

#### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifiers

| Product name            | $(\pm)$ -Amphetamine solution |
|-------------------------|-------------------------------|
| Product Number<br>Brand | : A-007<br>: Cerilliant       |
|                         |                               |

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Synthesis of substances

#### 1.3 Details of the supplier of the safety data sheet

| Company          | : | Sigma-Aldrich Inc.<br>3050 Spruce Street<br>ST. LOUIS MO 63103<br>UNITED STATES |
|------------------|---|---|
| Telephone<br>Fax | - | +1 314 771-5765<br>+1 800 325-5052  |

#### 1.4 **Emergency telephone number**

Emergency Phone # : +1-703-527-3887

#### **SECTION 2: Hazards identification**

#### 2.1 Classification of the substance or mixture

#### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 2), H225 Acute toxicity, Oral (Category 3), H301 Acute toxicity, Inhalation (Category 3), H331 Acute toxicity, Dermal (Category 3), H311 Specific target organ toxicity - single exposure (Category 1), H370

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### 2.2 GHS Label elements, including precautionary statements

Pictogram

Signal word

Danger

Hazard statement(s) H225

H301 + H311 + H331 H370

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Highly flammable liquid and vapour. Toxic if swallowed, in contact with skin or if inhaled. Causes damage to organs.

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| Precautionary statement(s) |  |
|----------------------------|--|
| P210                       | Keep away from heat/sparks/open flames/hot surfaces. No smoking.   |
| P233                       | Keep container tightly closed.   |
| P240                       | Ground/bond container and receiving equipment.   |
| P241                       | Use explosion-proof electrical/ ventilating/ lighting equipment.   |
| P242                       | Use only non-sparking tools.   |
| P243                       | Take precautionary measures against static discharge.  |
| P260                       | Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  |
| P264                       | Wash skin thoroughly after handling.   |
| P270                       | Do not eat, drink or smoke when using this product.  |
| P271                       | Use only outdoors or in a well-ventilated area.  |
| P280                       | Wear protective gloves/ protective clothing/ eye protection/ face protection.                                |
| P301 + P310                | IF SWALLOWED: Immediately call a POISON CENTER/doctor.   |
| P303 + P361 + P353         | IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. |
| P304 + P340                | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.             |
| P307 + P311                | IF exposed: Call a POISON CENTER or doctor/ physician.   |
| P322                       | Specific measures (see supplemental first aid instructions on this label).                                   |
| P330                       | Rinse mouth.   |
| P361                       | Remove/Take off immediately all contaminated clothing.   |
| P363                       | Wash contaminated clothing before reuse.   |
| P370 + P378                | In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.                        |
| P403 + P233                | Store in a well-ventilated place. Keep container tightly closed.   |
| P403 + P235                | Store in a well-ventilated place. Keep cool.   |
| P405                       | Store locked up.   |
| P501                       | Dispose of contents/ container to an approved waste disposal plant.  |

#### 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

#### **SECTION 3: Composition/information on ingredients**

#### 3.2 Mixtures

Molecular weight : 135.21 g/mol

| Component  |   | Classification  | Concentration       |
|--|---|---|---------------------|
| Methanol   |   |   |                     |
| CAS-No.<br>EC-No.<br>Index-No.<br>Registration<br>number | 67-56-1<br>200-659-6<br>603-001-00-X<br>01-2119433307-44-<br>XXXX | Flam. Liq. 2; Acute Tox. 3;<br>STOT SE 1; H225, H301,<br>H331, H311, H370 | >= 90 - <=<br>100 % |
| Amphetamine  |   |   |                     |
| CAS-No.<br>EC-No.  | 300-62-9<br>206-096-2   | Flam. Liq. 3; Acute Tox. 2;<br>H226, H300                                 | >= 0.1 - < 1<br>%   |

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#### **SECTION 4: First aid measures**

#### 4.1 Description of first aid measures

#### **General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

#### In case of eye contact

Flush eyes with water as a precaution.

#### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

- **4.2 Most important symptoms and effects, both acute and delayed** The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
- **4.3 Indication of any immediate medical attention and special treatment needed** No data available

#### **SECTION 5: Firefighting measures**

#### 5.1 Extinguishing media

#### Suitable extinguishing media Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

- **5.2** Special hazards arising from the substance or mixture Carbon oxides
- **5.3** Advice for firefighters Wear self-contained breathing apparatus for firefighting if necessary.

#### **5.4 Further information** Use water spray to cool unopened containers.

#### **SECTION 6:** Accidental release measures

**6.1 Personal precautions, protective equipment and emergency procedures** Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

For personal protection see section 8.

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#### 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

- **6.3 Methods and materials for containment and cleaning up** Contain spillage, and then collect with an electrically protected vacuum cleaner or by wetbrushing and place in container for disposal according to local regulations (see section 13).
- **6.4 Reference to other sections** For disposal see section 13.

#### **SECTION 7: Handling and storage**

#### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use explosion-proof equipment.Keep away from sources of ignition - No smoking.Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2.

#### 7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage temperature -20 °C Storage class (TRGS 510): 3: Flammable liquids

#### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

#### **SECTION 8: Exposure controls/personal protection**

#### 8.1 Control parameters

#### **Components with workplace control parameters**

| Component | CAS-No. | Value  | Control<br>parameters | Basis                                      |
|-----------|---------|--|-----------------------|--|
| Methanol  | 67-56-1 | TWA  | 200 ppm               | USA. ACGIH Threshold Limit<br>Values (TLV) |
|           | Remarks | or Indices (   |                       |  |
|           |         | STEL   | 250 ppm               | USA. ACGIH Threshold Limit<br>Values (TLV) |
|           |         | Headache<br>Nausea<br>Dizziness<br>Eye damage<br>Substances for which there is a Biological Exposure Inde<br>or Indices (see BEI® section)<br>Danger of cutaneous absorption |                       |  |

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| TWA                          | 200 ppm<br>260 mg/m3 | USA. NIOSH Recommended<br>Exposure Limits  |
|------------------------------|----------------------|--|
| Potential for dermal absorpt |                      | tion   |
| ST                           | 250 ppm<br>325 mg/m3 | USA. NIOSH Recommended<br>Exposure Limits  |
| Potential for                | or dermal absorp     | tion   |
| TWA                          | 200 ppm<br>260 mg/m3 | USA. Occupational Exposure<br>Limits (OSHA) - Table Z-1<br>Limits for Air Contaminants           |
| The value i                  | n mg/m3 is app       | roximate.  |
| С                            | 1,000 ppm            | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
| Skin                         |                      |  |
| PEL                          | 200 ppm<br>260 mg/m3 | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
| Skin                         |                      |  |
| STEL                         | 250 ppm<br>325 mg/m3 | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
| Skin                         |                      |  |

#### **Biological occupational exposure limits**

| Component | CAS-No. | Parameters     | Value      | Biological specimen | Basis  |
|-----------|---------|----------------|------------|---------------------|--|
| Methanol  | 67-56-1 | Methanol       | 15 mg/l    | Urine               | ACGIH -<br>Biological<br>Exposure Indices<br>(BEI) |
|           | Remarks | End of shift ( | As soon as | possible after exp  | osure ceases)                                      |

#### 8.2 Exposure controls

#### Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

#### Personal protective equipment

#### Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

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Full contact Material: butyl-rubber Minimum layer thickness: 0.3 mm Break through time: 480 min Material tested:Butoject® (KCL 897 / Aldrich Z677647, Size M)

Splash contact Material: Nitrile rubber Minimum layer thickness: 0.4 mm Break through time: 30 min Material tested:Camatril® (KCL 730 / Aldrich Z677442, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

#### **Body Protection**

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### **Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### **Control of environmental exposure**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

#### **SECTION 9: Physical and chemical properties**

#### 9.1 Information on basic physical and chemical properties

| a) | Appearance                              | Form: liquid                         |
|----|---|--------------------------------------|
| b) | Odour                                   | No data available                    |
| c) | Odour Threshold                         | No data available                    |
| d) | рН                                      | No data available                    |
| e) | Melting<br>point/freezing point         | No data available                    |
| f) | Initial boiling point and boiling range | 64 - 65 °C 147 - 149 °F at 1.013 hPa |
| g) | Flash point                             | 9.7 °C (49.5 °F) - closed cup        |
| h) | Evaporation rate                        | No data available                    |
| i) | Flammability (solid,<br>gas)            | No data available                    |

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| j)  | Upper/lower<br>flammability or<br>explosive limits | Upper explosion limit: 36 %(V)<br>Lower explosion limit: 6 %(V) |
|-----|--|---|
| k)  | Vapour pressure                                    | No data available   |
| I)  | Vapour density                                     | No data available   |
| m)  | Relative density                                   | 0.791 g/cm3 at 20 °C (68 °F)0.791 g/cm3 at 20 °C (68 °F)        |
| n)  | Water solubility                                   | No data available   |
| 0)  | Partition coefficient:<br>n-octanol/water          | No data available   |
| p)  | Auto-ignition<br>temperature                       | No data available   |
| q)  | Decomposition<br>temperature                       | No data available   |
| r)  | Viscosity  | No data available   |
| s)  | Explosive properties                               | No data available   |
| t)  | Oxidizing properties                               | No data available   |
| Oth | ner safety informatio                              | n   |

No data available

#### **SECTION 10: Stability and reactivity**

#### **10.1 Reactivity**

9.2

No data available

#### **10.2** Chemical stability

Stable under recommended storage conditions.

## 10.3 Possibility of hazardous reactions

Vapours may form explosive mixture with air.

#### 10.4 Conditions to avoid

Heat, flames and sparks. Extremes of temperature and direct sunlight.

#### **10.5** Incompatible materials

Acids, Oxidizing agents, Alkali metals, Strong oxidizing agents, Strong acids, Acid chlorides, Acid anhydrides, Reducing agents, Strong reducing agents, Phosphorus halides

# 10.6 Hazardous decomposition products Other decomposition products - No data available Hazardous decomposition products formed under fire conditions. - Carbon oxides In the event of fire: see section 5

#### **SECTION 11: Toxicological information**

#### **11.1 Information on toxicological effects**

#### Acute toxicity No data available

Inhalation: No data available

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Dermal: No data available

No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation No data available

**Respiratory or skin sensitisation** No data available

#### **Germ cell mutagenicity** No data available

#### Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

- ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

#### **Reproductive toxicity**

No data available

Specific target organ toxicity - single exposure No data available

**Specific target organ toxicity - repeated exposure** No data available

#### Aspiration hazard

No data available

#### **Additional Information**

RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Methyl alcohol may be fatal or cause blindness if swallowed., Cannot be made nonpoisonous., Effects due to ingestion may include:, Nausea, Headache, Vomiting, Gastrointestinal disturbance, Dizziness, Weakness, Confusion.

Central nervous system - Breathing difficulties - Based on Human Evidence

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#### **SECTION 12: Ecological information**

12.1 Toxicity

No data available

- **12.2 Persistence and degradability** No data available
- **12.3 Bioaccumulative potential** No data available
- **12.4 Mobility in soil** No data available
- 12.5 Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
- **12.6 Other adverse effects** No data available

#### **SECTION 13: Disposal considerations**

#### **13.1 Waste treatment methods**

#### Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

#### Contaminated packaging

Dispose of as unused product.

#### **SECTION 14: Transport information**

#### DOT (US)

UN number: 1230 Class: 3 Packing group: II Proper shipping name: MethanolSOLUTION

Reportable Quantity (RQ): Poison Inhalation Hazard: No

#### IMDG

UN number: 1230 Class: 3 (6.1) Packing group: II Proper shipping name: METHANOLSOLUTION

EMS-No: F-E, S-D

#### ΙΑΤΑ

UN number: 1230 Class: 3 (6.1) Packing group: II Proper shipping name: MethanolSOLUTION

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#### SECTION 15: Regulatory information

| SARA 302 Components<br>The following components are subject to reporting levels established by SARA Title III,<br>Section 302:   |                     |                             |  |
|--|---------------------|-----------------------------|--|
| Amphetamine  | CAS-No.<br>300-62-9 | Revision Date<br>2007-07-01 |  |
| SARA 313 Components<br>The following components are subject to reporting leve<br>Section 313:  | ls established by S | SARA Title III,             |  |
| Methanol   | CAS-No.<br>67-56-1  | Revision Date<br>2007-07-01 |  |
| SARA 311/312 Hazards<br>Fire Hazard, Acute Health Hazard, Chronic Health Hazar   | rd                  |                             |  |
| Massachusetts Right To Know Components   |                     |                             |  |
| Methanol   | CAS-No.<br>67-56-1  | Revision Date<br>2007-07-01 |  |
| Amphetamine  | 300-62-9            | 2007-07-01                  |  |
| No components are subject to the Massachusetts Right   | to Know Act.        |                             |  |
| Pennsylvania Right To Know Components  |                     |                             |  |
| Methanol   | CAS-No.<br>67-56-1  | Revision Date 2007-07-01    |  |
| Amphetamine  | 300-62-9            | 2007-07-01                  |  |
| Methanol   | CAS-No.<br>67-56-1  | Revision Date<br>2007-07-01 |  |
| New Jersey Right To Know Components<br>Methanol  | CAS-No.<br>67-56-1  | Revision Date<br>2007-07-01 |  |
| <b>California Prop. 65 Components</b><br>WARNING: This product contains a chemical known to<br>the State of California to cause birth defects or other<br>reproductive harm.Methanol | CAS-No.<br>67-56-1  | Revision Date<br>2012-03-16 |  |

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Millipore Sigma

#### **SECTION 16: Other information**

#### Further information

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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Version: 6.2

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# SECTION 1: Identification of the substance/mixture and of the company/undertaking 1.1 Product identifiers Product name : 6-AcetyImorphine, 1.0 mg/mL solution Product Number : A-009 Brand : Cerilliant 1.2 Relevant identified uses of the substance or mixture and uses advised against Identified uses : Laboratory chemicals, Synthesis of substances

#### **1.3** Details of the supplier of the safety data sheet

| Company          | : | Sigma-Aldrich Inc.<br>3050 Spruce Street<br>ST. LOUIS MO 63103<br>UNITED STATES |
|------------------|---|---|
| Telephone<br>Fax | - | +1 314 771-5765<br>+1 800 325-5052  |

#### **1.4 Emergency telephone number**

Emergency Phone # : +1-703-527-3887

#### **SECTION 2: Hazards identification**

#### 2.1 Classification of the substance or mixture

#### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 2), H225 Acute toxicity, Oral (Category 4), H302 Acute toxicity, Inhalation (Category 4), H332 Eye irritation (Category 2A), H319

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### 2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s) H225 H302 + H332 H319

Highly flammable liquid and vapour. Harmful if swallowed or if inhaled. Causes serious eye irritation.

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| Precautionary statement(s) |  |
|----------------------------|--|
| P210                       | Keep away from heat/sparks/open flames/hot surfaces. No smoking.   |
| P233                       | Keep container tightly closed.   |
| P240                       | Ground/bond container and receiving equipment.   |
| P241                       | Use explosion-proof electrical/ ventilating/ lighting equipment.   |
| P242                       | Use only non-sparking tools.   |
| P243                       | Take precautionary measures against static discharge.  |
| P261                       | Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.   |
| P264                       | Wash skin thoroughly after handling.   |
| P270                       | Do not eat, drink or smoke when using this product.  |
| P271                       | Use only outdoors or in a well-ventilated area.  |
| P280                       | Wear protective gloves/ eye protection/ face protection.   |
| P301 + P312 + P330         | IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.   |
| P303 + P361 + P353         | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.                                    |
| P304 + P340 + P312         | IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.             |
| P305 + P351 + P338         | IF IN EYES: Rinse cautiously with water for several minutes.<br>Remove contact lenses, if present and easy to do. Continue<br>rinsing. |
| P337 + P313                | If eye irritation persists: Get medical advice/ attention.   |
| P370 + P378                | In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.   |
| P403 + P235                | Store in a well-ventilated place. Keep cool.   |
| P501                       | Dispose of contents/ container to an approved waste disposal plant.  |

#### 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

#### **SECTION 3: Composition/information on ingredients**

#### 3.2 Mixtures

| Molecular weight | : 327.37 g/mol  |
|------------------|-----------------|
| noicealar weight | . 52/15/ 9/1101 |

| Component           |                           | Classification                                 | Concentration |
|---------------------|---------------------------|--|---------------|
| Acetonitrile        |                           |  |               |
| CAS-No.             | 75-05-8                   | Flam. Liq. 2; Acute Tox. 4;                    |               |
| EC-No.<br>Index-No. | 200-835-2<br>608-001-00-3 | Eye Irrit. 2A; H225, H302,<br>H332, H312, H319 | 100 %         |
| Registration        | 01-2119471307-38-         | 11552, 11512, 11519                            |               |
| number              | XXXX                      |  |               |

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

#### **General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

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#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

#### In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

#### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

#### 4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

**4.3 Indication of any immediate medical attention and special treatment needed** No data available

#### **SECTION 5: Firefighting measures**

5.1 Extinguishing media

Suitable extinguishing media Dry powder Dry sand

**Unsuitable extinguishing media** Do NOT use water jet.

- **5.2** Special hazards arising from the substance or mixture Carbon oxides, Nitrogen oxides (NOx)
- **5.3 Advice for firefighters** Wear self-contained breathing apparatus for firefighting if necessary.

#### 5.4 Further information

Use water spray to cool unopened containers.

#### **SECTION 6:** Accidental release measures

#### **6.1 Personal precautions, protective equipment and emergency procedures** Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. For personal protection see section 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

#### 6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

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#### SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use explosion-proof equipment.Keep away from sources of ignition - No smoking.Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2.

#### 7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage temperature -20 °C Storage class (TRGS 510): 3: Flammable liquids

#### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

#### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

#### **Components with workplace control parameters**

| Component    | CAS-No. | Value        | Control parameters                                       | Basis  |
|--------------|---------|--------------|--|--|
| Acetonitrile | 75-05-8 | TWA          | 20 ppm   | USA. ACGIH Threshold Limit<br>Values (TLV)   |
|              | Remarks | Not classifi | piratory Tract irr<br>able as a humar<br>cutaneous absor | n carcinogen   |
|              |         | TWA          | 20 ppm<br>34 mg/m3                                       | USA. NIOSH Recommended<br>Exposure Limits  |
|              |         | Forms cyar   | nide in the body.  |  |
|              |         | TWA          | 40 ppm<br>70 mg/m3                                       | USA. Occupational Exposure<br>Limits (OSHA) - Table Z-1<br>Limits for Air Contaminants           |
|              |         | The value i  | in mg/m3 is app  | roximate.  |
|              |         | PEL          | 40 ppm<br>70 mg/m3                                       | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
|              |         | Skin         |  | ·  |
|              |         | STEL         | 60 ppm<br>105 mg/m3                                      | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
|              |         | Skin         |  |  |

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#### 8.2 Exposure controls

#### Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

#### Personal protective equipment

#### Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

#### **Body Protection**

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### **Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

#### SECTION 9: Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties

| a) | Appearance   | Form: liquid  |
|----|--|---|
| b) | Odour  | No data available   |
| c) | Odour Threshold                                    | No data available   |
| d) | pН   | No data available   |
| e) | Melting<br>point/freezing point                    | No data available   |
| f) | Initial boiling point and boiling range            | 81 - 82 °C 178 - 180 °F at 1.013 hPa                              |
| g) | Flash point  | 6.0 °C (42.8 °F) - closed cup                                     |
| h) | Evaporation rate                                   | No data available   |
| i) | Flammability (solid,<br>gas)                       | No data available   |
| j) | Upper/lower<br>flammability or<br>explosive limits | Upper explosion limit: 16 %(V)<br>Lower explosion limit: 4.4 %(V) |

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- k) Vapour pressure No data available
- I) Vapour density No data available
- m) Relative density 0.782 g/cm3 at 20 °C (68 °F)0.782 g/cm3 at 20 °C (68 °F)
- n) Water solubility No data available
- o) Partition coefficient: No data available n-octanol/water
- p) Auto-ignition No data available temperature
- q) Decomposition No data available temperature
- r) Viscosity No data available
- s) Explosive properties No data available
- t) Oxidizing properties No data available

# 9.2 Other safety information No data available

#### **SECTION 10: Stability and reactivity**

#### **10.1 Reactivity** No data available

- **10.2 Chemical stability** Stable under recommended storage conditions.
- **10.3 Possibility of hazardous reactions** Vapours may form explosive mixture with air.
- **10.4 Conditions to avoid** Heat, flames and sparks.
- **10.5 Incompatible materials** acids, Bases, Oxidizing agents, Alkali metals
- 10.6 Hazardous decomposition products
   Other decomposition products No data available
   Hazardous decomposition products formed under fire conditions. Carbon oxides, Nitrogen oxides (NOx)
   In the event of fire: see section 5

#### **SECTION 11: Toxicological information**

#### 11.1 Information on toxicological effects

- Acute toxicity No data available
- Inhalation: No data available
- Dermal: No data available
- No data available

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#### Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

#### **Respiratory or skin sensitisation**

No data available

#### Germ cell mutagenicity

No data available

#### Carcinogenicity

- IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
- OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

#### **Reproductive toxicity**

No data available

Specific target organ toxicity - single exposure No data available

Specific target organ toxicity - repeated exposure No data available

**Aspiration hazard** No data available

#### **Additional Information**

RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Treat as cyanide poisoning., Always have on hand a cyanide first-aid kit, together with proper instructions., The onset of symptoms is generally delayed pending conversion to cyanide., Nausea, Vomiting, Diarrhoea, Headache, Dizziness, Rash, Cyanosis

#### **SECTION 12: Ecological information**

# **12.1 Toxicity**

- No data available
- 12.2 Persistence and degradability No data available
- **12.3 Bioaccumulative potential** No data available
- **12.4 Mobility in soil** No data available

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#### 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

#### 12.6 Other adverse effects

No data available

#### **SECTION 13: Disposal considerations**

#### 13.1 Waste treatment methods

#### Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Contact a licensed professional waste disposal service to dispose of this material.

#### Contaminated packaging

Dispose of as unused product.

#### **SECTION 14: Transport information**

#### DOT (US)

UN number: 1648 Class: 3 Packing group: II Proper shipping name: AcetonitrileSOLUTION

Reportable Quantity (RQ): Poison Inhalation Hazard: No

#### IMDG

UN number: 1648 Class: 3 Packing group: II Proper shipping name: ACETONITRILESOLUTION

EMS-No: F-E, S-D

#### ΙΑΤΑ

UN number: 1648 Class: 3 Packing group: II Proper shipping name: AcetonitrileSOLUTION

#### **SECTION 15: Regulatory information**

#### SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

#### SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

|              | CAS-No. | Revision Date |
|--------------|---------|---------------|
| Acetonitrile | 75-05-8 | 2007-07-01    |

#### SARA 311/312 Hazards

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#### Fire Hazard, Acute Health Hazard

| Massachusetts Right To Know Components              | CAS-No.            | Revision Date               |
|---|--------------------|-----------------------------|
| Acetonitrile  | 75-05-8            | 2007-07-01                  |
| No components are subject to the Massachusetts Righ | nt to Know Act.    |                             |
| Pennsylvania Right To Know Components               | CAS-No.            | Revision Date               |
| Acetonitrile  | 75-05-8            | 2007-07-01                  |
| Acetonitrile  | CAS-No.<br>75-05-8 | Revision Date<br>2007-07-01 |
| New Jersey Right To Know Components                 | CAS-No.            | Revision Date               |
| Acetonitrile  | 75-05-8            | 2007-07-01                  |

#### **SECTION 16: Other information**

#### **Further information**

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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Version: 6.3

Revision Date: 01/24/2020

Print Date: 02/27/2020

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# **SAFETY DATA SHEET**

#### SECTION 1: Identification of the substance/mixture and of the company/undertaking

**1.1 Product identifiers** 

Product name

| : (±)-Amphetamine-d5 (deuter | ium label on |
|------------------------------|--------------|
| side chain) solution         |              |

| Product Number | : | A-013      |
|----------------|---|------------|
| Brand          | : | Cerilliant |

- **1.2** Relevant identified uses of the substance or mixture and uses advised against
  - Identified uses : Laboratory chemicals, Synthesis of substances

#### 1.3 Details of the supplier of the safety data sheet

| Company   | : Sigma-Aldrich Inc.<br>3050 Spruce Street<br>ST. LOUIS MO 63103<br>UNITED STATES |
|-----------|---|
| Telephone | : +1 314 771-5765   |

| relephone | . +1 514 //1-5/05 |
|-----------|-------------------|
| Fax       | : +1 800 325-5052 |

#### **1.4 Emergency telephone number**

Emergency Phone # : +1-703-527-3887

#### **SECTION 2: Hazards identification**

#### 2.1 Classification of the substance or mixture

#### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 2), H225 Acute toxicity, Oral (Category 3), H301 Acute toxicity, Inhalation (Category 3), H331 Acute toxicity, Dermal (Category 3), H311 Specific target organ toxicity - single exposure (Category 1), H370

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### 2.2 GHS Label elements, including precautionary statements

Pictogram

Signal word



Danger

Hazard statement(s) H225

Highly flammable liquid and vapour.

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| H301 + H311 + H331<br>H370         | Toxic if swallowed, in contact with skin or if inhaled.<br>Causes damage to organs.                          |
|------------------------------------|--|
| Precautionary statement(s)<br>P210 | )<br>Keep away from heat/sparks/open flames/hot surfaces. No   |
|                                    | smoking.   |
| P233                               | Keep container tightly closed.   |
| P240<br>P241                       | Ground/bond container and receiving equipment.   |
| P241<br>P242                       | Use explosion-proof electrical/ ventilating/ lighting equipment.<br>Use only non-sparking tools.             |
| P242<br>P243                       | Take precautionary measures against static discharge.  |
| P260                               | Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  |
| P264                               | Wash skin thoroughly after handling.   |
| P270                               | Do not eat, drink or smoke when using this product.  |
| P271                               | Use only outdoors or in a well-ventilated area.  |
| P280                               | Wear protective gloves/ protective clothing/ eye protection/ face  |
|                                    | protection.  |
| P301 + P310                        | IF SWALLOWED: Immediately call a POISON CENTER/doctor.   |
| P303 + P361 + P353                 | IF ON SKIN (or hair): Remove/ Take off immediately all   |
|                                    | contaminated clothing. Rinse skin with water/ shower.  |
| P304 + P340                        | IF INHALED: Remove victim to fresh air and keep at rest in a   |
|                                    | position comfortable for breathing.  |
| P307 + P311                        | IF exposed: Call a POISON CENTER or doctor/ physician.   |
| P322                               | Specific measures (see supplemental first aid instructions on  |
| 0220                               | this label).   |
| P330                               | Rinse mouth.   |
| P361<br>P363                       | Remove/Take off immediately all contaminated clothing.   |
| P303<br>P370 + P378                | Wash contaminated clothing before reuse.<br>In case of fire: Use dry sand, dry chemical or alcohol-resistant |
| F370 + F378                        | foam for extinction.   |
| P403 + P233                        | Store in a well-ventilated place. Keep container tightly closed.   |
| P403 + P235                        | Store in a well-ventilated place. Keep cool.   |
| P405                               | Store locked up.   |
| P501                               | Dispose of contents/ container to an approved waste disposal   |
|                                    | plant.   |
|                                    |  |

#### 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

#### **SECTION 3:** Composition/information on ingredients

#### 3.2 Mixtures

| Component  |   | Classification  | Concentration       |
|--|---|---|---------------------|
| Methanol   |   |   |                     |
| CAS-No.<br>EC-No.<br>Index-No.<br>Registration<br>number | 67-56-1<br>200-659-6<br>603-001-00-X<br>01-2119433307-44-<br>XXXX | Flam. Liq. 2; Acute Tox. 3;<br>STOT SE 1; H225, H301,<br>H331, H311, H370 | >= 90 - <=<br>100 % |
| (±)-Amphetamine-   | ·D5   |   |                     |
| CAS-No.  | 136765-27-0   | Flam. Liq. 3; Acute Tox. 2;<br>H226, H300                                 | >= 0.1 - < 1<br>%   |

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For the full text of the H-Statements mentioned in this Section, see Section 16.

#### **SECTION 4: First aid measures**

#### 4.1 Description of first aid measures

#### **General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

#### In case of eye contact

Flush eyes with water as a precaution.

#### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

- **4.2 Most important symptoms and effects, both acute and delayed** The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
- **4.3 Indication of any immediate medical attention and special treatment needed** No data available

#### **SECTION 5: Firefighting measures**

#### 5.1 Extinguishing media

Suitable extinguishing media Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

- **5.2 Special hazards arising from the substance or mixture** Carbon oxides
- **5.3** Advice for firefighters Wear self-contained breathing apparatus for firefighting if necessary.
- 5.4 Further information

Use water spray to cool unopened containers.

#### **SECTION 6: Accidental release measures**

# **6.1 Personal precautions, protective equipment and emergency procedures** Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

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For personal protection see section 8.

#### 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

#### 6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wetbrushing and place in container for disposal according to local regulations (see section 13).

**6.4** Reference to other sections For disposal see section 13.

#### SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use explosion-proof equipment.Keep away from sources of ignition - No smoking.Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2.

#### 7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store under inert gas. hygroscopic

Recommended storage temperature -20 °C Storage class (TRGS 510): 3: Flammable liquids

#### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

#### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

#### Components with workplace control parameters

| Component | CAS-No. | Value   | Control<br>parameters | Basis                                      |  |
|-----------|---------|---|-----------------------|--|--|
| Methanol  | 67-56-1 | TWA   | 200 ppm               | USA. ACGIH Threshold Limit<br>Values (TLV) |  |
|           | Remarks | Headache<br>Nausea<br>Dizziness<br>Eye damage<br>Substances for which there is a Biological Exposure Index<br>or Indices (see BEI® section)<br>Danger of cutaneous absorption |                       |  |  |
|           |         | STEL 250 ppm USA. ACGIH Threshold Limit Values (TLV)  |                       |  |  |
|           |         | Headache<br>Nausea<br>Dizziness<br>Eye damage<br>Substances for which there is a Biological Exposure Index  |                       |  |  |

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| or Indices (see BEI® section)  |                      |  |  |
|--------------------------------|----------------------|--|--|
| Danger of cutaneous absorption |                      |  |  |
| TWA                            | 200 ppm              | USA. NIOSH Recommended   |  |
|                                | 260 mg/m3            | Exposure Limits  |  |
| Potential fo                   | r dermal absorp      | tion   |  |
| ST                             | 250 ppm              | USA. NIOSH Recommended   |  |
|                                | 325 mg/m3            | Exposure Limits  |  |
| Potential fo                   | r dermal absorp      | tion   |  |
| TWA                            | 200 ppm              | USA. Occupational Exposure   |  |
|                                | 260 mg/m3            | Limits (OSHA) - Table Z-1<br>Limits for Air Contaminants   |  |
| The value i                    | n mg/m3 is appi      |  |  |
| С                              | 1,000 ppm            | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |  |
| Skin                           |                      |  |  |
| PEL                            | 200 ppm<br>260 mg/m3 | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |  |
| Skin                           | I                    |  |  |
| STEL                           | 250 ppm<br>325 mg/m3 | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |  |
| Skin                           | 1                    |  |  |

#### Biological occupational exposure limits

| Component | CAS-No. | Parameters   | Value   | Biological specimen | Basis  |
|-----------|---------|--|---------|---------------------|--|
| Methanol  | 67-56-1 | Methanol   | 15 mg/l | Urine               | ACGIH -<br>Biological<br>Exposure Indices<br>(BEI) |
|           | Remarks | End of shift (As soon as possible after exposure ceases) |         |                     |  |

#### 8.2 Exposure controls

#### Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

#### Personal protective equipment

#### Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact

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with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact Material: butyl-rubber Minimum layer thickness: 0.3 mm Break through time: 480 min Material tested:Butoject® (KCL 897 / Aldrich Z677647, Size M)

Splash contact Material: Nitrile rubber Minimum layer thickness: 0.4 mm Break through time: 30 min Material tested:Camatril® (KCL 730 / Aldrich Z677442, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

#### **Body Protection**

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### **Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### **Control of environmental exposure**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

#### SECTION 9: Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties

| a) | Appearance                              | Form: liquid                         |
|----|---|--------------------------------------|
| b) | Odour                                   | No data available                    |
| c) | Odour Threshold                         | No data available                    |
| d) | рН                                      | No data available                    |
| e) | Melting<br>point/freezing point         | No data available                    |
| f) | Initial boiling point and boiling range | 64 - 65 °C 147 - 149 °F at 1.013 hPa |
| g) | Flash point                             | 9.7 °C (49.5 °F) - closed cup        |
| h) | Evaporation rate                        | No data available                    |

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| i)  | Flammability (solid,<br>gas)                       | No data available   |
|-----|--|---|
| j)  | Upper/lower<br>flammability or<br>explosive limits | Upper explosion limit: 36 %(V)<br>Lower explosion limit: 6 %(V) |
| k)  | Vapour pressure                                    | No data available   |
| I)  | Vapour density                                     | No data available   |
| m)  | Relative density                                   | 0.791 g/cm3 at 20 °C (68 °F)                                    |
| n)  | Water solubility                                   | No data available   |
| o)  | Partition coefficient:<br>n-octanol/water          | No data available   |
| p)  | Auto-ignition<br>temperature                       | No data available   |
| q)  | Decomposition<br>temperature                       | No data available   |
| r)  | Viscosity  | No data available   |
| s)  | Explosive properties                               | No data available   |
| t)  | Oxidizing properties                               | No data available   |
| Oth | er safety informatio                               | n   |

#### **9.2 Other safety information** No data available

#### **SECTION 10: Stability and reactivity**

#### 10.1 Reactivity

No data available

## 10.2 Chemical stability

Stable under recommended storage conditions.

#### **10.3 Possibility of hazardous reactions** No data available

#### **10.4** Conditions to avoid

Heat, flames and sparks. Extremes of temperature and direct sunlight.

#### **10.5** Incompatible materials

Acids, Oxidizing agents, Alkali metals, Strong oxidizing agents, Strong acids, Acid chlorides, Acid anhydrides, Reducing agents, Strong reducing agents, Phosphorus halides

#### **10.6 Hazardous decomposition products**

Other decomposition products - No data available Hazardous decomposition products formed under fire conditions. - Carbon oxides In the event of fire: see section 5

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#### **SECTION 11:** Toxicological information

#### 11.1 Information on toxicological effects

Acute toxicity

No data available

Inhalation: No data available

Dermal: No data available

No data available

Skin corrosion/irritation No data available

Serious eye damage/eye irritation No data available

**Respiratory or skin sensitisation** No data available

Germ cell mutagenicity No data available

#### Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

> No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

- ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

> No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

#### **Reproductive toxicity**

No data available

Specific target organ toxicity - single exposure No data available

Specific target organ toxicity - repeated exposure No data available

#### **Aspiration hazard** No data available

#### **Additional Information**

**RTECS:** Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

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Methyl alcohol may be fatal or cause blindness if swallowed., Cannot be made nonpoisonous., Effects due to ingestion may include:, Nausea, Headache, Vomiting, Gastrointestinal disturbance, Dizziness, Weakness, Confusion.

#### **SECTION 12: Ecological information**

#### **12.1 Toxicity**

No data available

- 12.2 Persistence and degradability No data available
- **12.3 Bioaccumulative potential** No data available
- **12.4 Mobility in soil** No data available

#### 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

**12.6 Other adverse effects** No data available

#### SECTION 13: Disposal considerations

#### 13.1 Waste treatment methods

#### Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

#### **Contaminated packaging**

Dispose of as unused product.

#### **SECTION 14: Transport information**

#### DOT (US)

UN number: 1230 Class: 3 Packing group: II Proper shipping name: MethanolSOLUTION

Reportable Quantity (RQ): Poison Inhalation Hazard: No

#### IMDG

UN number: 1230 Class: 3 (6.1) Packing group: II EMS-No: F-E, S-D Proper shipping name: METHANOLSOLUTION

#### ΙΑΤΑ

UN number: 1230 Class: 3 (6.1)

Packing group: II

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#### SECTION 15: Regulatory information

#### SARA 302 Components

The following components are subject to reporting levels established by SARA Title III, Section 302: (±)-Amphetamine-D5 CAS-No. Revision Date

| hetamine-D5 | CAS-No.     | Revision Date |
|-------------|-------------|---------------|
|             | 136765-27-0 | 2007-03-01    |

#### SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

| Methanol   | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |
|--|--------------------|-----------------------------|
| Massachusetts Right To Know Components<br>Methanol | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |
| (±)-Amphetamine-D5                                 | 136765-27-0        | 2007-03-01                  |

No components are subject to the Massachusetts Right to Know Act.

| Pennsylvania Right To Know Components  |                    |                             |
|--|--------------------|-----------------------------|
| Methanol   | CAS-No.<br>67-56-1 | Revision Date 2007-07-01    |
| (±)-Amphetamine-D5   | 136765-27-0        | 2007-03-01                  |
| Methanol   | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |
| New Jersey Right To Know Components<br>Methanol  | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |
| <b>California Prop. 65 Components</b><br>WARNING: This product contains a chemical known to<br>the State of California to cause birth defects or other<br>reproductive harm.Methanol | CAS-No.<br>67-56-1 | Revision Date<br>2012-03-16 |

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#### **SECTION 16: Other information**

#### Further information

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Version: 6.2

Revision Date: 01/14/2020

Print Date: 05/07/2020

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# **SAFETY DATA SHEET**

Version 6.4 Revision Date 05/08/2020 Print Date 05/09/2020

#### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### **1.1 Product identifiers**

 Product name
 : 6-AcetyImorphine-d6 solution

 Product Number
 : A-027

 Brand
 : Cerilliant

 Relevant identified uses of the substance or mixture and uses advised against

**1.2** Relevant identified uses of the substance or mixture and uses advised agains Identified uses : Laboratory chemicals, Synthesis of substances

#### **1.3** Details of the supplier of the safety data sheet

| Company          | : | : Sigma-Aldrich Inc.<br>3050 Spruce Street<br>ST. LOUIS MO 63103<br>UNITED STATES |  |
|------------------|---|---|--|
| Telephone<br>Fax | - | +1 314 771-5765<br>+1 800 325-5052  |  |

#### **1.4 Emergency telephone number**

Emergency Phone # : +1-703-527-3887

#### **SECTION 2: Hazards identification**

#### 2.1 Classification of the substance or mixture

#### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 2), H225 Acute toxicity, Inhalation (Category 4), H332 Eye irritation (Category 2A), H319

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### 2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

| Hazard statement(s) |
|---------------------|
| H225                |
| H319                |
| H332                |

Highly flammable liquid and vapour. Causes serious eye irritation. Harmful if inhaled.

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| Precautionary statement(s) |  |
|----------------------------|--|
| P210                       | Keep away from heat/sparks/open flames/hot surfaces. No smoking.   |
| P233                       | Keep container tightly closed.   |
| P240                       | Ground/bond container and receiving equipment.   |
| P241                       | Use explosion-proof electrical/ ventilating/ lighting equipment.   |
| P242                       | Use only non-sparking tools.   |
| P243                       | Take precautionary measures against static discharge.  |
| P261                       | Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.   |
| P264                       | Wash skin thoroughly after handling.   |
| P271                       | Use only outdoors or in a well-ventilated area.  |
| P280                       | Wear protective gloves/ eye protection/ face protection.   |
| P303 + P361 + P353         | IF ON SKIN (or hair): Take off immediately all contaminated  |
|                            | clothing. Rinse skin with water/shower.  |
| P304 + P340 + P312         | IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.             |
| P305 + P351 + P338         | IF IN EYES: Rinse cautiously with water for several minutes.<br>Remove contact lenses, if present and easy to do. Continue<br>rinsing. |
| P337 + P313                | If eye irritation persists: Get medical advice/ attention.   |
| P370 + P378                | In case of fire: Use dry sand, dry chemical or alcohol-resistant   |
|                            | foam to extinguish.  |
| P403 + P235                | Store in a well-ventilated place. Keep cool.   |
| P501                       | Dispose of contents/ container to an approved waste disposal plant.  |

#### 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

#### **SECTION 3: Composition/information on ingredients**

#### 3.2 Mixtures

| Component                 |                                   | Classification              | Concentration |
|---------------------------|-----------------------------------|-----------------------------|---------------|
| Acetonitrile              |                                   |                             |               |
| CAS-No.                   | 75-05-8                           | Flam. Liq. 2; Acute Tox. 4; |               |
| EC-No.                    | 200-835-2                         | Eye Irrit. 2A; H225, H302,  | 100 %         |
| Index-No.<br>Registration | 608-001-00-3<br>01-2119471307-38- | H332, H312, H319            |               |
| number                    | XXXX                              |                             |               |

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### **SECTION 4: First aid measures**

#### 4.1 Description of first aid measures

#### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

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#### In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

#### In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

#### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

#### 4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

**4.3 Indication of any immediate medical attention and special treatment needed** No data available

#### **SECTION 5: Firefighting measures**

#### 5.1 Extinguishing media

Suitable extinguishing media Dry powder Dry sand

**Unsuitable extinguishing media** Do NOT use water jet.

- **5.2** Special hazards arising from the substance or mixture Carbon oxides, Nitrogen oxides (NOx) Combustible.
- **5.3** Advice for firefighters Wear self-contained breathing apparatus for firefighting if necessary.
- **5.4 Further information** Use water spray to cool unopened containers.

#### **SECTION 6:** Accidental release measures

#### **6.1 Personal precautions, protective equipment and emergency procedures** Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. For personal protection see section 8.

- **6.2 Environmental precautions** Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
- **6.3** Methods and materials for containment and cleaning up Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).
- **6.4 Reference to other sections** For disposal see section 13.

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#### SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use explosion-proof equipment.Keep away from sources of ignition - No smoking.Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2.

#### 7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store under inert gas. hygroscopic

Recommended storage temperature -20 °C Storage class (TRGS 510): 3: Flammable liquids

#### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

#### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

#### **Components with workplace control parameters**

| Component    | CAS-No. | Value  | Control    | Basis                           |  |
|--------------|---------|--|------------|---------------------------------|--|
|              |         |  | parameters |                                 |  |
| Acetonitrile | 75-05-8 | TWA  | 20 ppm     | USA. ACGIH Threshold Limit      |  |
|              |         |  |            | Values (TLV)                    |  |
|              | Remarks | Lower Respiratory Tract irritation<br>Not classifiable as a human carcinogen |            |                                 |  |
|              |         |  |            |                                 |  |
|              |         | Danger of cutaneous absorption   |            |                                 |  |
|              |         | TWA  | 20 ppm     | USA. NIOSH Recommended          |  |
|              |         |  | 34 mg/m3   | Exposure Limits                 |  |
|              |         | Forms cyanide in the body.   |            |                                 |  |
|              |         | TWA  | 40 ppm     | USA. Occupational Exposure      |  |
|              |         |  | 70 mg/m3   | Limits (OSHA) - Table Z-1       |  |
|              |         |  |            | Limits for Air Contaminants     |  |
|              |         | The value in mg/m3 is approximate.   |            |                                 |  |
|              |         | PEL  | 40 ppm     | California permissible exposure |  |
|              |         |  | 70 mg/m3   | limits for chemical             |  |
|              |         |  | _          | contaminants (Title 8, Article  |  |
|              |         |  |            | 107)                            |  |
|              |         | Skin   |            |                                 |  |
|              |         | STEL   | 60 ppm     | California permissible exposure |  |
|              |         |  | 105 mg/m3  | limits for chemical             |  |
|              |         |  |            | contaminants (Title 8, Article  |  |
|              |         |  |            | 107)                            |  |
|              |         | Skin   |            |                                 |  |

#### 8.2 Exposure controls

#### Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

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#### **Personal protective equipment**

#### Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### **Skin protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

#### **Body Protection**

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### **Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### **Control of environmental exposure**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

#### SECTION 9: Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties

| а          | ) Appearance   | Form: liquid  |  |
|------------|--|---|--|
| b          | ) Odour  | No data available   |  |
| С          | ) Odour Threshold                                    | No data available   |  |
| d          | l) pH  | No data available   |  |
| e          | <ul> <li>Melting<br/>point/freezing point</li> </ul> | No data available   |  |
| f)         | ) Initial boiling point<br>and boiling range         | 81 - 82 °C 178 - 180 °F at 1.013 hPa                              |  |
| g          | ) Flash point  | 2 °C (36 °F) - closed cup   |  |
| h          | <ol> <li>Evaporation rate</li> </ol>                 | No data available   |  |
| i)         | ) Flammability (solid,<br>gas)                       | No data available   |  |
| j)         | ) Upper/lower<br>flammability or<br>explosive limits | Upper explosion limit: 16 %(V)<br>Lower explosion limit: 4.4 %(V) |  |
| k          | ) Vapour pressure                                    | No data available   |  |
| I)         | ) Vapour density                                     | No data available   |  |
| n          | n) Relative density                                  | 0.782 g/cm3 at 20 °C (68 °F)                                      |  |
| n          | ) Water solubility                                   | No data available   |  |
| Cerilliant | : - A-027  |   |  |

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- o) Partition coefficient: No data available n-octanol/water
- p) Auto-ignition No data available temperature
- No data available q) Decomposition temperature
- No data available r) Viscosity
- No data available s) Explosive properties
- t) Oxidizing properties No data available
- 9.2 Other safety information No data available

#### **SECTION 10: Stability and reactivity**

**10.1 Reactivity** 

No data available

- **10.2 Chemical stability** Stable under recommended storage conditions.
- 10.3 Possibility of hazardous reactions Vapours may form explosive mixture with air.
- 10.4 Conditions to avoid Heat, flames and sparks.
- **10.5** Incompatible materials acids, Bases, Oxidizing agents, Alkali metals
- **10.6 Hazardous decomposition products** Other decomposition products - No data available Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NOx) In the event of fire: see section 5

# **SECTION 11: Toxicological information**

#### 11.1 Information on toxicological effects

#### Acute toxicity

No data available

Inhalation: No data available

Dermal: No data available

No data available

#### Skin corrosion/irritation No data available

#### Serious eye damage/eye irritation No data available

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# **Respiratory or skin sensitisation**

No data available

### Germ cell mutagenicity

No data available

#### Carcinogenicity

- IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
- OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

#### **Reproductive toxicity**

No data available

# Specific target organ toxicity - single exposure

No data available

#### **Specific target organ toxicity - repeated exposure** No data available

Aspiration hazard

No data available

# **Additional Information**

RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Treat as cyanide poisoning., Always have on hand a cyanide first-aid kit, together with proper instructions., The onset of symptoms is generally delayed pending conversion to cyanide., Nausea, Vomiting, Diarrhoea, Headache, Dizziness, Rash, Cyanosis

# **SECTION 12: Ecological information**

- **12.1 Toxicity** No data available
- 12.2 Persistence and degradability No data available
- **12.3 Bioaccumulative potential** No data available
- **12.4 Mobility in soil** No data available

# 12.5 Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects No data available

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# **SECTION 13: Disposal considerations**

#### 13.1 Waste treatment methods

#### Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Contact a licensed professional waste disposal service to dispose of this material.

#### **Contaminated packaging**

Dispose of as unused product.

#### **SECTION 14: Transport information**

#### DOT (US)

UN number: 1648 Class: 3 Packing group: II Proper shipping name: AcetonitrileSOLUTION

Reportable Quantity (RQ): Poison Inhalation Hazard: No

#### IMDG

UN number: 1648 Class: 3 Packing group: II EMS-No: F-E, S-D Proper shipping name: ACETONITRILESOLUTION

# ΙΑΤΑ

UN number: 1648 Class: 3 Packing group: II Proper shipping name: AcetonitrileSOLUTION

#### **SECTION 15: Regulatory information**

#### SARA 302 Components

This material does not contain any components with a section 302 EHS TPO.

#### SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

|              | CAS-No. | Revision Date |
|--------------|---------|---------------|
| Acetonitrile | 75-05-8 | 2007-07-01    |
|              |         |               |
|              |         |               |

# SARA 311/312 Hazards

Fire Hazard, Acute Health Hazard

| Massachusetts Right To Know Components |         |               |
|--|---------|---------------|
|  | CAS-No. | Revision Date |
| Acetonitrile                           | 75-05-8 | 2007-07-01    |

No components are subject to the Massachusetts Right to Know Act.

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| Pennsylvania Right To Know Components |         |               |
|---------------------------------------|---------|---------------|
| Acetonitrile                          | CAS-No. | Revision Date |
|                                       | 75-05-8 | 2007-07-01    |
| New Jersey Right To Know Components   |         |               |
| Acetonitrile                          | CAS-No. | Revision Date |
|                                       | 75-05-8 | 2007-07-01    |
|                                       |         |               |

#### **SECTION 16: Other information**

#### **Further information**

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# SAFETY DATA SHEET

Version 6.1 Revision Date 07/02/2019 Print Date 03/31/2020

# SECTION 1: Identification of the substance/mixture and of the company/undertaking

# **1.1 Product identifiers**

| Product name                         | : | Alprazolam solution                 |
|--------------------------------------|---|-------------------------------------|
| Product Number<br>Brand<br>Index-No. | : | A-903<br>Cerilliant<br>603-001-00-X |

# **1.2** Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Synthesis of substances

# **1.3** Details of the supplier of the safety data sheet

| Company   | : Sigma-Aldrich Inc.<br>3050 Spruce Street<br>ST. LOUIS MO 63103<br>UNITED STATES |
|-----------|---|
| Telephone | : +1 314 771-5765   |
| Fax       | : +1 800 325-5052   |

# **1.4 Emergency telephone number**

Emergency Phone # : +1-703-527-3887

# **SECTION 2: Hazards identification**

#### 2.1 Classification of the substance or mixture

#### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 2), H225 Acute toxicity, Oral (Category 3), H301 Acute toxicity, Inhalation (Category 3), H331 Acute toxicity, Dermal (Category 3), H311 Specific target organ toxicity - single exposure (Category 1), H370

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### 2.2 GHS Label elements, including precautionary statements

Pictogram



Danger

Signal word Hazard statement(s) H225 H301 + H311 + H331

Highly flammable liquid and vapour. Toxic if swallowed, in contact with skin or if inhaled.

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| H370                       | Causes damage to organs.   |
|----------------------------|--|
| Precautionary statement(s) |  |
| P210 , ()                  | Keep away from heat/sparks/open flames/hot surfaces. No smoking.   |
| P233                       | Keep container tightly closed.   |
| P240                       | Ground/bond container and receiving equipment.   |
| P241                       | Use explosion-proof electrical/ ventilating/ lighting equipment.   |
| P242                       | Use only non-sparking tools.   |
| P243                       | Take precautionary measures against static discharge.  |
| P260                       | Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  |
| P264                       | Wash skin thoroughly after handling.   |
| P270                       | Do not eat, drink or smoke when using this product.  |
| P271                       | Use only outdoors or in a well-ventilated area.  |
| P280                       | Wear protective gloves/ protective clothing/ eye protection/ face protection.                                |
| P301 + P310                | IF SWALLOWED: Immediately call a POISON CENTER/doctor.   |
| P303 + P361 + P353         | IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. |
| P304 + P340                | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.             |
| P307 + P311                | IF exposed: Call a POISON CENTER or doctor/ physician.   |
| P322                       | Specific measures (see supplemental first aid instructions on this label).                                   |
| P330                       | Rinse mouth.   |
| P361                       | Remove/Take off immediately all contaminated clothing.   |
| P363                       | Wash contaminated clothing before reuse.   |
| P370 + P378                | In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.                        |
| P403 + P233                | Store in a well-ventilated place. Keep container tightly closed.   |
| P403 + P235                | Store in a well-ventilated place. Keep cool.   |
| P405                       | Store locked up.   |
| P501                       | Dispose of contents/ container to an approved waste disposal plant.  |

# 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

# **SECTION 3:** Composition/information on ingredients

#### 3.2 Mixtures

Molecular weight : 308.76 g/mol

| Component    |                   | Classification              | Concentration |
|--------------|-------------------|-----------------------------|---------------|
| Methanol     |                   |                             |               |
| CAS-No.      | 67-56-1           | Flam. Liq. 2; Acute Tox. 3; | >= 90 - <=    |
| EC-No.       | 200-659-6         | STOT SE 1; H225, H301,      | 100 %         |
| Index-No.    | 603-001-00-X      | H331, H311, H370            |               |
| Registration | 01-2119433307-44- |                             |               |
| number       | XXXX              |                             |               |

For the full text of the H-Statements mentioned in this Section, see Section 16.

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# **SECTION 4: First aid measures**

#### 4.1 Description of first aid measures

#### **General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

#### In case of eye contact

Flush eyes with water as a precaution.

#### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

- **4.2 Most important symptoms and effects, both acute and delayed** The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
- **4.3 Indication of any immediate medical attention and special treatment needed** No data available

#### **SECTION 5: Firefighting measures**

#### 5.1 Extinguishing media

#### **Suitable extinguishing media** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

- **5.2** Special hazards arising from the substance or mixture Carbon oxides
- **5.3** Advice for firefighters Wear self-contained breathing apparatus for firefighting if necessary.

# 5.4 Further information

Use water spray to cool unopened containers.

#### **SECTION 6: Accidental release measures**

#### 6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

For personal protection see section 8.

# 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

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# 6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wetbrushing and place in container for disposal according to local regulations (see section 13).

# 6.4 Reference to other sections

For disposal see section 13.

# SECTION 7: Handling and storage

# 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use explosion-proof equipment.Keep away from sources of ignition - No smoking.Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2.

#### 7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage temperature -20 °C Storage class (TRGS 510): 3: Flammable liquids

#### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

# SECTION 8: Exposure controls/personal protection

# 8.1 Control parameters

#### **Components with workplace control parameters**

| Component | CAS-No. | Value                       | Control<br>parameters                                     | Basis  |
|-----------|---------|-----------------------------|---|--|
| Methanol  | 67-56-1 | TWA                         | 200 ppm   | USA. ACGIH Threshold Limit<br>Values (TLV)     |
|           | Remarks | or Indices (                |   | •  |
|           |         | STEL                        | 250 ppm   | USA. ACGIH Threshold Limit<br>Values (TLV)     |
|           |         | or Indices (<br>Danger of d | s for which there<br>(see BEI® section<br>cutaneous absor | is a Biological Exposure Index<br>on)<br>ption |
|           |         | TWA                         | 200 ppm<br>260 mg/m3                                      | USA. NIOSH Recommended<br>Exposure Limits      |
|           |         | Potential for               | or dermal absorp  | tion   |

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| ST            | 250 ppm<br>325 mg/m3 | USA. NIOSH Recommended<br>Exposure Limits  |
|---------------|----------------------|--|
| Potential for | or dermal absorp     | tion   |
| TWA           | 200 ppm<br>260 mg/m3 | USA. Occupational Exposure<br>Limits (OSHA) - Table Z-1<br>Limits for Air Contaminants           |
| The value i   | n mg/m3 is app       | roximate.  |
| С             | 1,000 ppm            | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
| Skin          |                      |  |
| PEL           | 200 ppm<br>260 mg/m3 | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
| Skin          | ·                    |  |
| STEL          | 250 ppm<br>325 mg/m3 | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
| Skin          |                      |  |

# **Biological occupational exposure limits**

| Component | CAS-No. | Parameters     | Value      | Biological specimen | Basis  |
|-----------|---------|----------------|------------|---------------------|--|
| Methanol  | 67-56-1 | Methanol       | 15 mg/l    | Urine               | ACGIH -<br>Biological<br>Exposure Indices<br>(BEI) |
|           | Remarks | End of shift ( | As soon as | possible after exp  | oosure ceases)                                     |

# 8.2 Exposure controls

#### Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

#### Personal protective equipment

#### Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### **Skin protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact Material: butyl-rubber Minimum layer thickness: 0.3 mm

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Break through time: 480 min Material tested:Butoject® (KCL 897 / Aldrich Z677647, Size M)

Splash contact Material: Nitrile rubber Minimum layer thickness: 0.4 mm Break through time: 30 min Material tested:Camatril® (KCL 730 / Aldrich Z677442, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

#### **Body Protection**

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### **Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### **Control of environmental exposure**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

#### SECTION 9: Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties

| a) | Appearance   | Form: liquid  |
|----|--|---|
| b) | Odour  | No data available   |
| c) | Odour Threshold                                    | No data available   |
| d) | рН   | No data available   |
| e) | Melting<br>point/freezing point                    | No data available   |
| f) | Initial boiling point<br>and boiling range         | 64 - 65 °C 147 - 149 °F at 1.013 hPa                            |
| g) | Flash point  | 9.7 °C (49.5 °F) - closed cup                                   |
| h) | Evaporation rate                                   | No data available   |
| i) | Flammability (solid,<br>gas)                       | No data available   |
| j) | Upper/lower<br>flammability or<br>explosive limits | Upper explosion limit: 36 %(V)<br>Lower explosion limit: 6 %(V) |

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- k) Vapour pressure No data available
- I) Vapour density No data available
- m) Relative density 0.791 g/cm3 at 20 °C (68 °F)0.791 g/cm3 at 20 °C (68 °F)
- n) Water solubility No data available
- o) Partition coefficient: No data available n-octanol/water
- p) Auto-ignition No data available temperature
- q) Decomposition No data available temperature
- r) Viscosity No data available
- s) Explosive properties No data available
- t) Oxidizing properties No data available

#### **9.2 Other safety information** No data available

# **SECTION 10: Stability and reactivity**

# 10.1 Reactivity

No data available

# **10.2 Chemical stability**

Stable under recommended storage conditions.

# **10.3** Possibility of hazardous reactions

Vapours may form explosive mixture with air.

# 10.4 Conditions to avoid

Heat, flames and sparks. Extremes of temperature and direct sunlight.

#### **10.5** Incompatible materials

Acids, Oxidizing agents, Alkali metals, Strong oxidizing agents, Strong acids, Acid chlorides, Acid anhydrides, Reducing agents, Strong reducing agents, Phosphorus halides

#### **10.6 Hazardous decomposition products** Other decomposition products - No data available Hazardous decomposition products formed under fire conditions. - Carbon oxides In the event of fire: see section 5

# **SECTION 11: Toxicological information**

# **11.1 Information on toxicological effects**

# Acute toxicity

No data available

Inhalation: No data available

Dermal: No data available

No data available

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# Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

# Respiratory or skin sensitisation

No data available

#### Germ cell mutagenicity

No data available

#### Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

- ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

#### **Reproductive toxicity**

No data available

Specific target organ toxicity - single exposure No data available

#### **Specific target organ toxicity - repeated exposure** No data available

**Aspiration hazard** No data available

#### **Additional Information**

RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Methyl alcohol may be fatal or cause blindness if swallowed., Cannot be made nonpoisonous., Effects due to ingestion may include:, Nausea, Headache, Vomiting, Gastrointestinal disturbance, Dizziness, Weakness, Confusion.

Central nervous system - Breathing difficulties - Based on Human Evidence

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# **SECTION 12: Ecological information**

12.1 Toxicity

No data available

- **12.2 Persistence and degradability** No data available
- **12.3 Bioaccumulative potential** No data available
- **12.4 Mobility in soil** No data available
- 12.5 Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
- **12.6 Other adverse effects** No data available

#### **SECTION 13: Disposal considerations**

#### **13.1 Waste treatment methods**

#### Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

#### Contaminated packaging

Dispose of as unused product.

#### **SECTION 14: Transport information**

#### DOT (US)

UN number: 1230 Class: 3 Packing group: II Proper shipping name: MethanolSOLUTION

Reportable Quantity (RQ): Poison Inhalation Hazard: No

#### IMDG

UN number: 1230 Class: 3 (6.1) Packing group: II Proper shipping name: METHANOLSOLUTION

EMS-No: F-E, S-D

# ΙΑΤΑ

UN number: 1230 Class: 3 (6.1) Packing group: II Proper shipping name: MethanolSOLUTION

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| SEC | SECTION 15: Regulatory information   |   |   |  |  |  |
|-----|--|---|---|--|--|--|
|     | <b>SARA 302 Components</b><br>No chemicals in this material are subject to the reporting requirements of SARA Title III,<br>Section 302.   |   |   |  |  |  |
|     | <b>SARA 313 Components</b><br>The following components are subject to reporting level<br>Section 313:  | following components are subject to reporting levels established by SARA Title III, |   |  |  |  |
|     | Methanol   | CAS-No.<br>67-56-1  | Revision Date<br>2007-07-01               |  |  |  |
|     | SARA 311/312 Hazards<br>Fire Hazard, Acute Health Hazard, Chronic Health Hazar   | ď   |   |  |  |  |
|     | Massachusetts Right To Know Components   |   |   |  |  |  |
|     | Methanol   | CAS-No.<br>67-56-1  | Revision Date<br>2007-07-01               |  |  |  |
|     | No components are subject to the Massachusetts Right   | to Know Act.  |   |  |  |  |
|     | <b>Pennsylvania Right To Know Components</b><br>Methanol   | CAS-No.<br>67-56-1  | Revision Date<br>2007-07-01               |  |  |  |
|     | Methanol   | CAS-No.<br>67-56-1  | Revision Date<br>2007-07-01               |  |  |  |
|     | New Jersey Right To Know Components<br>Methanol  | CAS-No.<br>67-56-1  | Revision Date<br>2007-07-01               |  |  |  |
|     | Alprazolam   | 28981-97-7  | 1994-07-31                                |  |  |  |
|     | <b>California Prop. 65 Components</b><br>WARNING: This product contains a chemical known to<br>the State of California to cause birth defects or other<br>reproductive harm.Methanol<br>Alprazolam | CAS-No.<br>67-56-1<br>28981-97-7  | Revision Date<br>2012-03-16<br>2007-09-28 |  |  |  |
|     |  |   |   |  |  |  |

# **SECTION 16: Other information**

#### **Further information**

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to

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appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

The branding on the header and/or footer of this document may temporarily not visually match the product purchased as we transition our branding. However, all of the information in the document regarding the product remains unchanged and matches the product ordered. For further information please contact mlsbranding@sial.com.

Version: 6.1

Revision Date: 07/02/2019

Print Date: 03/31/2020

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# SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### **1.1 Product identifiers**

1.2

| 2 | Relevant identified us | es | of the substance or mixture and uses advised against |
|---|------------------------|----|--|
|   | Index-No.              | :  | 603-001-00-X   |
|   | Brand                  | :  | Cerilliant   |
|   | Product Number         | :  | A-907  |
|   | Product name           | :  | alpha-Hydroxyalprazolam solution                     |

# Identified uses : Laboratory chemicals, Synthesis of substances

# **1.3** Details of the supplier of the safety data sheet

| Company          | : | Sigma-Aldrich Inc.<br>3050 Spruce Street<br>ST. LOUIS MO 63103<br>UNITED STATES |
|------------------|---|---|
| Telephone<br>Fax | - | +1 314 771-5765<br>+1 800 325-5052  |

# **1.4 Emergency telephone number**

Emergency Phone # : +1-703-527-3887

# **SECTION 2: Hazards identification**

#### 2.1 Classification of the substance or mixture

#### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 2), H225 Acute toxicity, Oral (Category 3), H301 Acute toxicity, Inhalation (Category 3), H331 Acute toxicity, Dermal (Category 3), H311 Specific target organ toxicity - single exposure (Category 1), H370

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### 2.2 GHS Label elements, including precautionary statements

Pictogram



Danger

Signal word Hazard statement(s) H225 H301 + H311 + H331

Highly flammable liquid and vapour. Toxic if swallowed, in contact with skin or if inhaled.

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| H370                       | Causes damage to organs.   |
|----------------------------|--|
| Precautionary statement(s) |  |
| P210 , ()                  | Keep away from heat/sparks/open flames/hot surfaces. No smoking.   |
| P233                       | Keep container tightly closed.   |
| P240                       | Ground/bond container and receiving equipment.   |
| P241                       | Use explosion-proof electrical/ ventilating/ lighting equipment.   |
| P242                       | Use only non-sparking tools.   |
| P243                       | Take precautionary measures against static discharge.  |
| P260                       | Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  |
| P264                       | Wash skin thoroughly after handling.   |
| P270                       | Do not eat, drink or smoke when using this product.  |
| P271                       | Use only outdoors or in a well-ventilated area.  |
| P280                       | Wear protective gloves/ protective clothing/ eye protection/ face protection.                                |
| P301 + P310                | IF SWALLOWED: Immediately call a POISON CENTER/doctor.   |
| P303 + P361 + P353         | IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. |
| P304 + P340                | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.             |
| P307 + P311                | IF exposed: Call a POISON CENTER or doctor/ physician.   |
| P322                       | Specific measures (see supplemental first aid instructions on this label).                                   |
| P330                       | Rinse mouth.   |
| P361                       | Remove/Take off immediately all contaminated clothing.   |
| P363                       | Wash contaminated clothing before reuse.   |
| P370 + P378                | In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.                        |
| P403 + P233                | Store in a well-ventilated place. Keep container tightly closed.   |
| P403 + P235                | Store in a well-ventilated place. Keep cool.   |
| P405                       | Store locked up.   |
| P501                       | Dispose of contents/ container to an approved waste disposal plant.  |

# 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

# SECTION 3: Composition/information on ingredients

#### 3.2 Mixtures

Molecular weight : 324.76 g/mol

| Component              |                           | Classification  | Concentration       |
|------------------------|---------------------------|---|---------------------|
| Methanol               |                           |   |                     |
| CAS-No.<br>EC-No.      | 67-56-1<br>200-659-6      | Flam. Liq. 2; Acute Tox. 3;<br>STOT SE 1; H225, H301, | >= 90 - <=<br>100 % |
| Index-No.              | 603-001-00-X              | H331, H311, H370                                      | 100 %               |
| Registration<br>number | 01-2119433307-44-<br>XXXX |   |                     |

For the full text of the H-Statements mentioned in this Section, see Section 16.

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# **SECTION 4: First aid measures**

#### 4.1 Description of first aid measures

#### **General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

#### In case of eye contact

Flush eyes with water as a precaution.

#### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

- **4.2 Most important symptoms and effects, both acute and delayed** The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
- **4.3 Indication of any immediate medical attention and special treatment needed** No data available

#### **SECTION 5: Firefighting measures**

#### 5.1 Extinguishing media

#### **Suitable extinguishing media** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

- **5.2** Special hazards arising from the substance or mixture Carbon oxides
- **5.3** Advice for firefighters Wear self-contained breathing apparatus for firefighting if necessary.

# 5.4 Further information

Use water spray to cool unopened containers.

#### **SECTION 6: Accidental release measures**

#### 6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

For personal protection see section 8.

# 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

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# 6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wetbrushing and place in container for disposal according to local regulations (see section 13).

# 6.4 Reference to other sections

For disposal see section 13.

# SECTION 7: Handling and storage

# 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use explosion-proof equipment.Keep away from sources of ignition - No smoking.Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2.

#### 7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage temperature -20 °C Storage class (TRGS 510): 3: Flammable liquids

#### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

# SECTION 8: Exposure controls/personal protection

# 8.1 Control parameters

#### **Components with workplace control parameters**

| Component                                      | CAS-No. | Value   | Control<br>parameters                     | Basis  |  |  |
|--|---------|---|---|--|--|--|
| Remarks He<br>Na<br>Di<br>Ey<br>Su<br>or<br>Da |         | TWA   | 200 ppm                                   | USA. ACGIH Threshold Limit<br>Values (TLV)     |  |  |
|  |         | Headache<br>Nausea<br>Dizziness<br>Eye damage<br>Substances for which there is a Biological Exposure Index<br>or Indices (see BEI® section)<br>Danger of cutaneous absorption |   |  |  |  |
|  |         | STEL  | 250 ppm                                   | USA. ACGIH Threshold Limit<br>Values (TLV)     |  |  |
|  |         |   | (see BEI® section<br>cutaneous absor      | is a Biological Exposure Index<br>on)<br>ption |  |  |
|  |         |   | USA. NIOSH Recommended<br>Exposure Limits |  |  |  |
|  |         | Potential for   | or dermal absorp                          | tion   |  |  |

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| ST            | 250 ppm<br>325 mg/m3 | USA. NIOSH Recommended<br>Exposure Limits  |
|---------------|----------------------|--|
| Potential for | or dermal absorp     | tion   |
| TWA           | 200 ppm<br>260 mg/m3 | USA. Occupational Exposure<br>Limits (OSHA) - Table Z-1<br>Limits for Air Contaminants           |
| The value i   | n mg/m3 is app       | roximate.  |
| С             | 1,000 ppm            | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
| Skin          |                      |  |
| PEL           | 200 ppm<br>260 mg/m3 | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
| Skin          | ·                    |  |
| STEL          | 250 ppm<br>325 mg/m3 | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
| Skin          |                      |  |

# **Biological occupational exposure limits**

| Component        | CAS-No. | Parameters     | Value       | Biological specimen | Basis  |  |
|------------------|---------|----------------|-------------|---------------------|--|--|
| Methanol 67-56-1 |         | Methanol       | 15 mg/l     | Urine               | ACGIH -<br>Biological<br>Exposure Indices<br>(BEI) |  |
|                  | Remarks | End of shift ( | (As soon as | s possible after ex | posure ceases)                                     |  |

#### 8.2 Exposure controls

#### Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

#### Personal protective equipment

#### Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### **Skin protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact Material: butyl-rubber Minimum layer thickness: 0.3 mm

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Break through time: 480 min Material tested:Butoject® (KCL 897 / Aldrich Z677647, Size M)

Splash contact Material: Nitrile rubber Minimum layer thickness: 0.4 mm Break through time: 30 min Material tested:Camatril® (KCL 730 / Aldrich Z677442, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

#### **Body Protection**

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### **Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### **Control of environmental exposure**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

#### SECTION 9: Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties

| a) | Appearance   | Form: liquid  |
|----|--|---|
| b) | Odour  | No data available   |
| c) | Odour Threshold                                    | No data available   |
| d) | рН   | No data available   |
| e) | Melting<br>point/freezing point                    | No data available   |
| f) | Initial boiling point<br>and boiling range         | 64 - 65 °C 147 - 149 °F at 1.013 hPa                            |
| g) | Flash point  | 9.7 °C (49.5 °F) - closed cup                                   |
| h) | Evaporation rate                                   | No data available   |
| i) | Flammability (solid,<br>gas)                       | No data available   |
| j) | Upper/lower<br>flammability or<br>explosive limits | Upper explosion limit: 36 %(V)<br>Lower explosion limit: 6 %(V) |

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- k) Vapour pressure No data available
- I) Vapour density No data available
- m) Relative density 0.791 g/cm3 at 20 °C (68 °F)0.791 g/cm3 at 20 °C (68 °F)
- n) Water solubility No data available
- o) Partition coefficient: No data available n-octanol/water
- p) Auto-ignition No data available temperature
- q) Decomposition No data available temperature
- r) Viscosity No data available
- s) Explosive properties No data available
- t) Oxidizing properties No data available

#### **9.2 Other safety information** No data available

# **SECTION 10: Stability and reactivity**

# 10.1 Reactivity

No data available

# **10.2** Chemical stability

Stable under recommended storage conditions.

# **10.3** Possibility of hazardous reactions

Vapours may form explosive mixture with air.

# 10.4 Conditions to avoid

Heat, flames and sparks. Extremes of temperature and direct sunlight.

#### **10.5** Incompatible materials

Acids, Oxidizing agents, Alkali metals, Strong oxidizing agents, Strong acids, Acid chlorides, Acid anhydrides, Reducing agents, Strong reducing agents, Phosphorus halides

#### **10.6 Hazardous decomposition products** Other decomposition products - No data available Hazardous decomposition products formed under fire conditions. - Carbon oxides In the event of fire: see section 5

# **SECTION 11: Toxicological information**

# **11.1 Information on toxicological effects**

# Acute toxicity

No data available

Inhalation: No data available

Dermal: No data available

No data available

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# Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

# Respiratory or skin sensitisation

No data available

#### Germ cell mutagenicity

No data available

#### Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

- ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

#### **Reproductive toxicity**

No data available

Specific target organ toxicity - single exposure No data available

#### **Specific target organ toxicity - repeated exposure** No data available

**Aspiration hazard** No data available

#### **Additional Information**

RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Methyl alcohol may be fatal or cause blindness if swallowed., Cannot be made nonpoisonous., Effects due to ingestion may include:, Nausea, Headache, Vomiting, Gastrointestinal disturbance, Dizziness, Weakness, Confusion.

Central nervous system - Breathing difficulties - Based on Human Evidence

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# **SECTION 12: Ecological information**

12.1 Toxicity

No data available

- **12.2 Persistence and degradability** No data available
- **12.3 Bioaccumulative potential** No data available
- **12.4 Mobility in soil** No data available
- 12.5 Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
- **12.6 Other adverse effects** No data available

#### **SECTION 13: Disposal considerations**

#### **13.1 Waste treatment methods**

#### Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

#### Contaminated packaging

Dispose of as unused product.

#### **SECTION 14: Transport information**

#### DOT (US)

UN number: 1230 Class: 3 Packing group: II Proper shipping name: MethanolSOLUTION

Reportable Quantity (RQ): Poison Inhalation Hazard: No

#### IMDG

UN number: 1230 Class: 3 (6.1) Packing group: II Proper shipping name: METHANOLSOLUTION

EMS-No: F-E, S-D

# ΙΑΤΑ

UN number: 1230 Class: 3 (6.1) Packing group: II Proper shipping name: MethanolSOLUTION

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| SEC | TION 15: Regulatory information  |                    |                             |
|-----|--|--------------------|-----------------------------|
|     | <b>SARA 302 Components</b><br>No chemicals in this material are subject to the reportin<br>Section 302.  | g requirements of  | SARA Title III,             |
|     | SARA 313 Components<br>The following components are subject to reporting level<br>Section 313:   | s established by S | ARA Title III,              |
|     | Methanol   | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |
|     | SARA 311/312 Hazards<br>Fire Hazard, Acute Health Hazard, Chronic Health Hazar   | ď                  |                             |
|     | Massachusetts Right To Know Components   |                    |                             |
|     | Methanol   | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |
|     | No components are subject to the Massachusetts Right   | to Know Act.       |                             |
|     | Pennsylvania Right To Know Components<br>Methanol  | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |
|     | Methanol   | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |
|     | New Jersey Right To Know Components<br>Methanol  | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |
|     | <b>California Prop. 65 Components</b><br>WARNING: This product contains a chemical known to<br>the State of California to cause birth defects or other<br>reproductive harm.Methanol | CAS-No.<br>67-56-1 | Revision Date<br>2012-03-16 |

# **SECTION 16: Other information**

#### **Further information**

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See

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www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

The branding on the header and/or footer of this document may temporarily not visually match the product purchased as we transition our branding. However, all of the information in the document regarding the product remains unchanged and matches the product ordered. For further information please contact mlsbranding@sial.com.

Version: 6.1

Revision Date: 07/02/2019

Print Date: 03/09/2020

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# SAFETY DATA SHEET

# SECTION 1: Identification of the substance/mixture and of the company/undertaking

# 1.1 Product identifiers

| 2 | Relevant identified us | es | of the substance or mixture and uses advised against |
|---|------------------------|----|--|
|   | Index-No.              | -  | 603-001-00-X   |
|   | Brand                  | -  | Cerilliant   |
|   | Product Number         |    | A-908  |
|   | Product name           | :  | alpha-Hydroxyalprazolam-d5 solution                  |

#### 1.2 Relevant identifi tance or mixture and u advised against

Identified uses : Laboratory chemicals, Synthesis of substances

# 1.3 Details of the supplier of the safety data sheet

| Company          | : | Sigma-Aldrich Inc.<br>3050 Spruce Street<br>ST. LOUIS MO 63103<br>UNITED STATES |
|------------------|---|---|
| Telephone<br>Fax | - | +1 314 771-5765<br>+1 800 325-5052  |

# **1.4 Emergency telephone number**

Emergency Phone # : +1-703-527-3887

# SECTION 2: Hazards identification

#### 2.1 **Classification of the substance or mixture**

# GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 2), H225 Acute toxicity, Oral (Category 3), H301 Acute toxicity, Inhalation (Category 3), H331 Acute toxicity, Dermal (Category 3), H311 Specific target organ toxicity - single exposure (Category 1), H370

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### 2.2 GHS Label elements, including precautionary statements

Danger

Pictogram

Signal word Hazard statement(s) H225 H301 + H311 + H331

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Highly flammable liquid and vapour. Toxic if swallowed, in contact with skin or if inhaled.

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| H370                       | Causes damage to organs.   |
|----------------------------|--|
| Precautionary statement(s) |  |
| P210 , ()                  | Keep away from heat/sparks/open flames/hot surfaces. No smoking.   |
| P233                       | Keep container tightly closed.   |
| P240                       | Ground/bond container and receiving equipment.   |
| P241                       | Use explosion-proof electrical/ ventilating/ lighting equipment.   |
| P242                       | Use only non-sparking tools.   |
| P243                       | Take precautionary measures against static discharge.  |
| P260                       | Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  |
| P264                       | Wash skin thoroughly after handling.   |
| P270                       | Do not eat, drink or smoke when using this product.  |
| P271                       | Use only outdoors or in a well-ventilated area.  |
| P280                       | Wear protective gloves/ protective clothing/ eye protection/ face protection.                                |
| P301 + P310                | IF SWALLOWED: Immediately call a POISON CENTER/doctor.   |
| P303 + P361 + P353         | IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. |
| P304 + P340                | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.             |
| P307 + P311                | IF exposed: Call a POISON CENTER or doctor/ physician.   |
| P322                       | Specific measures (see supplemental first aid instructions on this label).                                   |
| P330                       | Rinse mouth.   |
| P361                       | Remove/Take off immediately all contaminated clothing.   |
| P363                       | Wash contaminated clothing before reuse.   |
| P370 + P378                | In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.                        |
| P403 + P233                | Store in a well-ventilated place. Keep container tightly closed.   |
| P403 + P235                | Store in a well-ventilated place. Keep cool.   |
| P405                       | Store locked up.   |
| P501                       | Dispose of contents/ container to an approved waste disposal plant.  |

# 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

# **SECTION 3:** Composition/information on ingredients

#### 3.2 Mixtures

| Component                           |   | Classification  | Concentration       |
|-------------------------------------|---|---|---------------------|
| Methanol                            |   |   |                     |
| CAS-No.<br>EC-No.                   | 67-56-1<br>200-659-6                      | Flam. Liq. 2; Acute Tox. 3;<br>STOT SE 1; H225, H301, | >= 90 - <=<br>100 % |
| Index-No.<br>Registration<br>number | 603-001-00-X<br>01-2119433307-44-<br>XXXX | H331, H311, H370                                      |                     |

For the full text of the H-Statements mentioned in this Section, see Section 16.

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# SECTION 4: First aid measures

#### 4.1 Description of first aid measures

#### **General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

#### In case of eye contact

Flush eyes with water as a precaution.

#### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

- **4.2 Most important symptoms and effects, both acute and delayed** The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
- **4.3 Indication of any immediate medical attention and special treatment needed** No data available

# **SECTION 5: Firefighting measures**

#### 5.1 Extinguishing media

# Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

- **5.2** Special hazards arising from the substance or mixture Carbon oxides
- **5.3 Advice for firefighters** Wear self-contained breathing apparatus for firefighting if necessary.

#### 5.4 Further information

Use water spray to cool unopened containers.

#### **SECTION 6:** Accidental release measures

**6.1 Personal precautions, protective equipment and emergency procedures** Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

For personal protection see section 8.

#### 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

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# 6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wetbrushing and place in container for disposal according to local regulations (see section 13).

# 6.4 Reference to other sections

For disposal see section 13.

# SECTION 7: Handling and storage

# 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use explosion-proof equipment.Keep away from sources of ignition - No smoking.Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2.

# 7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store under inert gas. hygroscopic

Recommended storage temperature -20 °C Storage class (TRGS 510): 3: Flammable liquids

# 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

# **SECTION 8: Exposure controls/personal protection**

#### 8.1 Control parameters

#### Components with workplace control parameters

| Component | CAS-No. | Value   | Control<br>parameters | Basis                                      |
|-----------|---------|---|-----------------------|--|
| Methanol  | 67-56-1 | TWA   | 200 ppm               | USA. ACGIH Threshold Limit<br>Values (TLV) |
|           | Remarks | Headache<br>Nausea<br>Dizziness<br>Eye damage<br>Substances for which there is a Biological Exposure Index<br>or Indices (see BEI® section)<br>Danger of cutaneous absorption |                       |  |
|           |         | STEL  | 250 ppm               | USA. ACGIH Threshold Limit<br>Values (TLV) |
|           |         | Headache<br>Nausea<br>Dizziness<br>Eye damage<br>Substances for which there is a Biological Exposure Index<br>or Indices (see BEI® section)<br>Danger of cutaneous absorption |                       |  |

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| TWA         | 200 ppm<br>260 mg/m3               | USA. NIOSH Recommended<br>Exposure Limits  |  |
|-------------|------------------------------------|--|--|
| Potential f | Potential for dermal absorption    |  |  |
| ST          | 250 ppm<br>325 mg/m3               | USA. NIOSH Recommended<br>Exposure Limits  |  |
| Potential f | Potential for dermal absorption    |  |  |
| TWA         | 200 ppm<br>260 mg/m3               | USA. Occupational Exposure<br>Limits (OSHA) - Table Z-1<br>Limits for Air Contaminants           |  |
| The value   | The value in mg/m3 is approximate. |  |  |
| С           | 1,000 ppm                          | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |  |
| Skin        | Skin                               |  |  |
| PEL         | 200 ppm<br>260 mg/m3               | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |  |
| Skin        | 1                                  |  |  |
| STEL        | 250 ppm<br>325 mg/m3               | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |  |
| Skin        |                                    |  |  |

# **Biological occupational exposure limits**

| Component | CAS-No. | Parameters   | Value   | Biological specimen | Basis  |  |
|-----------|---------|--|---------|---------------------|--|--|
| Methanol  | 67-56-1 | Methanol   | 15 mg/l | Urine               | ACGIH -<br>Biological<br>Exposure Indices<br>(BEI) |  |
|           | Remarks | End of shift (As soon as possible after exposure ceases) |         |                     |  |  |

#### 8.2 Exposure controls

#### Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

#### Personal protective equipment

#### Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

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Full contact Material: butyl-rubber Minimum layer thickness: 0.3 mm Break through time: 480 min Material tested:Butoject® (KCL 897 / Aldrich Z677647, Size M)

Splash contact Material: Nitrile rubber Minimum layer thickness: 0.4 mm Break through time: 30 min Material tested:Camatril® (KCL 730 / Aldrich Z677442, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

#### **Body Protection**

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### **Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### **Control of environmental exposure**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

#### **SECTION 9: Physical and chemical properties**

#### 9.1 Information on basic physical and chemical properties

| a) | Appearance                                 | Form: liquid                         |
|----|--|--------------------------------------|
| b) | Odour                                      | No data available                    |
| c) | Odour Threshold                            | No data available                    |
| d) | рН   | No data available                    |
| e) | Melting<br>point/freezing point            | No data available                    |
| f) | Initial boiling point<br>and boiling range | 64 - 65 °C 147 - 149 °F at 1.013 hPa |
| g) | Flash point                                | 9.7 °C (49.5 °F) - closed cup        |
| h) | Evaporation rate                           | No data available                    |
| i) | Flammability (solid,<br>gas)               | No data available                    |

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| j)                       | Upper/lower<br>flammability or<br>explosive limits | Upper explosion limit: 36 %(V)<br>Lower explosion limit: 6 %(V) |  |  |  |
|--------------------------|--|---|--|--|--|
| k)                       | Vapour pressure                                    | No data available   |  |  |  |
| I)                       | Vapour density                                     | No data available   |  |  |  |
| m)                       | Relative density                                   | 0.791 g/cm3 at 20 °C (68 °F)                                    |  |  |  |
| n)                       | Water solubility                                   | No data available   |  |  |  |
| o)                       | Partition coefficient:<br>n-octanol/water          | No data available   |  |  |  |
| p)                       | Auto-ignition<br>temperature                       | No data available   |  |  |  |
| q)                       | Decomposition<br>temperature                       | No data available   |  |  |  |
| r)                       | Viscosity  | No data available   |  |  |  |
| s)                       | Explosive properties                               | No data available   |  |  |  |
| t)                       | Oxidizing properties                               | No data available   |  |  |  |
| Other safety information |  |   |  |  |  |

No data available

#### **SECTION 10: Stability and reactivity**

#### **10.1 Reactivity**

9.2

No data available

#### **10.2 Chemical stability**

Stable under recommended storage conditions.

**10.3 Possibility of hazardous reactions** No data available

#### **10.4 Conditions to avoid** Heat, flames and sparks. Extremes of temperature and direct sunlight.

#### **10.5** Incompatible materials

Acids, Öxidizing agents, Alkali metals, Strong oxidizing agents, Strong acids, Acid chlorides, Acid anhydrides, Reducing agents, Strong reducing agents, Phosphorus halides

# **10.6 Hazardous decomposition products**

Other decomposition products - No data available Hazardous decomposition products formed under fire conditions. - Carbon oxides In the event of fire: see section 5

# **SECTION 11: Toxicological information**

#### **11.1 Information on toxicological effects**

#### Acute toxicity No data available

Inhalation: No data available

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Dermal: No data available

No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation No data available

**Respiratory or skin sensitisation** No data available

#### **Germ cell mutagenicity** No data available

#### Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

- ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

#### **Reproductive toxicity**

No data available

Specific target organ toxicity - single exposure No data available

**Specific target organ toxicity - repeated exposure** No data available

#### **Aspiration hazard**

No data available

# **Additional Information**

RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Methyl alcohol may be fatal or cause blindness if swallowed., Cannot be made nonpoisonous., Effects due to ingestion may include:, Nausea, Headache, Vomiting, Gastrointestinal disturbance, Dizziness, Weakness, Confusion.

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# SECTION 12: Ecological information

12.1 Toxicity

No data available

- **12.2 Persistence and degradability** No data available
- **12.3 Bioaccumulative potential** No data available
- **12.4 Mobility in soil** No data available
- 12.5 Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
- **12.6 Other adverse effects** No data available

#### **SECTION 13: Disposal considerations**

#### **13.1 Waste treatment methods**

#### Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

#### **Contaminated packaging**

Dispose of as unused product.

# **SECTION 14:** Transport information

#### DOT (US)

UN number: 1230 Class: 3 Packing group: II Proper shipping name: MethanolSOLUTION

Reportable Quantity (RQ): Poison Inhalation Hazard: No

#### IMDG

UN number: 1230 Class: 3 (6.1) Packing group: II Proper shipping name: METHANOLSOLUTION

EMS-No: F-E, S-D

# ΙΑΤΑ

UN number: 1230 Class: 3 (6.1) Packing group: II Proper shipping name: MethanolSOLUTION

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| SECTION 15: Regulatory information   |  |                             |  |
|--|--|-----------------------------|--|
| <b>SARA 302 Components</b><br>No chemicals in this material are subject to the reporting<br>Section 302.   | g requirements of  | SARA Title III,             |  |
| <b>SARA 313 Components</b><br>The following components are subject to reporting levels<br>Section 313:   | he following components are subject to reporting levels established by SARA Title III, |                             |  |
| Methanol   | CAS-No.<br>67-56-1   | Revision Date<br>2007-07-01 |  |
| Massachusetts Right To Know Components   |  |                             |  |
| Methanol   | CAS-No.<br>67-56-1   | Revision Date<br>2007-07-01 |  |
|  | No components are subject to the Massachusetts Right to Know Act.                      |                             |  |
| Pennsylvania Right To Know Components<br>Methanol  | CAS-No.<br>67-56-1   | Revision Date<br>2007-07-01 |  |
| Methanol   | CAS-No.<br>67-56-1   | Revision Date<br>2007-07-01 |  |
| New Jersey Right To Know Components<br>Methanol  | CAS-No.<br>67-56-1   | Revision Date<br>2007-07-01 |  |
| <b>California Prop. 65 Components</b><br>WARNING: This product contains a chemical known to<br>the State of California to cause birth defects or other<br>reproductive harm.Methanol | CAS-No.<br>67-56-1   | Revision Date<br>2012-03-16 |  |

# **SECTION 16: Other information**

#### Further information

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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# SAFETY DATA SHEET

Version 6.1 Revision Date 07/02/2019 Print Date 03/10/2020

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

## **1.1 Product identifiers**

| Product name   | : Alprazolam-d5 solution |
|----------------|--------------------------|
| Product Number | : A-910                  |
| Brand          | : Cerilliant             |
| Index-No.      | : 603-001-00-X           |

## **1.2** Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Synthesis of substances

## 1.3 Details of the supplier of the safety data sheet

| Company          | : | Sigma-Aldrich Inc.<br>3050 Spruce Street<br>ST. LOUIS MO 63103<br>UNITED STATES |
|------------------|---|---|
| Telephone<br>Fax | - | +1 314 771-5765<br>+1 800 325-5052  |

## **1.4 Emergency telephone number**

Emergency Phone # : +1-703-527-3887

## **SECTION 2: Hazards identification**

## 2.1 Classification of the substance or mixture

## GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 2), H225 Acute toxicity, Oral (Category 3), H301 Acute toxicity, Inhalation (Category 3), H331 Acute toxicity, Dermal (Category 3), H311 Specific target organ toxicity - single exposure (Category 1), H370

For the full text of the H-Statements mentioned in this Section, see Section 16.

## 2.2 GHS Label elements, including precautionary statements

Danger

Pictogram

Signal word Hazard statement(s) H225 H301 + H311 + H331

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Highly flammable liquid and vapour. Toxic if swallowed, in contact with skin or if inhaled.

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| H370                       | Causes damage to organs.   |
|----------------------------|--|
| Precautionary statement(s) |  |
| P210                       | Keep away from heat/sparks/open flames/hot surfaces. No smoking.   |
| P233                       | Keep container tightly closed.   |
| P240                       | Ground/bond container and receiving equipment.   |
| P241                       | Use explosion-proof electrical/ ventilating/ lighting equipment.   |
| P242                       | Use only non-sparking tools.   |
| P243                       | Take precautionary measures against static discharge.  |
| P260                       | Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  |
| P264                       | Wash skin thoroughly after handling.   |
| P270                       | Do not eat, drink or smoke when using this product.  |
| P271                       | Use only outdoors or in a well-ventilated area.  |
| P280                       | Wear protective gloves/ protective clothing/ eye protection/ face protection.                                |
| P301 + P310                | IF SWALLOWED: Immediately call a POISON CENTER/doctor.   |
| P303 + P361 + P353         | IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. |
| P304 + P340                | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.             |
| P307 + P311                | IF exposed: Call a POISON CENTER or doctor/ physician.   |
| P322                       | Specific measures (see supplemental first aid instructions on this label).                                   |
| P330                       | Rinse mouth.   |
| P361                       | Remove/Take off immediately all contaminated clothing.   |
| P363                       | Wash contaminated clothing before reuse.   |
| P370 + P378                | In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.                        |
| P403 + P233                | Store in a well-ventilated place. Keep container tightly closed.   |
| P403 + P235                | Store in a well-ventilated place. Keep cool.   |
| P405                       | Store locked up.   |
| P501                       | Dispose of contents/ container to an approved waste disposal plant.  |

## 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

## **SECTION 3:** Composition/information on ingredients

#### 3.2 Mixtures

Molecular weight : 313.80 g/mol

| Component    |                   | Classification              | Concentration |
|--------------|-------------------|-----------------------------|---------------|
| Methanol     |                   |                             |               |
| CAS-No.      | 67-56-1           | Flam. Liq. 2; Acute Tox. 3; | >= 90 - <=    |
| EC-No.       | 200-659-6         | STOT SE 1; H225, H301,      | 100 %         |
| Index-No.    | 603-001-00-X      | H331, H311, H370            |               |
| Registration | 01-2119433307-44- |                             |               |
| number       | XXXX              |                             |               |

For the full text of the H-Statements mentioned in this Section, see Section 16.

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## SECTION 4: First aid measures

## 4.1 Description of first aid measures

#### **General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance.

## If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

## In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

## In case of eye contact

Flush eyes with water as a precaution.

#### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

- **4.2 Most important symptoms and effects, both acute and delayed** The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
- **4.3 Indication of any immediate medical attention and special treatment needed** No data available

## **SECTION 5: Firefighting measures**

## 5.1 Extinguishing media

## Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

- **5.2** Special hazards arising from the substance or mixture Carbon oxides
- **5.3 Advice for firefighters** Wear self-contained breathing apparatus for firefighting if necessary.

## 5.4 Further information

Use water spray to cool unopened containers.

## **SECTION 6:** Accidental release measures

**6.1 Personal precautions, protective equipment and emergency procedures** Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

For personal protection see section 8.

## 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

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## 6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wetbrushing and place in container for disposal according to local regulations (see section 13).

## 6.4 Reference to other sections

For disposal see section 13.

## SECTION 7: Handling and storage

## 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use explosion-proof equipment.Keep away from sources of ignition - No smoking.Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2.

## 7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store under inert gas. hygroscopic

Recommended storage temperature -20 °C Storage class (TRGS 510): 3: Flammable liquids

## 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

## **SECTION 8: Exposure controls/personal protection**

## 8.1 Control parameters

## Components with workplace control parameters

| Component | CAS-No. | Value        | Control<br>parameters | Basis                                      |
|-----------|---------|--------------|-----------------------|--|
| Methanol  | 67-56-1 | TWA          | 200 ppm               | USA. ACGIH Threshold Limit<br>Values (TLV) |
|           | Remarks | or Indices ( |                       |  |
|           |         | STEL         | 250 ppm               | USA. ACGIH Threshold Limit<br>Values (TLV) |
|           |         | or Indices ( |                       |  |

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| TWA         | 200 ppm<br>260 mg/m3            | USA. NIOSH Recommended<br>Exposure Limits  |  |  |
|-------------|---------------------------------|--|--|--|
| Potential f | Potential for dermal absorption |  |  |  |
| ST          | 250 ppm<br>325 mg/m3            | USA. NIOSH Recommended<br>Exposure Limits  |  |  |
| Potential f | or dermal absor                 |  |  |  |
| TWA         | 200 ppm<br>260 mg/m3            | USA. Occupational Exposure<br>Limits (OSHA) - Table Z-1<br>Limits for Air Contaminants           |  |  |
| The value   | in mg/m3 is app                 | proximate.   |  |  |
| С           | 1,000 ppm                       | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |  |  |
| Skin        | Skin                            |  |  |  |
| PEL         | 200 ppm<br>260 mg/m3            | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |  |  |
| Skin        | 1                               |  |  |  |
| STEL        | 250 ppm<br>325 mg/m3            | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |  |  |
| Skin        |                                 |  |  |  |

## **Biological occupational exposure limits**

| Component | CAS-No. | Parameters   | Value   | Biological specimen | Basis  |
|-----------|---------|--|---------|---------------------|--|
| Methanol  | 67-56-1 | Methanol   | 15 mg/l | Urine               | ACGIH -<br>Biological<br>Exposure Indices<br>(BEI) |
|           | Remarks | End of shift (As soon as possible after exposure ceases) |         |                     |  |

## 8.2 Exposure controls

## Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

## Personal protective equipment

## Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

## Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

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Full contact Material: butyl-rubber Minimum layer thickness: 0.3 mm Break through time: 480 min Material tested:Butoject® (KCL 897 / Aldrich Z677647, Size M)

Splash contact Material: Nitrile rubber Minimum layer thickness: 0.4 mm Break through time: 30 min Material tested:Camatril® (KCL 730 / Aldrich Z677442, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

## **Body Protection**

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

## **Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### **Control of environmental exposure**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

## **SECTION 9: Physical and chemical properties**

## 9.1 Information on basic physical and chemical properties

| a) | Appearance                                 | Form: liquid   |
|----|--|--|
| b) | Odour                                      | No data available  |
| c) | Odour Threshold                            | No data available  |
| d) | рН   | No data available  |
| e) | Melting<br>point/freezing point            | No data available  |
| f) | Initial boiling point<br>and boiling range | 64 - 65 °C 147 - 149 °F at 1.013 hPa<br>64 - 65 °C (147 - 149 °F) at 1.013 hPa |
| g) | Flash point                                | 9.7 °C (49.5 °F) - closed cup  |
| h) | Evaporation rate                           | No data available  |
| i) | Flammability (solid,<br>gas)               | No data available  |

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| j) | Upper/lower<br>flammability or<br>explosive limits | Upper explosion limit: 36 %(V)<br>36 %(V)<br>Lower explosion limit: 6 %(V)6 %(V) |
|----|--|--|
| k) | Vapour pressure                                    | No data available  |
| I) | Vapour density                                     | No data available  |
| m) | Relative density                                   | 0.791 g/cm3 at 20 °C (68 °F)0.791 g/cm3 at 20 °C (68 °F)                         |
| n) | Water solubility                                   | No data available  |
| 0) | Partition coefficient:<br>n-octanol/water          | No data available  |
| p) | Auto-ignition<br>temperature                       | No data available  |
| q) | Decomposition<br>temperature                       | No data available  |
| r) | Viscosity  | No data available  |
| s) | Explosive properties                               | No data available  |
| t) | Oxidizing properties                               | No data available  |
|    | <b>her safety informatio</b><br>data available     | n  |

## **SECTION 10: Stability and reactivity**

## **10.1 Reactivity**

9.2

No data available

#### **10.2 Chemical stability**

Stable under recommended storage conditions.

**10.3 Possibility of hazardous reactions** No data available

#### **10.4 Conditions to avoid** Heat, flames and sparks. Extremes of temperature and direct sunlight.

#### **10.5** Incompatible materials

Acids, Öxidizing agents, Alkali metals, Strong oxidizing agents, Strong acids, Acid chlorides, Acid anhydrides, Reducing agents, Strong reducing agents, Phosphorus halides

## **10.6 Hazardous decomposition products**

Other decomposition products - No data available Hazardous decomposition products formed under fire conditions. - Carbon oxides In the event of fire: see section 5

## **SECTION 11: Toxicological information**

## **11.1** Information on toxicological effects

#### Acute toxicity No data available

Inhalation: No data available

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Dermal: No data available

No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation No data available

**Respiratory or skin sensitisation** No data available

#### **Germ cell mutagenicity** No data available

## Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

- ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

## **Reproductive toxicity**

No data available

Specific target organ toxicity - single exposure No data available

**Specific target organ toxicity - repeated exposure** No data available

## Aspiration hazard

No data available

## **Additional Information**

RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Methyl alcohol may be fatal or cause blindness if swallowed., Cannot be made nonpoisonous., Effects due to ingestion may include:, Nausea, Headache, Vomiting, Gastrointestinal disturbance, Dizziness, Weakness, Confusion.

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## SECTION 12: Ecological information

12.1 Toxicity

No data available

- **12.2 Persistence and degradability** No data available
- **12.3 Bioaccumulative potential** No data available
- **12.4 Mobility in soil** No data available
- 12.5 Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
- **12.6 Other adverse effects** No data available

## **SECTION 13: Disposal considerations**

## **13.1 Waste treatment methods**

## Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

## **Contaminated packaging**

Dispose of as unused product.

## **SECTION 14:** Transport information

#### DOT (US)

UN number: 1230 Class: 3 Packing group: II Proper shipping name: MethanolSOLUTION

Reportable Quantity (RQ): Poison Inhalation Hazard: No

## IMDG

UN number: 1230 Class: 3 (6.1) Packing group: II Proper shipping name: METHANOLSOLUTION

EMS-No: F-E, S-D

## ΙΑΤΑ

UN number: 1230 Class: 3 (6.1) Packing group: II Proper shipping name: MethanolSOLUTION

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| SECTION 15: Regulatory information   |                    |                             |
|--|--------------------|-----------------------------|
| <b>SARA 302 Components</b><br>No chemicals in this material are subject to the reporting<br>Section 302.   | g requirements of  | SARA Title III,             |
| SARA 313 Components<br>The following components are subject to reporting levels<br>Section 313:  | s established by S | ARA Title III,              |
| Methanol   | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |
| Massachusetts Right To Know Components   |                    |                             |
| Methanol   | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |
| No components are subject to the Massachusetts Right t   | to Know Act.       |                             |
| Pennsylvania Right To Know Components<br>Methanol  | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |
| Methanol   | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |
| New Jersey Right To Know Components<br>Methanol  | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |
| <b>California Prop. 65 Components</b><br>WARNING: This product contains a chemical known to<br>the State of California to cause birth defects or other<br>reproductive harm.Methanol | CAS-No.<br>67-56-1 | Revision Date<br>2012-03-16 |

## **SECTION 16: Other information**

#### Further information

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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The branding on the header and/or footer of this document may temporarily not visually match the product purchased as we transition our branding. However, all of the information in the document regarding the product remains unchanged and matches the product ordered. For further information please contact mlsbranding@sial.com.

Version: 6.1

Revision Date: 07/02/2019

Print Date: 03/10/2020

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## SECTION 1: Identification of the substance/mixture and of the company/undertaking

## **1.1 Product identifiers**

| Product name   | <sup>:</sup> Cocaine solution |
|----------------|-------------------------------|
| Product Number | : C-008                       |

Brand : Cerilliant

## **1.2** Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Synthesis of substances

## **1.3** Details of the supplier of the safety data sheet

| Company          | : | Sigma-Aldrich Inc.<br>3050 Spruce Street<br>ST. LOUIS MO 63103<br>UNITED STATES |
|------------------|---|---|
| Telephone<br>Fax | - | +1 314 771-5765<br>+1 800 325-5052  |

## **1.4 Emergency telephone number**

Emergency Phone # : +1-703-527-3887

## **SECTION 2: Hazards identification**

## 2.1 Classification of the substance or mixture

## GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 2), H225 Acute toxicity, Oral (Category 4), H302 Acute toxicity, Inhalation (Category 4), H332 Acute toxicity, Dermal (Category 4), H312 Eye irritation (Category 2A), H319 Reproductive toxicity (Category 2), H361

For the full text of the H-Statements mentioned in this Section, see Section 16.

## 2.2 GHS Label elements, including precautionary statements

Pictogram



Danger

Signal word Hazard statement(s) H225 H302 + H312 + H332

Highly flammable liquid and vapour. Harmful if swallowed, in contact with skin or if inhaled.

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| H319                      | Causes serious eye irritation.                                    |
|---------------------------|---|
| H361                      | Suspected of damaging fertility or the unborn child.              |
| Precautionary statement(s |   |
| P201                      | ,<br>Obtain special instructions before use.                      |
| P202                      | Do not handle until all safety precautions have been read and     |
|                           | understood.   |
| P210                      | Keep away from heat/sparks/open flames/hot surfaces. No           |
|                           | smoking.  |
| P233                      | Keep container tightly closed.                                    |
| P240                      | Ground/bond container and receiving equipment.                    |
| P241                      | Use explosion-proof electrical/ ventilating/ lighting equipment.  |
| P242                      | Use only non-sparking tools.                                      |
| P243                      | Take precautionary measures against static discharge.             |
| P261                      | Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.            |
| P264                      | Wash skin thoroughly after handling.                              |
| P270                      | Do not eat, drink or smoke when using this product.               |
| P271                      | Use only outdoors or in a well-ventilated area.                   |
| P280                      | Wear protective gloves/ protective clothing/ eye protection/ face |
|                           | protection.   |
| P301 + P312 + P330        | IF SWALLOWED: Call a POISON CENTER/doctor if you feel             |
|                           | unwell. Rinse mouth.  |
| P303 + P361 + P353        | IF ON SKIN (or hair): Take off immediately all contaminated       |
|                           | clothing. Rinse skin with water/shower.                           |
| P304 + P340 + P312        | IF INHALED: Remove person to fresh air and keep comfortable       |
|                           | for breathing. Call a POISON CENTER/doctor if you feel unwell.    |
| P305 + P351 + P338        | IF IN EYES: Rinse cautiously with water for several minutes.      |
|                           | Remove contact lenses, if present and easy to do. Continue        |
|                           | rinsing.  |
| P308 + P313               | IF exposed or concerned: Get medical advice/ attention.           |
| P337 + P313               | If eye irritation persists: Get medical advice/ attention.        |
| P363                      | Wash contaminated clothing before reuse.                          |
| P370 + P378               | In case of fire: Use dry sand, dry chemical or alcohol-resistant  |
|                           | foam to extinguish.   |
| P403 + P235               | Store in a well-ventilated place. Keep cool.                      |
| P405                      | Store locked up.  |
| P501                      | Dispose of contents/ container to an approved waste disposal      |
|                           | plant.  |
| Sensitising components:   |   |

Sensitising components: Cocaine May produce an allergic reaction.

# 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

## **SECTION 3:** Composition/information on ingredients

## 3.2 Mixtures

| Component    |           | Classification             | Concentration |
|--------------|-----------|----------------------------|---------------|
| Acetonitrile |           |                            |               |
| CAS-No.      | 75-05-8   | Flam. Liq. 2; Acute Tox. 4 | ; >= 90 - <=  |
| EC-No.       | 200-835-2 | Eye Irrit. 2A; H225, H302  | , 100 %       |

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| Index-No.<br>Registration<br>number | 608-001-00-3<br>01-2119471307-38-<br>XXXX | H332, H312, H319                     |              |
|-------------------------------------|---|--------------------------------------|--------------|
| Cocaine<br>CAS-No.                  | 50-36-2                                   | Acute Tox. 2; Repr. 2;               | >= 0.1 - < 1 |
| EC-No.                              | 200-032-7                                 | STOT SE 3; H300, H330,<br>H361, H336 | %            |

For the full text of the H-Statements mentioned in this Section, see Section 16.

## **SECTION 4: First aid measures**

## 4.1 Description of first aid measures

## **General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

## If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

## In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

## In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

## If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

# **4.2 Most important symptoms and effects, both acute and delayed** The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

**4.3 Indication of any immediate medical attention and special treatment needed** No data available

## **SECTION 5: Firefighting measures**

## 5.1 Extinguishing media

**Suitable extinguishing media** Dry powder Dry sand

## **Unsuitable extinguishing media** Do NOT use water jet.

- **5.2** Special hazards arising from the substance or mixture Carbon oxides, Nitrogen oxides (NOx)
- **5.3** Advice for firefighters Wear self-contained breathing apparatus for firefighting if necessary.

## 5.4 Further information

Use water spray to cool unopened containers.

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## **SECTION 6:** Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

For personal protection see section 8.

- 6.2 **Environmental precautions** Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
- 6.3 Methods and materials for containment and cleaning up Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).
- 6.4 **Reference to other sections** For disposal see section 13.

## **SECTION 7: Handling and storage**

#### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use explosion-proof equipment. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2.

#### Conditions for safe storage, including any incompatibilities 7.2

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage temperature -20 °C Storage class (TRGS 510): 3: Flammable liquids

#### Specific end use(s) 7.3

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

## **SECTION 8: Exposure controls/personal protection**

#### 8.1 **Control parameters**

## Components with workplace control parameters

|              |         | •                                      |            |                            |
|--------------|---------|--|------------|----------------------------|
| Component    | CAS-No. | Value                                  | Control    | Basis                      |
|              |         |  | parameters |                            |
| Acetonitrile | 75-05-8 | TWA                                    | 20 ppm     | USA. ACGIH Threshold Limit |
|              |         |  |            | Values (TLV)               |
|              | Remarks | Lower Respiratory Tract irritation     |            |                            |
|              |         | Not classifiable as a human carcinogen |            |                            |
|              |         | Danger of cutaneous absorption         |            |                            |

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| TWA            | 20 ppm<br>34 mg/m3  | USA. NIOSH Recommended<br>Exposure Limits  |
|----------------|---------------------|--|
| <br>Forms cyar | ide in the body.    |  |
| TWA            | 40 ppm<br>70 mg/m3  | USA. Occupational Exposure<br>Limits (OSHA) - Table Z-1<br>Limits for Air Contaminants           |
| The value i    | n mg/m3 is appi     | roximate.  |
| PEL            | 40 ppm<br>70 mg/m3  | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
| Skin           |                     |  |
| STEL           | 60 ppm<br>105 mg/m3 | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
| Skin           |                     |  |

Hazardous components without workplace control parameters

## 8.2 Exposure controls

## Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

#### Personal protective equipment

## Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### **Skin protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

#### **Body Protection**

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### **Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

## Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

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## SECTION 9: Physical and chemical properties

## 9.1 Information on basic physical and chemical properties

|     | -  |   |
|-----|--|---|
| a)  | Appearance   | Form: liquid  |
| b)  | Odour  | No data available   |
| c)  | Odour Threshold                                    | No data available   |
| d)  | рН   | No data available   |
| e)  | Melting<br>point/freezing point                    | No data available   |
| f)  | Initial boiling point<br>and boiling range         | 81 - 82 °C 178 - 180 °F at 1.013 hPa                              |
| g)  | Flash point  | 2 °C (36 °F) - closed cup   |
| h)  | Evaporation rate                                   | No data available   |
| i)  | Flammability (solid,<br>gas)                       | No data available   |
| j)  | Upper/lower<br>flammability or<br>explosive limits | Upper explosion limit: 16 %(V)<br>Lower explosion limit: 4.4 %(V) |
| k)  | Vapour pressure                                    | No data available   |
| I)  | Vapour density                                     | No data available   |
| m)  | Relative density                                   | 0.782 g/cm3 at 20 °C (68 °F)                                      |
| n)  | Water solubility                                   | No data available   |
| o)  | Partition coefficient:<br>n-octanol/water          | No data available   |
| p)  | Auto-ignition<br>temperature                       | No data available   |
| q)  | Decomposition<br>temperature                       | No data available   |
| r)  | Viscosity  | No data available   |
| s)  | Explosive properties                               | No data available   |
| t)  | Oxidizing properties                               | No data available   |
| Oth | er safety informatio                               | n   |
|     |  |   |

9.2 Other safety informat No data available

## **SECTION 10: Stability and reactivity**

## **10.1 Reactivity**

No data available

- **10.2 Chemical stability** Stable under recommended storage conditions.
- **10.3 Possibility of hazardous reactions** Vapours may form explosive mixture with air.

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## **10.4** Conditions to avoid

Heat, flames and sparks.

# **10.5 Incompatible materials**

acids, Bases, Oxidizing agents, Alkali metals

## **10.6 Hazardous decomposition products**

Other decomposition products - No data available Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NOx) In the event of fire: see section 5

## **SECTION 11: Toxicological information**

## **11.1 Information on toxicological effects**

#### Acute toxicity

No data available

Inhalation: No data available

Dermal: No data available

No data available

#### Skin corrosion/irritation No data available

Serious eye damage/eye irritation

No data available

## **Respiratory or skin sensitisation** No data available

Germ cell mutagenicity

No data available

## Carcinogenicity

- IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
- OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

#### **Reproductive toxicity**

No data available

**Specific target organ toxicity - single exposure** No data available

**Specific target organ toxicity - repeated exposure** No data available

**Aspiration hazard** No data available

Additional Information RTECS: Not available

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Treat as cyanide poisoning., Always have on hand a cyanide first-aid kit, together with proper instructions., The onset of symptoms is generally delayed pending conversion to cyanide., Nausea, Vomiting, Diarrhoea, Headache, Dizziness, Rash, Cyanosis

## **SECTION 12: Ecological information**

## **12.1 Toxicity**

No data available

- 12.2 Persistence and degradability No data available
- **12.3 Bioaccumulative potential** No data available
- **12.4 Mobility in soil** No data available

## 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

**12.6 Other adverse effects** No data available

## SECTION 13: Disposal considerations

#### 13.1 Waste treatment methods

#### Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Contact a licensed professional waste disposal service to dispose of this material.

#### Contaminated packaging

Dispose of as unused product.

## **SECTION 14: Transport information**

## DOT (US)

UN number: 1648 Class: 3 Packing group: II Proper shipping name: AcetonitrileSOLUTION

Reportable Quantity (RQ): Poison Inhalation Hazard: No

#### IMDG

UN number: 1648 Class: 3 Packing group: II Proper shipping name: ACETONITRILESOLUTION

## EMS-No: F-E, S-D

#### ΙΑΤΑ

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| SECTION | 15: | Regulatory | information |
|---------|-----|------------|-------------|
|---------|-----|------------|-------------|

#### SARA 302 Components

This material does not contain any components with a section 302 EHS TPQ.

#### SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

| Acetonitrile  | CAS-No.<br>75-05-8 | Revision Date<br>2007-07-01 |
|---|--------------------|-----------------------------|
| SARA 311/312 Hazards<br>Fire Hazard, Acute Health Hazard  |                    |                             |
| Massachusetts Right To Know Components  |                    |                             |
| Acetonitrile  | CAS-No.<br>75-05-8 | Revision Date<br>2007-07-01 |
| Pennsylvania Right To Know Components   |                    |                             |
| Acetonitrile  | CAS-No.<br>75-05-8 | Revision Date<br>2007-07-01 |
| California Prop. 65 Components  |                    |                             |
| , which is/are known to the State of California to<br>cause birth defects or other reproductive harm. For<br>more information go to<br>www.P65Warnings.ca.gov.Cocaine | CAS-No.<br>50-36-2 | Revision Date<br>2008-06-17 |

## **SECTION 16: Other information**

#### **Further information**

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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## SECTION 1: Identification of the substance/mixture and of the company/undertaking

## **1.1 Product identifiers**

| Product name   | <sup>:</sup> Cocaethylene solution |
|----------------|------------------------------------|
| Product Number | : C-010                            |
| Brand          | : Cerilliant                       |

## 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Synthesis of substances

## 1.3 Details of the supplier of the safety data sheet

| Company          | : | Sigma-Aldrich Inc.<br>3050 Spruce Street<br>ST. LOUIS MO 63103<br>UNITED STATES |
|------------------|---|---|
| Telephone<br>Fax | - | +1 314 771-5765<br>+1 800 325-5052  |

## **1.4 Emergency telephone number**

Emergency Phone # : +1-703-527-3887

## **SECTION 2: Hazards identification**

## 2.1 Classification of the substance or mixture

## GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 2), H225 Acute toxicity, Oral (Category 4), H302 Acute toxicity, Inhalation (Category 4), H332 Eye irritation (Category 2A), H319

For the full text of the H-Statements mentioned in this Section, see Section 16.

## 2.2 GHS Label elements, including precautionary statements

Pictogram

Signal word



Danger

Hazard statement(s) H225 H302 + H332 H319

Highly flammable liquid and vapour. Harmful if swallowed or if inhaled. Causes serious eye irritation.

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| Precautionary statement(s) |  |
|----------------------------|--|
| P210                       | Keep away from heat/sparks/open flames/hot surfaces. No smoking.                                 |
| P233                       | Keep container tightly closed.   |
| P240                       | Ground/bond container and receiving equipment.   |
| P241                       | Use explosion-proof electrical/ ventilating/ lighting equipment.                                 |
| P242                       | Use only non-sparking tools.   |
| P243                       | Take precautionary measures against static discharge.  |
| P261                       | Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.   |
| P264                       | Wash skin thoroughly after handling.   |
| P270                       | Do not eat, drink or smoke when using this product.  |
| P271                       | Use only outdoors or in a well-ventilated area.  |
| P280                       | Wear protective gloves/ protective clothing/ eye protection/ face protection.                    |
| P301 + P312                | IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.                                    |
| P303 + P361 + P353         | IF ON SKIN (or hair): Remove/ Take off immediately all   |
|                            | contaminated clothing. Rinse skin with water/ shower.  |
| P304 + P340                | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. |
| P305 + P351 + P338         | IF IN EYES: Rinse cautiously with water for several minutes.                                     |
|                            | Remove contact lenses, if present and easy to do. Continue rinsing.                              |
| P312                       | Call a POISON CENTER/doctor if you feel unwell.  |
| P330                       | Rinse mouth.   |
| P337 + P313                | If eye irritation persists: Get medical advice/ attention.                                       |
| P370 + P378                | In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.            |
| P403 + P235                | Store in a well-ventilated place. Keep cool.   |
| P501                       | Dispose of contents/ container to an approved waste disposal plant.                              |

## 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

## SECTION 3: Composition/information on ingredients

## 3.2 Mixtures

| Component                 |                                   | Classification  | Concentration       |
|---------------------------|-----------------------------------|---|---------------------|
| Acetonitrile              |                                   |   |                     |
| CAS-No.<br>EC-No.         | 75-05-8<br>200-835-2              | Flam. Liq. 2; Acute Tox. 4;<br>Eye Irrit. 2A; H225, H302, | >= 90 - <=<br>100 % |
| Index-No.<br>Registration | 608-001-00-3<br>01-2119471307-38- | H332, H312, H319  |                     |
| number                    | XXXX                              |   |                     |

For the full text of the H-Statements mentioned in this Section, see Section 16.

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## **SECTION 4: First aid measures**

## 4.1 Description of first aid measures

## **General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

## If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

## In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

## In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

## If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

#### **4.2 Most important symptoms and effects, both acute and delayed** The most important known symptoms and effects are described in the labelling (see section

2.2) and/or in section 11

**4.3 Indication of any immediate medical attention and special treatment needed** No data available

## **SECTION 5: Firefighting measures**

## 5.1 Extinguishing media

## Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**5.2** Special hazards arising from the substance or mixture Carbon oxides, Nitrogen oxides (NOx)

## **5.3** Advice for firefighters Wear self-contained breathing apparatus for firefighting if necessary.

**5.4 Further information** Use water spray to cool unopened containers.

#### **SECTION 6:** Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. For personal protection see section 8.

## **6.2 Environmental precautions** Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

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llipore



## 6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wetbrushing and place in container for disposal according to local regulations (see section 13).

## 6.4 Reference to other sections

For disposal see section 13.

## SECTION 7: Handling and storage

## 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use explosion-proof equipment.Keep away from sources of ignition - No smoking.Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2.

## 7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage temperature -20 °C Storage class (TRGS 510): 3: Flammable liquids

## 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

## SECTION 8: Exposure controls/personal protection

## 8.1 Control parameters

## Components with workplace control parameters

| components with | i morrepiace | control pa   |   |  |
|-----------------|--------------|--------------|---|--|
| Component       | CAS-No.      | Value        | Control<br>parameters                                     | Basis  |
| Acetonitrile    | 75-05-8      | TWA          | 20 ppm  | USA. ACGIH Threshold Limit<br>Values (TLV)   |
|                 | Remarks      | Not classifi | piratory Tract irri<br>able as a human<br>cutaneous absor | carcinogen   |
|                 |              | TWA          | 20 ppm<br>34 mg/m3  | USA. NIOSH Recommended<br>Exposure Limits  |
|                 |              | Forms cyar   | ide in the body.  |  |
|                 |              | TWA          | 40 ppm<br>70 mg/m3  | USA. Occupational Exposure<br>Limits (OSHA) - Table Z-1<br>Limits for Air Contaminants           |
|                 |              | The value i  | n mg/m3 is appi   | roximate.  |
|                 |              | PEL          | 40 ppm<br>70 mg/m3  | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
|                 |              | Skin         |   |  |

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|  | STEL | 60 ppm<br>105 mg/m3 | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
|--|------|---------------------|--|
|  | Skin |                     |  |

## 8.2 Exposure controls

## Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

## **Personal protective equipment**

## Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### **Skin protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

## **Body Protection**

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

## **Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

## **Control of environmental exposure**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

hPa

## **SECTION 9: Physical and chemical properties**

## 9.1 Information on basic physical and chemical properties

| a) | Appearance                                 | Form: liquid                     |
|----|--|----------------------------------|
| b) | Odour                                      | No data available                |
| c) | Odour Threshold                            | No data available                |
| d) | рН   | No data available                |
| e) | Melting<br>point/freezing point            | No data available                |
| f) | Initial boiling point<br>and boiling range | 81 - 82 °C 178 - 180 °F at 1.013 |
| g) | Flash point                                | 2 °C (36 °F) - closed cup        |
| h) | Evaporation rate                           | No data available                |
|    |  |                                  |

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| i)  | Flammability (solid,<br>gas)                       | No data available   |
|-----|--|---|
| j)  | Upper/lower<br>flammability or<br>explosive limits | Upper explosion limit: 16 %(V)<br>Lower explosion limit: 4.4 %(V) |
| k)  | Vapour pressure                                    | No data available   |
| I)  | Vapour density                                     | No data available   |
| m)  | Relative density                                   | 0.782 g/cm3 at 20 °C (68 °F)                                      |
| n)  | Water solubility                                   | No data available   |
| o)  | Partition coefficient:<br>n-octanol/water          | No data available   |
| p)  | Auto-ignition<br>temperature                       | No data available   |
| q)  | Decomposition<br>temperature                       | No data available   |
| r)  | Viscosity  | No data available   |
| s)  | Explosive properties                               | No data available   |
| t)  | Oxidizing properties                               | No data available   |
| Oth | er safety informatio                               | n   |

#### **9.2 Other safety information** No data available

## **SECTION 10: Stability and reactivity**

- **10.1 Reactivity** No data available
- **10.2 Chemical stability** Stable under recommended storage conditions.
- **10.3 Possibility of hazardous reactions** Vapours may form explosive mixture with air.
- **10.4 Conditions to avoid** Heat, flames and sparks. Extremes of temperature and direct sunlight.

## 10.5 Incompatible materials

acids, Bases, Oxidizing agents, Alkali metals

# **10.6 Hazardous decomposition products**

Other decomposition products - No data available Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NOx) In the event of fire: see section 5

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## SECTION 11: Toxicological information

## **11.1 Information on toxicological effects**

#### **Acute toxicity**

No data available

Inhalation: No data available

Dermal: No data available

No data available

**Skin corrosion/irritation** No data available

Serious eye damage/eye irritation

No data available

**Respiratory or skin sensitisation** No data available

Germ cell mutagenicity

No data available

#### Carcinogenicity

- IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
- OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

#### **Reproductive toxicity**

No data available

Specific target organ toxicity - single exposure No data available

Specific target organ toxicity - repeated exposure No data available

#### Aspiration hazard

No data available

## **Additional Information**

RTECS: Not available

Treat as cyanide poisoning., Always have on hand a cyanide first-aid kit, together with proper instructions., The onset of symptoms is generally delayed pending conversion to cyanide., Nausea, Vomiting, Diarrhoea, Headache, Dizziness, Rash, Cyanosis

Lungs - Lung oedema - Based on Human Evidence

## **SECTION 12: Ecological information**

#### **12.1 Toxicity**

No data available

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## 12.2 Persistence and degradability No data available

**12.3 Bioaccumulative potential** No data available

## **12.4 Mobility in soil** No data available

## 12.5 Results of PBT and vPvB assessment

 $\mathsf{PBT}/\mathsf{vPvB}$  assessment not available as chemical safety assessment not required/not conducted

# **12.6 Other adverse effects**

No data available

## SECTION 13: Disposal considerations

## 13.1 Waste treatment methods

## Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

## **Contaminated packaging**

Dispose of as unused product.

## **SECTION 14: Transport information**

## DOT (US)

UN number: 1648 Class: 3 Packing group: II Proper shipping name: AcetonitrileSOLUTION

Reportable Quantity (RQ): Poison Inhalation Hazard: No

## IMDG

UN number: 1648 Class: 3 Packing group: II EMS-No: F-E, S-D Proper shipping name: ACETONITRILESOLUTION

## ΙΑΤΑ

UN number: 1648 Class: 3 Packing group: II Proper shipping name: AcetonitrileSOLUTION

## **SECTION 15: Regulatory information**

## SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

## SARA 313 Components

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The following components are subject to reporting levels established by SARA Title III, Section 313:

|              | CAS-No. | Revision Date |
|--------------|---------|---------------|
| Acetonitrile | 75-05-8 | 2007-07-01    |

## SARA 311/312 Hazards

Fire Hazard, Acute Health Hazard, Chronic Health Hazard

| Massachusetts Right To Know Components | CAS-No. | Revision Date |
|--|---------|---------------|
| Acetonitrile                           | 75-05-8 | 2007-07-01    |
| Pennsylvania Right To Know Components  | CAS-No. | Revision Date |
| Acetonitrile                           | 75-05-8 | 2007-07-01    |
| New Jersey Right To Know Components    | CAS-No. | Revision Date |
| Acetonitrile                           | 75-05-8 | 2007-07-01    |

## **California Prop. 65 Components**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

## **SECTION 16: Other information**

## **Further information**

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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Version 5.6 Revision Date 09/23/2016 Print Date 08/07/2018

a SIGMA-ALDRICH<sup>\*</sup>company

## 1. PRODUCT AND COMPANY IDENTIFICATION

| 1.1 | Product identifiers |
|-----|---------------------|
|     | Product name        |

| •• | Product name                         | : | Codeine solution                    |
|----|--------------------------------------|---|-------------------------------------|
|    | Product Number<br>Brand<br>Index-No. | - | C-015<br>Cerilliant<br>603-001-00-X |

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

| Identified uses | : | Laboratory chemicals | , Synthesis of substances |
|-----------------|---|----------------------|---------------------------|
|                 |   |                      |                           |

#### 1.3 Details of the supplier of the safety data sheet

| Company          | : | Sigma-Aldrich<br>3050 Spruce Street<br>SAINT LOUIS MO 63103<br>USA |
|------------------|---|--|
| Telephone<br>Fax | - | +1 800-325-5832<br>+1 800-325-5052                                 |

#### 1.4 **Emergency telephone number**

| Emergency Phone # | : | +1-703-527-3887 (CHEMTREC) |
|-------------------|---|----------------------------|
|-------------------|---|----------------------------|

## 2. HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

## GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 2), H225 Acute toxicity, Oral (Category 3), H301 Acute toxicity, Inhalation (Category 3), H331 Acute toxicity, Dermal (Category 3), H311 Specific target organ toxicity - single exposure (Category 1), H370

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### 2.2 GHS Label elements, including precautionary statements

Pictogram



| Signal w | ord |
|----------|-----|
|----------|-----|

Danger

| Hazard statement(s)<br>H225<br>H301 + H311 + H331<br>H370          | Highly flammable liquid and vapour.<br>Toxic if swallowed, in contact with skin or if inhaled<br>Causes damage to organs.   |
|--|---|
| Precautionary statement(s)<br>P210<br>P233<br>P240<br>P241<br>P242 | Keep away from heat/sparks/open flames/hot surfaces. No smoking.<br>Keep container tightly closed.<br>Ground/bond container and receiving equipment.<br>Use explosion-proof electrical/ ventilating/ lighting/ equipment.<br>Use only non-sparking tools. |

| P243               | Take precautionary measures against static discharge.  |
|--------------------|--|
| P260               | Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  |
| P264               | Wash skin thoroughly after handling.   |
| P270               | Do not eat, drink or smoke when using this product.  |
| P271               | Use only outdoors or in a well-ventilated area.  |
| P280               | Wear protective gloves/ protective clothing/ eye protection/ face protection.                                |
| P301 + P310        | F SWALLOWED: Immediately call a POISON CENTER/doctor.  |
| P303 + P361 + P353 | IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. |
| P304 + P340        | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.             |
| P307 + P311        | IF exposed: Call a POISON CENTER or doctor/ physician.   |
| P322               | Specific measures (see supplemental first aid instructions on this label).                                   |
| P330               | Rinse mouth.   |
| P361               | Remove/Take off immediately all contaminated clothing.   |
| P363               | Wash contaminated clothing before reuse.   |
| P370 + P378        | In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.                        |
| P403 + P233        | Store in a well-ventilated place. Keep container tightly closed.   |
| P403 + P235        | Store in a well-ventilated place. Keep cool.   |
| P405               | Store locked up.   |
| P501               | Dispose of contents/ container to an approved waste disposal plant.  |

## 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

## **3. COMPOSITION/INFORMATION ON INGREDIENTS**

#### 3.2 Mixtures

#### Hazardous components

| Component           |                       | Classification              | Concentration  |
|---------------------|-----------------------|-----------------------------|----------------|
| Methanol            |                       |                             |                |
| CAS-No.             | 67-56-1               | Flam. Liq. 2; Acute Tox. 3; | >= 90 - <= 100 |
| EC-No.              | 200-659-6             | STOT SE 1; H225, H301 +     | %              |
| Index-No.           | 603-001-00-X          | H311 + H331, H370           |                |
| Registration number | 01-2119433307-44-XXXX |                             |                |

For the full text of the H-Statements mentioned in this Section, see Section 16.

## 4. FIRST AID MEASURES

#### 4.1 Description of first aid measures

#### **General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

#### In case of eye contact

Flush eyes with water as a precaution.

#### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

#### 4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

#### 4.3 Indication of any immediate medical attention and special treatment needed

No data available

## **5. FIREFIGHTING MEASURES**

#### 5.1 Extinguishing media

#### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture No data available

#### **5.3** Advice for firefighters Wear self-contained breathing apparatus for firefighting if necessary.

## 5.4 Further information

Use water spray to cool unopened containers.

## 6. ACCIDENTAL RELEASE MEASURES

#### 6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

For personal protection see section 8.

## 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

#### 6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

## 6.4 Reference to other sections

For disposal see section 13.

## 7. HANDLING AND STORAGE

## 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use explosion-proof equipment.Keep away from sources of ignition - No smoking.Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2.

## 7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage temperature -20 °C

#### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### 8.1 Control parameters

#### Components with workplace control parameters

| Component | CAS-No. | Value   | Control parameters | Basis                                      |  |
|-----------|---------|---|--------------------|--|--|
| Methanol  | 67-56-1 | TWA   | 200.000000<br>ppm  | USA. ACGIH Threshold Limit Values<br>(TLV) |  |
|           | Remarks | Headache<br>Nausea<br>Dizziness<br>Eye damage<br>Substances for which there is a Biological Exposure Index or Indices |                    |  |  |

| (see BEI® s                | ection)                                   |  |
|----------------------------|---|--|
|                            | utaneous absorpt                          | ion  |
| STEL                       | 250.000000<br>ppm                         | USA. ACGIH Threshold Limit Values<br>(TLV)   |
|                            | for which there is                        | s a Biological Exposure Index or Indices   |
| (see BEI® s<br>Danger of c | ection)<br>utaneous absorpt               | ion  |
| TWA                        | 200.000000<br>ppm<br>260.000000<br>mg/m3  | USA. NIOSH Recommended<br>Exposure Limits  |
| Potential for              | dermal absorptio                          | on   |
| ST                         | 250.000000<br>ppm<br>325.000000<br>mg/m3  | USA. NIOSH Recommended<br>Exposure Limits  |
| Potential for              | dermal absorptio                          | <u>מ</u> וויד איז                                  |
| TWA                        | 200.000000<br>ppm<br>260.000000<br>mg/m3  | USA. Occupational Exposure Limits<br>(OSHA) - Table Z-1 Limits for Air<br>Contaminants |
| The value in               | mg/m3 is approx                           | ximate.  |
| TWA                        | 200 ppm                                   | USA. ACGIH Threshold Limit Values<br>(TLV)   |
| (see BEI® s                | for which there is                        | s a Biological Exposure Index or Indices   |
| STEL                       | 250 ppm                                   | USA. ACGIH Threshold Limit Values<br>(TLV)   |
| (see BEI® s                | for which there is                        |  |
| TWA                        | 200 ppm<br>260 mg/m3                      | USA. NIOSH Recommended<br>Exposure Limits  |
| Potential for              | dermal absorption                         |  |
| ST                         | 250 ppm<br>325 mg/m3                      | USA. NIOSH Recommended<br>Exposure Limits  |
| Potential for              | dermal absorptio                          |  |
| TWA                        | 200 ppm<br>260 mg/m3                      | USA. Occupational Exposure Limits<br>(OSHA) - Table Z-1 Limits for Air<br>Contaminants |
| 1                          | malm? in annro                            | vimate   |
| STEL                       | n mg/m3 is approx<br>250 ppm<br>325 mg/m3 | USA. OSHA - TABLE Z-1 Limits for<br>Air Contaminants - 1910.1000                       |

| TWA       | 200 ppm<br>260 mg/m3 | USA. OSHA - TABLE Z-1 Limits for<br>Air Contaminants - 1910.1000                              |  |  |
|-----------|----------------------|---|--|--|
| Skin nota | Skin notation        |   |  |  |
| С         | 1,000 ppm            | California permissible exposure<br>limits for chemical contaminants<br>(Title 8, Article 107) |  |  |
| Skin      | Skin                 |   |  |  |
| PEL       | 200 ppm<br>260 mg/m3 | California permissible exposure<br>limits for chemical contaminants<br>(Title 8, Article 107) |  |  |
| Skin      | Skin                 |   |  |  |
| STEL      | 250 ppm<br>325 mg/m3 | California permissible exposure<br>limits for chemical contaminants<br>(Title 8, Article 107) |  |  |
| Skin      |                      |   |  |  |

#### **Biological occupational exposure limits**

| Component | CAS-No. | Parameters   | Value  | Biological specimen | Basis   |  |
|-----------|---------|--|--|---------------------|---|--|
| Methanol  | 67-56-1 | Methanol   | 15.0000<br>mg/l  | Urine               | ACGIH - Biological<br>Exposure Indices<br>(BEI) |  |
|           | Remarks | End of shift (A  | End of shift (As soon as possible after exposure ceases) |                     |   |  |
|           |         | Methanol   | 15 mg/l  | Urine               | ACGIH - Biological<br>Exposure Indices<br>(BEI) |  |
|           |         | End of shift (As soon as possible after exposure ceases) |  |                     |   |  |

#### 8.2 Exposure controls

#### Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

#### Personal protective equipment

#### Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact Material: butyl-rubber Minimum layer thickness: 0.3 mm Break through time: 480 min Material tested:Butoject® (KCL 897 / Aldrich Z677647, Size M)

Splash contact Material: Nitrile rubber Minimum layer thickness: 0.4 mm Break through time: 30 min Material tested:Camatril® (KCL 730 / Aldrich Z677442, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

#### **Body Protection**

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### **Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

#### 9. PHYSICAL AND CHEMICAL PROPERTIES

#### 9.1 Information on basic physical and chemical properties

| a)  | Appearance   | Form: liquid  |  |  |
|---|--|---|--|--|
| b)  | Odour  | No data available   |  |  |
| c)  | Odour Threshold                                    | No data available   |  |  |
| d)  | рН   | No data available   |  |  |
| e)  | Melting point/freezing point                       | No data available   |  |  |
| f)  | Initial boiling point and boiling range            | 64 - 65 °C (147 - 149 °F) at 1.013 hPa (0.760 mmHg)             |  |  |
| g)  | Flash point  | 9.7 °C (49.5 °F) - closed cup                                   |  |  |
| h)  | Evaporation rate                                   | No data available   |  |  |
| i)  | Flammability (solid, gas)                          | No data available   |  |  |
| j)  | Upper/lower<br>flammability or<br>explosive limits | Upper explosion limit: 36 %(V)<br>Lower explosion limit: 6 %(V) |  |  |
| k)  | Vapour pressure                                    | No data available   |  |  |
| I)  | Vapour density                                     | No data available   |  |  |
| m)  | Relative density                                   | 0.791 g/cm3 at 20 °C (68 °F)                                    |  |  |
| n)  | Water solubility                                   | No data available   |  |  |
| o)  | Partition coefficient: n-<br>octanol/water         | No data available   |  |  |
| p)  | Auto-ignition<br>temperature                       | No data available   |  |  |
| q)  | Decomposition<br>temperature                       | No data available   |  |  |
| r)  | Viscosity  | No data available   |  |  |
| s)  | Explosive properties                               | No data available   |  |  |
| t)  | Oxidizing properties                               | No data available   |  |  |
| Other safety information<br>No data available |  |   |  |  |

#### **10. STABILITY AND REACTIVITY**

#### 10.1 Reactivity

9.2

No data available

#### 10.2 Chemical stability

Stable under recommended storage conditions.

**10.3 Possibility of hazardous reactions** Vapours may form explosive mixture with air.

#### 10.4 Conditions to avoid

Heat, flames and sparks. Extremes of temperature and direct sunlight.

#### 10.5 Incompatible materials

Acids, Oxidizing agents, Alkali metals, Strong oxidizing agents, Strong acids, Acid chlorides, Acid anhydrides, Reducing agents, Strong reducing agents, Phosphorus halides

#### **10.6 Hazardous decomposition products**

Other decomposition products - No data available Hazardous decomposition products formed under fire conditions. - Carbon oxides In the event of fire: see section 5

#### **11. TOXICOLOGICAL INFORMATION**

#### **11.1** Information on toxicological effects

#### Acute toxicity

No data available

Inhalation: No data available

Dermal: No data available

No data available

#### Skin corrosion/irritation No data available

#### Serious eye damage/eye irritation No data available

Respiratory or skin sensitisation No data available

#### Germ cell mutagenicity

No data available

#### Carcinogenicity

- IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
- OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

#### **Reproductive toxicity**

No data available No data available

Specific target organ toxicity - single exposure No data available

Specific target organ toxicity - repeated exposure No data available

Aspiration hazard

No data available

#### **Additional Information**

**RTECS:** Not available

Methyl alcohol may be fatal or cause blindness if swallowed., Cannot be made non-poisonous., Effects due to ingestion may include:, Nausea, Headache, Vomiting, Gastrointestinal disturbance, Dizziness, Weakness, Confusion.

Central nervous system - Breathing difficulties - Based on Human Evidence Stomach - Irregularities - Based on Human Evidence Stomach - Irregularities - Based on Human Evidence (Codeine)

#### **12. ECOLOGICAL INFORMATION**

#### 12.1 Toxicity

No data available

- 12.2 Persistence and degradability No data available
- **12.3 Bioaccumulative potential** No data available
- **12.4 Mobility in soil** No data available
- 12.5 Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
- **12.6 Other adverse effects** No data available

#### **13. DISPOSAL CONSIDERATIONS**

#### 13.1 Waste treatment methods

#### Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

#### Contaminated packaging

Dispose of as unused product.

#### **14. TRANSPORT INFORMATION**

| <b>DOT (US)</b><br>UN number: 1230<br>Proper shipping nam<br>Reportable Quantity |   | Packing group: II      |                  |  |
|--|---|------------------------|------------------|--|
| Poison Inhalation Ha   | zard: No                                |                        |                  |  |
| <b>IMDG</b><br>UN number: 1230<br>Proper shipping nam                            | Class: 3 (6.1)<br>e: METHANOL, SOLUTIOI | Packing group: II<br>N | EMS-No: F-E, S-D |  |
| <b>IATA</b><br>UN number: 1230<br>Proper shipping nam                            | Class: 3 (6.1)<br>e: Methanol, solution | Packing group: II      |                  |  |

#### **15. REGULATORY INFORMATION**

#### SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

#### SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

CAS-No. Revision Date

| Methanol  | 67-56-1            | 2007-07-01                  |
|---|--------------------|-----------------------------|
| <b>SARA 311/312 Hazards</b><br>Fire Hazard, Acute Health Hazard, Chronic Health Hazard  |                    |                             |
| Massachusetts Right To Know Components  |                    |                             |
| Methanol  | CAS-No.<br>67-56-1 | Revision Date 2007-07-01    |
| Pennsylvania Right To Know Components   |                    |                             |
| Methanol  | CAS-No.<br>67-56-1 | Revision Date 2007-07-01    |
| New Jersey Right To Know Components   |                    |                             |
| Methanol  | CAS-No.<br>67-56-1 | Revision Date 2007-07-01    |
| California Prop. 65 Components  |                    |                             |
| WARNING: This product contains a chemical known to the<br>State of California to cause birth defects or other reproductive<br>harm.<br>Methanol | CAS-No.<br>67-56-1 | Revision Date<br>2012-03-16 |

#### **16. OTHER INFORMATION**

#### Full text of H-Statements referred to under sections 2 and 3.

| Acute Tox.<br>Flam. Liq.<br>H225<br>H301  | Acute toxicity<br>Flammable liquids<br>Highly flammable liquid and vapour.<br>Toxic if swallowed. |  |  |
|---|---|--|--|
| H301 + H311 +<br>H331   | Toxic if swallowed, in contact with skin or if inhaled  |  |  |
| H311<br>H331<br>H370  | Toxic in contact with skin.<br>Toxic if inhaled.<br>Causes damage to organs.                      |  |  |
| STOT SE   | Specific target organ toxicity - single exposure  |  |  |
| HMIS Rating<br>Health hazard:<br>Chronic Health Haz<br>Flammability:<br>Physical Hazard | ard: 2<br>3<br>0  |  |  |
| <b>NFPA Rating</b><br>Health hazard:<br>Fire Hazard:<br>Reactivity Hazard:              | 2<br>3<br>0   |  |  |

#### **Further information**

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**Preparation Information** Sigma-Aldrich Corporation Product Safety – Americas Region 1-800-521-8956

Version: 5.6

Revision Date: 09/23/2016

Print Date: 08/07/2018



Sigma-Aldrich.

## **SAFETY DATA SHEET**

Version 1.0 Revision Date 01/29/2020 Print Date 02/07/2020

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

## **1.1** Product identifiers

| Product name   | : | Cocaethylene-D8 |
|----------------|---|-----------------|
| Product Number | : | C-025           |

**1.2** Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Synthesis of substances

### 1.3 Details of the supplier of the safety data sheet

| Company   | : Sigma-Aldrich Inc.<br>3050 Spruce Street<br>ST. LOUIS MO 63103<br>UNITED STATES |
|-----------|---|
| Telephone | : +1 314 771-5765   |
| Fax       | : +1 800 325-5052   |

### **1.4 Emergency telephone number**

Emergency Phone # : +1-703-527-3887

## **SECTION 2: Hazards identification**

#### 2.1 Classification of the substance or mixture

## GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 2), H225 Acute toxicity, Oral (Category 4), H302 Acute toxicity, Inhalation (Category 4), H332 Eye irritation (Category 2A), H319

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### 2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word Hazard statement(s) H225 H302 + H332 H319 Danger

Highly flammable liquid and vapour. Harmful if swallowed or if inhaled. Causes serious eye irritation.

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| Precautionary statement(s) |  |
|----------------------------|--|
| P210                       | Keep away from heat/sparks/open flames/hot surfaces. No smoking.   |
| P233                       | Keep container tightly closed.   |
| P240                       | Ground/bond container and receiving equipment.   |
| P241                       | Use explosion-proof electrical/ ventilating/ lighting equipment.   |
| P242                       | Use only non-sparking tools.   |
| P243                       | Take precautionary measures against static discharge.  |
| P261                       | Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.   |
| P264                       | Wash skin thoroughly after handling.   |
| P270                       | Do not eat, drink or smoke when using this product.  |
| P271                       | Use only outdoors or in a well-ventilated area.  |
| P280                       | Wear protective gloves/ eye protection/ face protection.   |
| P301 + P312 + P330         | IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.   |
| P303 + P361 + P353         | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.                                    |
| P304 + P340 + P312         | IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.             |
| P305 + P351 + P338         | IF IN EYES: Rinse cautiously with water for several minutes.<br>Remove contact lenses, if present and easy to do. Continue<br>rinsing. |
| P337 + P313                | If eye irritation persists: Get medical advice/ attention.   |
| P370 + P378                | In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.   |
| P403 + P235                | Store in a well-ventilated place. Keep cool.   |
| P501                       | Dispose of contents/ container to an approved waste disposal plant.  |

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

## SECTION 3: Composition/information on ingredients

## 3.2 Mixtures

| Component  |   | Classification  | Concentration       |
|--|---|---|---------------------|
| Acetonitrile   |   |   |                     |
| CAS-No.<br>EC-No.<br>Index-No.<br>Registration<br>number | 75-05-8<br>200-835-2<br>608-001-00-3<br>01-2119471307-38-<br>XXXX | Flam. Liq. 2; Acute Tox. 4;<br>Eye Irrit. 2A; H225, H302,<br>H332, H312, H319 | >= 90 - <=<br>100 % |
| Cocaethylene-D8  |   |   |                     |
| CAS-No.  | 152521-09-0   | Acute Tox. 3; H301  | >= 0.1 - < 1<br>%   |

For the full text of the H-Statements mentioned in this Section, see Section 16.

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### **SECTION 4: First aid measures**

#### 4.1 Description of first aid measures

#### **General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

#### In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

#### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

- **4.2 Most important symptoms and effects, both acute and delayed** The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
- 4.3 Indication of any immediate medical attention and special treatment needed No data available

## **SECTION 5: Firefighting measures**

#### 5.1 Extinguishing media

Suitable extinguishing media Dry powder Dry sand

**Unsuitable extinguishing media** Do NOT use water jet.

- **5.2** Special hazards arising from the substance or mixture Carbon oxides, Nitrogen oxides (NOx)
- **5.3** Advice for firefighters Wear self-contained breathing apparatus for firefighting if necessary.
- 5.4 Further information

Use water spray to cool unopened containers.

### **SECTION 6:** Accidental release measures

 6.1 Personal precautions, protective equipment and emergency procedures
 Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. For personal protection see section 8.

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## 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

#### 6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

#### **6.4 Reference to other sections** For disposal see section 13.

#### SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use explosion-proof equipment.Keep away from sources of ignition - No smoking.Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2.

## 7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage temperature -20 °C Storage class (TRGS 510): 3: Flammable liquids

#### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

#### **SECTION 8: Exposure controls/personal protection**

#### 8.1 Control parameters

#### **Components with workplace control parameters**

| components with |         | <u></u>                            |                 |                                 |  |
|-----------------|---------|------------------------------------|-----------------|---------------------------------|--|
| Component       | CAS-No. | Value                              | Control         | Basis                           |  |
|                 |         |                                    | parameters      |                                 |  |
| Acetonitrile    | 75-05-8 | TWA                                | 20 ppm          | USA. ACGIH Threshold Limit      |  |
|                 |         |                                    |                 | Values (TLV)                    |  |
|                 | Remarks | Lower Respiratory Tract irritation |                 |                                 |  |
|                 |         | Not classifia                      | able as a human | carcinogen                      |  |
|                 |         | Danger of o                        | utaneous absor  | ption                           |  |
|                 |         | TWA                                | 20 ppm          | USA. NIOSH Recommended          |  |
|                 |         |                                    | 34 mg/m3        | Exposure Limits                 |  |
|                 |         | Forms cyanide in the body.         |                 |                                 |  |
|                 |         | TWA                                | 40 ppm          | USA. Occupational Exposure      |  |
|                 |         |                                    | 70 mg/m3        | Limits (OSHA) - Table Z-1       |  |
|                 |         |                                    |                 | Limits for Air Contaminants     |  |
|                 |         | The value i                        | n mg/m3 is appi | roximate.                       |  |
|                 |         | PEL                                | 40 ppm          | California permissible exposure |  |
|                 |         |                                    | 70 mg/m3        | limits for chemical             |  |
|                 |         |                                    | -               | contaminants (Title 8, Article  |  |
|                 |         |                                    |                 | 107)                            |  |
|                 |         | Skin                               |                 |                                 |  |

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| STEL | 60 ppm<br>105 mg/m3 | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
|------|---------------------|--|
| Skin |                     |  |

#### 8.2 Exposure controls

#### Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

#### Personal protective equipment

#### Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### **Skin protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

#### **Body Protection**

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### **Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### **Control of environmental exposure**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

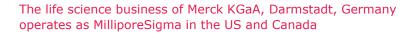
#### **SECTION 9: Physical and chemical properties**

#### 9.1 Information on basic physical and chemical properties

| a) | Appearance                                 | Form: liquid                  |
|----|--|-------------------------------|
| b) | Odour                                      | No data available             |
| c) | Odour Threshold                            | No data available             |
| d) | рН   | No data available             |
| e) | Melting<br>point/freezing point            | No data available             |
| f) | Initial boiling point<br>and boiling range | No data available             |
| g) | Flash point                                | 6.0 °C (42.8 °F) - closed cup |
| h) | Evaporation rate                           | No data available             |

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| i) | Flammability (solid, | No data available |
|----|----------------------|-------------------|
|    | gas)                 |                   |

| j)         | Upper/lower<br>flammability or<br>explosive limits | No data available |
|------------|--|-------------------|
| <i>د</i> ا | Vanour pressure                                    | No data available |

- k) Vapour pressure No data available
- I) Vapour density No data available
- m) Relative density No data available
- n) Water solubility No data available
- o) Partition coefficient: No data available n-octanol/water
- p) Auto-ignition No data available temperature
- q) Decomposition No data available temperature
- r) Viscosity No data available
- s) Explosive properties No data available
- t) Oxidizing properties No data available

#### **9.2 Other safety information** No data available

### **SECTION 10: Stability and reactivity**

- **10.1 Reactivity** No data available
- **10.2 Chemical stability** Stable under recommended storage conditions.
- **10.3 Possibility of hazardous reactions** No data available
- **10.4 Conditions to avoid** Heat, flames and sparks.
- **10.5 Incompatible materials** Acids, Bases, Oxidizing agents, Reducing agents, Alkali metals

#### 10.6 Hazardous decomposition products Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NOx) In the event of fire: see section 5

#### **SECTION 11: Toxicological information**

#### 11.1 Information on toxicological effects

Acute toxicity No data available

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## Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

## Respiratory or skin sensitisation

No data available

#### Germ cell mutagenicity

No data available

#### Carcinogenicity

- IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
- OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

#### **Reproductive toxicity**

No data available

Specific target organ toxicity - single exposure No data available

**Specific target organ toxicity - repeated exposure** No data available

**Aspiration hazard** No data available

#### **Additional Information**

RTECS: Not available

Treat as cyanide poisoning., Always have on hand a cyanide first-aid kit, together with proper instructions., The onset of symptoms is generally delayed pending conversion to cyanide., Nausea, Vomiting, Diarrhoea, Headache, Dizziness, Rash, Cyanosis, excitement, depression, Drowsiness, impaired judgment, Lack of coordination, stupor, death

#### **SECTION 12: Ecological information**

## **12.1 Toxicity**

No data available

- 12.2 Persistence and degradability No data available
- **12.3 Bioaccumulative potential** No data available
- **12.4 Mobility in soil** No data available
- 12.5 Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

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#### SECTION 13: Disposal considerations

#### **13.1 Waste treatment methods**

#### Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable.

#### Contaminated packaging

Dispose of as unused product.

#### **SECTION 14: Transport information**

## DOT (US)

UN number: 1648 Class: 3 Packing group: II Proper shipping name: AcetonitrileSOLUTION

Reportable Quantity (RQ): Poison Inhalation Hazard: No

#### IMDG

UN number: 1648 Class: 3 E, S-D Proper shipping name: ACETONITRILESOLUTION

#### ΙΑΤΑ

UN number: 1648 Class: 3 Packing group: II Proper shipping name: AcetonitrileSOLUTION

#### **SECTION 15: Regulatory information**

**Massachusetts Right To Know Components** No components are subject to the Massachusetts Right to Know Act.

## Pennsylvania Right To Know Components

| Acetonitrile | CAS-No. | Revision Date |
|--------------|---------|---------------|
|              | 75-05-8 | 2007-07-01    |



Packing group: II EMS-No: F-

## **SECTION 16: Other information**

#### **Further information**

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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# **SAFETY DATA SHEET**

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### **1.1 Product identifiers**

|                | f the substance on whiten and uses a duised and |   |
|----------------|---|---|
| Index-No.      | : 603-001-00-X                                  |   |
| Brand          | : Cerilliant                                    |   |
| Product Number | : D-015   |   |
| Product name   | Diphenhydramine hydrochloride solutio           | n |

## **1.2** Relevant identified uses of the substance or mixture and uses advised against

| Identified uses : | Laboratory | chemicals, Synthesis of substances |
|-------------------|------------|------------------------------------|
|-------------------|------------|------------------------------------|

## **1.3** Details of the supplier of the safety data sheet

| Company   | : Sigma-Aldrich Inc.<br>3050 Spruce Street<br>ST. LOUIS MO 63103<br>UNITED STATES |
|-----------|---|
| Telephone | : +1 314 771-5765   |
| Fax       | : +1 800 325-5052   |

### **1.4 Emergency telephone number**

Emergency Phone # : +1-703-527-3887

## **SECTION 2: Hazards identification**

## 2.1 Classification of the substance or mixture

#### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 2), H225 Acute toxicity, Oral (Category 3), H301 Acute toxicity, Inhalation (Category 3), H331 Acute toxicity, Dermal (Category 3), H311 Specific target organ toxicity - single exposure (Category 1), H370

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### 2.2 GHS Label elements, including precautionary statements

Pictogram



Danger

Signal word Hazard statement(s) H225 H301 + H311 + H331

Highly flammable liquid and vapour. Toxic if swallowed, in contact with skin or if inhaled.

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| H370                       | Causes damage to organs.   |
|----------------------------|--|
| Precautionary statement(s) |  |
| P210                       | Keep away from heat/sparks/open flames/hot surfaces. No smoking.   |
| P233                       | Keep container tightly closed.   |
| P240                       | Ground/bond container and receiving equipment.   |
| P241                       | Use explosion-proof electrical/ ventilating/ lighting equipment.   |
| P242                       | Use only non-sparking tools.   |
| P243                       | Take precautionary measures against static discharge.  |
| P260                       | Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  |
| P264                       | Wash skin thoroughly after handling.   |
| P270                       | Do not eat, drink or smoke when using this product.  |
| P271                       | Use only outdoors or in a well-ventilated area.  |
| P280                       | Wear protective gloves/ protective clothing/ eye protection/ face protection.                                |
| P301 + P310                | IF SWALLOWED: Immediately call a POISON CENTER/doctor.   |
| P303 + P361 + P353         | IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. |
| P304 + P340                | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.             |
| P307 + P311                | IF exposed: Call a POISON CENTER or doctor/ physician.   |
| P322                       | Specific measures (see supplemental first aid instructions on this label).                                   |
| P330                       | Rinse mouth.   |
| P361                       | Remove/Take off immediately all contaminated clothing.   |
| P363                       | Wash contaminated clothing before reuse.   |
| P370 + P378                | In case of fire: Use dry sand, dry chemical or alcohol-resistant   |
|                            | foam for extinction.   |
| P403 + P233                | Store in a well-ventilated place. Keep container tightly closed.   |
| P403 + P235                | Store in a well-ventilated place. Keep cool.   |
| P405                       | Store locked up.   |
| P501                       | Dispose of contents/ container to an approved waste disposal plant.  |

## 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

## SECTION 3: Composition/information on ingredients

#### 3.2 Mixtures

Molecular weight : 291.82 g/mol

| Component    |                   | Classification              | Concentration |
|--------------|-------------------|-----------------------------|---------------|
| Methanol     |                   |                             |               |
| CAS-No.      | 67-56-1           | Flam. Liq. 2; Acute Tox. 3; | >= 90 - <=    |
| EC-No.       | 200-659-6         | STOT SE 1; H225, H301,      | 100 %         |
| Index-No.    | 603-001-00-X      | H331, H311, H370            |               |
| Registration | 01-2119433307-44- |                             |               |
| number       | XXXX              |                             |               |

For the full text of the H-Statements mentioned in this Section, see Section 16.

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#### **SECTION 4: First aid measures**

#### 4.1 Description of first aid measures

#### **General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

#### In case of eye contact

Flush eyes with water as a precaution.

#### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

- **4.2 Most important symptoms and effects, both acute and delayed** The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
- **4.3 Indication of any immediate medical attention and special treatment needed** No data available

#### **SECTION 5: Firefighting measures**

#### 5.1 Extinguishing media

#### **Suitable extinguishing media** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

- **5.2** Special hazards arising from the substance or mixture Carbon oxides
- **5.3** Advice for firefighters Wear self-contained breathing apparatus for firefighting if necessary.

## 5.4 Further information

Use water spray to cool unopened containers.

#### **SECTION 6: Accidental release measures**

#### 6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

For personal protection see section 8.

#### **6.2 Environmental precautions** Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

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## 6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wetbrushing and place in container for disposal according to local regulations (see section 13).

## 6.4 Reference to other sections

For disposal see section 13.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use explosion-proof equipment.Keep away from sources of ignition - No smoking.Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2.

#### 7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage temperature -20 °C Storage class (TRGS 510): 3: Flammable liquids

#### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

### SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### **Components with workplace control parameters**

| Component | CAS-No.                | Value  | Control<br>parameters | Basis                                      |  |
|-----------|------------------------|--|-----------------------|--|--|
| Methanol  | ol 67-56-1 TWA 200 ppm |  | 200 ppm               | USA. ACGIH Threshold Limit<br>Values (TLV) |  |
|           | Remarks                | or Indices (   |                       |  |  |
|           |                        | STEL 250 ppm USA. ACGIH Thresh<br>Values (TLV)   |                       |  |  |
|           |                        | Headache<br>Nausea<br>Dizziness<br>Eye damage<br>Substances for which there is a Biological Exposure II<br>or Indices (see BEI® section)<br>Danger of cutaneous absorption |                       |  |  |
|           |                        | TWA  | 200 ppm<br>260 mg/m3  | USA. NIOSH Recommended<br>Exposure Limits  |  |
|           |                        | Potential for dermal absorption  |                       |  |  |

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| ST            | 250 ppm<br>325 mg/m3 | USA. NIOSH Recommended<br>Exposure Limits  |
|---------------|----------------------|--|
| Potential for | or dermal absorp     | tion   |
| TWA           | 200 ppm<br>260 mg/m3 | USA. Occupational Exposure<br>Limits (OSHA) - Table Z-1<br>Limits for Air Contaminants           |
| The value i   | n mg/m3 is app       | roximate.  |
| С             | 1,000 ppm            | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
| Skin          |                      |  |
| PEL           | 200 ppm<br>260 mg/m3 | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
| Skin          | ·                    |  |
| STEL          | 250 ppm<br>325 mg/m3 | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
| Skin          |                      |  |

### **Biological occupational exposure limits**

| Component | CAS-No. | Parameters   | Value   | Biological specimen | Basis  |  |  |
|-----------|---------|--|---------|---------------------|--|--|--|
| Methanol  | 67-56-1 | Methanol   | 15 mg/l | Urine               | ACGIH -<br>Biological<br>Exposure Indices<br>(BEI) |  |  |
|           | Remarks | End of shift (As soon as possible after exposure ceases) |         |                     | posure ceases)                                     |  |  |

#### 8.2 Exposure controls

#### Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

#### Personal protective equipment

#### Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### **Skin protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact Material: butyl-rubber Minimum layer thickness: 0.3 mm

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Break through time: 480 min Material tested:Butoject® (KCL 897 / Aldrich Z677647, Size M)

Splash contact Material: Nitrile rubber Minimum layer thickness: 0.4 mm Break through time: 30 min Material tested:Camatril® (KCL 730 / Aldrich Z677442, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

#### **Body Protection**

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### **Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### **Control of environmental exposure**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

#### **SECTION 9: Physical and chemical properties**

#### 9.1 Information on basic physical and chemical properties

| a) | Appearance   | Form: liquid  |
|----|--|---|
| b) | Odour  | No data available   |
| c) | Odour Threshold                                    | No data available   |
| d) | рН   | No data available   |
| e) | Melting<br>point/freezing point                    | No data available   |
| f) | Initial boiling point<br>and boiling range         | 64 - 65 °C 147 - 149 °F at 1.013 hPa                            |
| g) | Flash point  | 9.7 °C (49.5 °F) - closed cup                                   |
| h) | Evaporation rate                                   | No data available   |
| i) | Flammability (solid,<br>gas)                       | No data available   |
| j) | Upper/lower<br>flammability or<br>explosive limits | Upper explosion limit: 36 %(V)<br>Lower explosion limit: 6 %(V) |

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- k) Vapour pressure No data available
- I) Vapour density No data available
- m) Relative density 0.791 g/cm3 at 20 °C (68 °F)
- n) Water solubility No data available
- o) Partition coefficient: No data available n-octanol/water
- p) Auto-ignition No data available temperature
- q) Decomposition No data available temperature
- r) Viscosity No data available
- s) Explosive properties No data available
- t) Oxidizing properties No data available

#### **9.2 Other safety information** No data available

## **SECTION 10: Stability and reactivity**

## 10.1 Reactivity

No data available

## **10.2** Chemical stability

Stable under recommended storage conditions.

## **10.3** Possibility of hazardous reactions

Vapours may form explosive mixture with air.

## 10.4 Conditions to avoid

Heat, flames and sparks. Extremes of temperature and direct sunlight.

#### **10.5** Incompatible materials

Acids, Oxidizing agents, Alkali metals, Strong oxidizing agents, Strong acids, Acid chlorides, Acid anhydrides, Reducing agents, Strong reducing agents, Phosphorus halides

#### **10.6 Hazardous decomposition products** Other decomposition products - No data available Hazardous decomposition products formed under fire conditions. - Carbon oxides In the event of fire: see section 5

## **SECTION 11: Toxicological information**

## 11.1 Information on toxicological effects

## Acute toxicity

No data available

Inhalation: No data available

Dermal: No data available

No data available

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## Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

## Respiratory or skin sensitisation

No data available

#### Germ cell mutagenicity

No data available

#### Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

- ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

#### **Reproductive toxicity**

No data available

Specific target organ toxicity - single exposure No data available

#### **Specific target organ toxicity - repeated exposure** No data available

Aspiration hazard No data available

#### **Additional Information**

RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Methyl alcohol may be fatal or cause blindness if swallowed., Cannot be made nonpoisonous., Effects due to ingestion may include:, Nausea, Headache, Vomiting, Gastrointestinal disturbance, Dizziness, Weakness, Confusion.

Central nervous system - Breathing difficulties - Based on Human Evidence

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## **SECTION 12: Ecological information**

12.1 Toxicity

No data available

- **12.2 Persistence and degradability** No data available
- **12.3 Bioaccumulative potential** No data available
- **12.4 Mobility in soil** No data available
- 12.5 Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
- **12.6 Other adverse effects** No data available

#### **SECTION 13: Disposal considerations**

#### **13.1 Waste treatment methods**

#### Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

#### Contaminated packaging

Dispose of as unused product.

#### **SECTION 14: Transport information**

#### DOT (US)

UN number: 1230 Class: 3 Packing group: II Proper shipping name: MethanolSOLUTION

Reportable Quantity (RQ): Poison Inhalation Hazard: No

#### IMDG

UN number: 1230 Class: 3 (6.1) Packing group: II Proper shipping name: METHANOLSOLUTION

EMS-No: F-E, S-D

## ΙΑΤΑ

UN number: 1230 Class: 3 (6.1) Packing group: II Proper shipping name: MethanolSOLUTION

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| SEC. | FION 15: Regulatory information  |                    |                             |  |  |  |
|------|--|--------------------|-----------------------------|--|--|--|
|      | SARA 302 Components<br>No chemicals in this material are subject to the reporting requirements of SARA Title III,<br>Section 302.  |                    |                             |  |  |  |
|      | <b>SARA 313 Components</b><br>The following components are subject to reporting levels established by SARA Title III,<br>Section 313:  |                    |                             |  |  |  |
|      | Methanol   | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |  |  |  |
|      | SARA 311/312 Hazards<br>Fire Hazard, Acute Health Hazard, Chronic Health Hazar   | ď                  |                             |  |  |  |
|      | Massachusetts Right To Know Components   |                    |                             |  |  |  |
|      | Methanol   | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |  |  |  |
|      | No components are subject to the Massachusetts Right to Know Act.  |                    |                             |  |  |  |
|      | Pennsylvania Right To Know Components<br>Methanol  | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |  |  |  |
|      | Methanol   | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |  |  |  |
|      | New Jersey Right To Know Components<br>Methanol  | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |  |  |  |
|      | <b>California Prop. 65 Components</b><br>WARNING: This product contains a chemical known to<br>the State of California to cause birth defects or other<br>reproductive harm.Methanol | CAS-No.<br>67-56-1 | Revision Date<br>2012-03-16 |  |  |  |

## **SECTION 16: Other information**

#### **Further information**

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See

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Version: 6.1

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## **SAFETY DATA SHEET**

Version 1.0 Revision Date 01/29/2020 Print Date 02/07/2020

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

## 1.1 Product identifiers

Product name : Diphenhydramine-D3 Product Number : D-187

**1.2** Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Synthesis of substances

### 1.3 Details of the supplier of the safety data sheet

| Company   | : Sigma-Aldrich Inc.<br>3050 Spruce Street<br>ST. LOUIS MO 63103<br>UNITED STATES |
|-----------|---|
| Telephone | : +1 314 771-5765   |
| Fax       | : +1 800 325-5052   |

### **1.4 Emergency telephone number**

Emergency Phone # : +1-703-527-3887

## **SECTION 2: Hazards identification**

#### 2.1 Classification of the substance or mixture

## GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 2), H225 Acute toxicity, Oral (Category 3), H301 Acute toxicity, Inhalation (Category 3), H331 Acute toxicity, Dermal (Category 3), H311 Specific target organ toxicity - single exposure (Category 1), Eyes, H370

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### 2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s) H225 H301 + H311 + H331 H370

Highly flammable liquid and vapour. Toxic if swallowed, in contact with skin or if inhaled. Causes damage to organs (Eyes).

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| Precautionary statement(s) |   |
|----------------------------|---|
| P210                       | Keep away from heat/sparks/open flames/hot surfaces. No smoking.  |
| P233                       | Keep container tightly closed.  |
| P240                       | Ground/bond container and receiving equipment.  |
| P241                       | Use explosion-proof electrical/ ventilating/ lighting equipment.  |
| P242                       | Use only non-sparking tools.  |
| P243                       | Take precautionary measures against static discharge.   |
| P260                       | Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.   |
| P264                       | Wash skin thoroughly after handling.  |
| P270                       | Do not eat, drink or smoke when using this product.   |
| P271                       | Use only outdoors or in a well-ventilated area.   |
| P280                       | Wear protective gloves/ eye protection/ face protection.  |
| P301 + P310 + P330         | IF SWALLOWED: Immediately call a POISON CENTER/doctor.  |
|                            | Rinse mouth.  |
| P303 + P361 + P353         | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.     |
| P304 + P340 + P311         | IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor. |
| P307 + P311                | IF exposed: Call a POISON CENTER or doctor/ physician.  |
| P362                       | Take off contaminated clothing and wash before reuse.   |
| P370 + P378                | In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.                    |
| P403 + P233                | Store in a well-ventilated place. Keep container tightly closed.  |
| P403 + P235                | Store in a well-ventilated place. Keep cool.  |
| P405                       | Store locked up.  |
| P501                       | Dispose of contents/ container to an approved waste disposal plant.                                     |

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

## SECTION 3: Composition/information on ingredients

#### 3.2 Mixtures

| Component    |                   | Classification              | Concentration |
|--------------|-------------------|-----------------------------|---------------|
| Methanol     |                   |                             |               |
| CAS-No.      | 67-56-1           | Flam. Liq. 2; Acute Tox. 3; |               |
| EC-No.       | 200-659-6         | STOT SE 1; H225, H301,      | 100 %         |
| Index-No.    | 603-001-00-X      | H331, H311, H370            |               |
| Registration | 01-2119433307-44- |                             |               |
| number       | XXXX              |                             |               |

For the full text of the H-Statements mentioned in this Section, see Section 16.

## SECTION 4: First aid measures

#### 4.1 Description of first aid measures

#### **General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance.

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## If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

#### In case of eye contact

Flush eyes with water as a precaution.

#### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

## 4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed No data available

### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

**Suitable extinguishing media** Dry powder Dry sand

## Unsuitable extinguishing media

Do NOT use water jet.

**5.2** Special hazards arising from the substance or mixture Carbon oxides

#### **5.3 Advice for firefighters** Wear self-contained breathing apparatus for firefighting if necessary.

**5.4 Further information** Use water spray to cool unopened containers.

#### **SECTION 6: Accidental release measures**

# 6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

For personal protection see section 8.

#### **6.2 Environmental precautions** Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

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## 6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

## 6.4 Reference to other sections

For disposal see section 13.

## SECTION 7: Handling and storage

## 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use explosion-proof equipment.Keep away from sources of ignition - No smoking.Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2.

### 7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage temperature -20 °C Storage class (TRGS 510): 3: Flammable liquids

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

### SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Components with workplace control parameters

| Component | CAS-No. | Value   | Control parameters   | Basis                                      |
|-----------|---------|---|----------------------|--|
| Methanol  | 67-56-1 | TWA   | 200 ppm              | USA. ACGIH Threshold Limit<br>Values (TLV) |
|           | Remarks | or Indices (  |                      | is a Biological Exposure Index<br>on)      |
|           |         | STEL  | 250 ppm              | USA. ACGIH Threshold Limit<br>Values (TLV) |
|           |         | Headache<br>Nausea<br>Dizziness<br>Eye damage<br>Substances for which there is a Biological Exposure Index<br>or Indices (see BEI® section)<br>Danger of cutaneous absorption |                      |  |
|           |         | TWA   | 200 ppm<br>260 mg/m3 | USA. NIOSH Recommended<br>Exposure Limits  |
|           |         | Potential for   | or dermal absorp     | tion                                       |

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| ST            | 250 ppm<br>325 mg/m3 | USA. NIOSH Recommended<br>Exposure Limits  |
|---------------|----------------------|--|
| Potential for | or dermal absorp     | tion   |
| TWA           | 200 ppm<br>260 mg/m3 | USA. Occupational Exposure<br>Limits (OSHA) - Table Z-1<br>Limits for Air Contaminants           |
| The value i   | n mg/m3 is app       | roximate.  |
| С             | 1,000 ppm            | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
| Skin          |                      |  |
| PEL           | 200 ppm<br>260 mg/m3 | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
| Skin          |                      |  |
| STEL          | 250 ppm<br>325 mg/m3 | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
| Skin          |                      |  |

## **Biological occupational exposure limits**

| Component | CAS-No. | Parameters     | Value      | Biological         | Basis            |  |
|-----------|---------|----------------|------------|--------------------|------------------|--|
|           |         |                |            | specimen           |                  |  |
| Methanol  | 67-56-1 | Methanol       | 15 mg/l    | Urine              | ACGIH -          |  |
|           |         |                |            |                    | Biological       |  |
|           |         |                |            |                    | Exposure Indices |  |
|           |         |                |            |                    | (BEI)            |  |
|           | Remarks | End of shift ( | As soon as | possible after exp | oosure ceases)   |  |

#### 8.2 Exposure controls

#### Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

#### Personal protective equipment

#### Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### **Skin protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

#### **Body Protection**

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

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#### **Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

## **Control of environmental exposure**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

## SECTION 9: Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties

| a)  | Appearance   | Form: liquid   |
|-----|--|--|
| b)  | Odour  | No data available  |
| c)  | Odour Threshold                                    | No data available  |
| d)  | рН   | No data available  |
| e)  | Melting<br>point/freezing point                    | No data available  |
| f)  | Initial boiling point and boiling range            | No data available  |
| g)  | Flash point  | 9.7 °C (49.5 °F) - closed cup - Tested according to Directive 92/69/EEC. |
| h)  | Evaporation rate                                   | No data available  |
| i)  | Flammability (solid,<br>gas)                       | No data available  |
| j)  | Upper/lower<br>flammability or<br>explosive limits | No data available  |
| k)  | Vapour pressure                                    | No data available  |
| I)  | Vapour density                                     | No data available  |
| m)  | Relative density                                   | No data available  |
| n)  | Water solubility                                   | No data available  |
| o)  | Partition coefficient:<br>n-octanol/water          | No data available  |
| p)  | Auto-ignition<br>temperature                       | No data available  |
| q)  | Decomposition<br>temperature                       | No data available  |
| r)  | Viscosity  | No data available  |
| s)  | Explosive properties                               | No data available  |
| t)  | Oxidizing properties                               | No data available  |
| Oth | er safety information                              | n  |

No data available

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## **SECTION 10: Stability and reactivity**

- **10.1 Reactivity** No data available
- **10.2 Chemical stability** Stable under recommended storage conditions.
- 10.3 Possibility of hazardous reactions No data available
- **10.4 Conditions to avoid** Heat, flames and sparks.
- **10.5 Incompatible materials** Acid chlorides, Acid anhydrides, Oxidizing agents, Alkali metals, Reducing agents, Acids
- **10.6 Hazardous decomposition products** Hazardous decomposition products formed under fire conditions. - Carbon oxides In the event of fire: see section 5

### **SECTION 11: Toxicological information**

### **11.1 Information on toxicological effects**

Acute toxicity No data available

**Skin corrosion/irritation** No data available

Serious eye damage/eye irritation No data available

**Respiratory or skin sensitisation** No data available

**Germ cell mutagenicity** No data available

#### Carcinogenicity

- IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
- OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

#### **Reproductive toxicity**

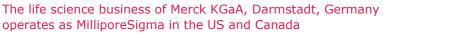
No data available

#### Specific target organ toxicity - single exposure No data available

Specific target organ toxicity - repeated exposure No data available

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## Aspiration hazard

No data available

#### **Additional Information**

RTECS: Not available

Methyl alcohol may be fatal or cause blindness if swallowed. Effects due to ingestion may include:, Headache, Dizziness, Drowsiness, metabolic acidosis, Coma, Seizures. Symptoms may be delayed., Damage of the:, Liver, Kidney

## SECTION 12: Ecological information

- **12.1 Toxicity** No data available
- 12.2 Persistence and degradability No data available
- **12.3 Bioaccumulative potential** No data available
- **12.4 Mobility in soil** No data available
- 12.5 Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
- **12.6 Other adverse effects** No data available

## SECTION 13: Disposal considerations

#### 13.1 Waste treatment methods

#### Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable.

#### Contaminated packaging

Dispose of as unused product.

## **SECTION 14: Transport information**

#### DOT (US)

UN number: 1230 Class: 3 Packing group: II Proper shipping name: MethanolSOLUTION

Reportable Quantity (RQ): Poison Inhalation Hazard: No

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#### ΙΑΤΑ

UN number: 1230 Class: 3 (6.1) Packing group: II Proper shipping name: MethanolSOLUTION

#### SECTION 15: Regulatory information

### **Massachusetts Right To Know Components**

No components are subject to the Massachusetts Right to Know Act.

## Pennsylvania Right To Know Components

Methanol

CAS-No. Revision Date 67-56-1 2007-07-01

## **SECTION 16: Other information**

#### **Further information**

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### **1.1 Product identifiers**

| Product name   | <sup>:</sup> Diazepam |
|----------------|-----------------------|
| Product Number | : D-907               |
| Brand          | : Cerilliant          |
| Index-No.      | : 603-001-00-X        |

## 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Synthesis of substances

## **1.3** Details of the supplier of the safety data sheet

| Company   | : Sigma-Aldrich Inc.<br>3050 Spruce Street<br>ST. LOUIS MO 63103<br>UNITED STATES |
|-----------|---|
| Telephone | : +1 314 771-5765   |
| Fax       | : +1 800 325-5052   |

### **1.4 Emergency telephone number**

Emergency Phone # : +1-703-527-3887

## **SECTION 2: Hazards identification**

#### 2.1 Classification of the substance or mixture

#### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 2), H225 Acute toxicity, Oral (Category 3), H301 Acute toxicity, Inhalation (Category 3), H331 Acute toxicity, Dermal (Category 3), H311 Specific target organ toxicity - single exposure (Category 1), H370

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### 2.2 GHS Label elements, including precautionary statements

Pictogram

Danger

Signal word Hazard statement(s) H225 H301 + H311 + H331

Highly flammable liquid and vapour. Toxic if swallowed, in contact with skin or if inhaled.

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| H370                       | Causes damage to organs.   |
|----------------------------|--|
| Precautionary statement(s) |  |
| P210                       | Keep away from heat/sparks/open flames/hot surfaces. No smoking.                                 |
| P233                       | Keep container tightly closed.   |
| P240                       | Ground/bond container and receiving equipment.   |
| P241                       | Use explosion-proof electrical/ ventilating/ lighting equipment.                                 |
| P242                       | Use only non-sparking tools.   |
| P243                       | Take precautionary measures against static discharge.  |
| P260                       | Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  |
| P264                       | Wash skin thoroughly after handling.   |
| P270                       | Do not eat, drink or smoke when using this product.  |
| P271                       | Use only outdoors or in a well-ventilated area.  |
| P280                       | Wear protective gloves/ protective clothing/ eye protection/ face protection.                    |
| P301 + P310                | IF SWALLOWED: Immediately call a POISON CENTER/doctor.   |
| P303 + P361 + P353         | IF ON SKIN (or hair): Remove/ Take off immediately all   |
|                            | contaminated clothing. Rinse skin with water/ shower.  |
| P304 + P340                | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. |
| P307 + P311                | IF exposed: Call a POISON CENTER or doctor/ physician.   |
| P322                       | Specific measures (see supplemental first aid instructions on this label).                       |
| P330                       | Rinse mouth.   |
| P361                       | Remove/Take off immediately all contaminated clothing.   |
| P363                       | Wash contaminated clothing before reuse.   |
| P370 + P378                | In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.            |
| P403 + P233                | Store in a well-ventilated place. Keep container tightly closed.                                 |
| P403 + P235                | Store in a well-ventilated place. Keep cool.   |
| P405                       | Store locked up.   |
| P501                       | Dispose of contents/ container to an approved waste disposal plant.                              |

## 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

## **SECTION 3: Composition/information on ingredients**

## 3.2 Mixtures

| Component  |   | Classification  | Concentration       |
|--|---|---|---------------------|
| Methanol   |   |   |                     |
| CAS-No.<br>EC-No.<br>Index-No.<br>Registration<br>number | 67-56-1<br>200-659-6<br>603-001-00-X<br>01-2119433307-44-<br>XXXX | Flam. Liq. 2; Acute Tox. 3;<br>STOT SE 1; H225, H301,<br>H331, H311, H370 | >= 90 - <=<br>100 % |
| Diazepam   |   |   |                     |
| CAS-No.<br>EC-No.  | 439-14-5<br>207-122-5   | Acute Tox. 3; H301, H311  | >= 0.1 - < 1<br>%   |

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#### **SECTION 4: First aid measures**

#### 4.1 Description of first aid measures

#### **General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

#### In case of eye contact

Flush eyes with water as a precaution.

#### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

- **4.2 Most important symptoms and effects, both acute and delayed** The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
- **4.3 Indication of any immediate medical attention and special treatment needed** No data available

#### **SECTION 5: Firefighting measures**

#### 5.1 Extinguishing media

# Suitable extinguishing media Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

- **5.2** Special hazards arising from the substance or mixture Carbon oxides
- **5.3** Advice for firefighters Wear self-contained breathing apparatus for firefighting if necessary.

#### **5.4 Further information** Use water spray to cool unopened containers.

#### **SECTION 6: Accidental release measures**

**6.1 Personal precautions, protective equipment and emergency procedures** Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

For personal protection see section 8.

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# 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

- **6.3 Methods and materials for containment and cleaning up** Contain spillage, and then collect with an electrically protected vacuum cleaner or by wetbrushing and place in container for disposal according to local regulations (see section 13).
- **6.4 Reference to other sections** For disposal see section 13.

#### **SECTION 7: Handling and storage**

#### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use explosion-proof equipment.Keep away from sources of ignition - No smoking.Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2.

# 7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage temperature -20 °C Storage class (TRGS 510): 3: Flammable liquids

#### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

#### **SECTION 8: Exposure controls/personal protection**

#### 8.1 Control parameters

#### **Components with workplace control parameters**

| components with |         |   |                 |                                |  |
|-----------------|---------|---|-----------------|--------------------------------|--|
| Component       | CAS-No. | Value   | Control         | Basis                          |  |
|                 |         |   | parameters      |                                |  |
| Methanol        | 67-56-1 | TWA   | 200 ppm         | USA. ACGIH Threshold Limit     |  |
|                 |         |   |                 | Values (TLV)                   |  |
|                 | Remarks | Headache  |                 |                                |  |
|                 |         | Nausea  |                 |                                |  |
|                 |         | Dizziness   |                 |                                |  |
|                 |         | Eye damag   | e               |                                |  |
|                 |         | Substances  | for which there | is a Biological Exposure Index |  |
|                 |         | or Indices (  | see BEI® sectio | n)                             |  |
|                 |         | Danger of o   | cutaneous absor | ption                          |  |
|                 |         | STEL  | 250 ppm         | USA. ACGIH Threshold Limit     |  |
|                 |         |   |                 | Values (TLV)                   |  |
|                 |         | Headache  |                 |                                |  |
|                 |         | Nausea  |                 |                                |  |
|                 |         | Dizziness   |                 |                                |  |
|                 |         | Eye damage  |                 |                                |  |
|                 |         | Substances for which there is a Biological Exposure Index or Indices (see BEI® section) |                 |                                |  |
|                 |         |   |                 |                                |  |
|                 |         | Danger of d   | cutaneous absor | ption                          |  |

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| TWA         | 200 ppm<br>260 mg/m3 | USA. NIOSH Recommended<br>Exposure Limits  |
|-------------|----------------------|--|
| Potential f | or dermal absor      | ption  |
| ST          | 250 ppm<br>325 mg/m3 | USA. NIOSH Recommended<br>Exposure Limits  |
| Potential f | or dermal absor      |  |
| TWA         | 200 ppm<br>260 mg/m3 | USA. Occupational Exposure<br>Limits (OSHA) - Table Z-1<br>Limits for Air Contaminants           |
| The value   | in mg/m3 is app      | proximate.   |
| С           | 1,000 ppm            | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
| Skin        | •                    |  |
| PEL         | 200 ppm<br>260 mg/m3 | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
| Skin        | 1                    |  |
| STEL        | 250 ppm<br>325 mg/m3 | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
| Skin        |                      |  |

# **Biological occupational exposure limits**

| Component | CAS-No. | Parameters     | Value      | Biological specimen | Basis  |
|-----------|---------|----------------|------------|---------------------|--|
| Methanol  | 67-56-1 | Methanol       | 15 mg/l    | Urine               | ACGIH -<br>Biological<br>Exposure Indices<br>(BEI) |
|           | Remarks | End of shift ( | As soon as | possible after exp  | osure ceases)                                      |

#### 8.2 Exposure controls

#### Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

#### Personal protective equipment

#### Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

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Full contact Material: butyl-rubber Minimum layer thickness: 0.3 mm Break through time: 480 min Material tested:Butoject® (KCL 897 / Aldrich Z677647, Size M)

Splash contact Material: Nitrile rubber Minimum layer thickness: 0.4 mm Break through time: 30 min Material tested:Camatril® (KCL 730 / Aldrich Z677442, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

#### **Body Protection**

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### **Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### **Control of environmental exposure**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

#### **SECTION 9: Physical and chemical properties**

#### 9.1 Information on basic physical and chemical properties

| a) | Appearance                              | Form: liquid                         |
|----|---|--------------------------------------|
| b) | Odour                                   | No data available                    |
| c) | Odour Threshold                         | No data available                    |
| d) | рН                                      | No data available                    |
| e) | Melting<br>point/freezing point         | No data available                    |
| f) | Initial boiling point and boiling range | 64 - 65 °C 147 - 149 °F at 1.013 hPa |
| g) | Flash point                             | 9.7 °C (49.5 °F) - closed cup        |
| h) | Evaporation rate                        | No data available                    |
| i) | Flammability (solid,<br>gas)            | No data available                    |

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|     | j)  | Upper/lower<br>flammability or<br>explosive limits | Upper explosion limit: 36 %(V)<br>Lower explosion limit: 6 %(V) |
|-----|-----|--|---|
|     | k)  | Vapour pressure                                    | No data available   |
|     | I)  | Vapour density                                     | No data available   |
|     | m)  | Relative density                                   | 0.791 g/cm3 at 20 °C (68 °F)                                    |
|     | n)  | Water solubility                                   | No data available   |
|     | o)  | Partition coefficient:<br>n-octanol/water          | No data available   |
|     | p)  | Auto-ignition<br>temperature                       | No data available   |
|     | q)  | Decomposition<br>temperature                       | No data available   |
|     | r)  | Viscosity  | No data available   |
|     | s)  | Explosive properties                               | No data available   |
|     | t)  | Oxidizing properties                               | No data available   |
| 9.2 | Oth | ner safety informatio                              | n   |

No data available

#### **SECTION 10: Stability and reactivity**

#### **10.1 Reactivity**

No data available

#### **10.2** Chemical stability

Stable under recommended storage conditions.

# 10.3 Possibility of hazardous reactions

# Vapours may form explosive mixture with air.

# 10.4 Conditions to avoid

Heat, flames and sparks. Extremes of temperature and direct sunlight.

#### **10.5** Incompatible materials

Acids, Oxidizing agents, Alkali metals, Strong oxidizing agents, Strong acids, Acid chlorides, Acid anhydrides, Reducing agents, Strong reducing agents, Phosphorus halides

# 10.6 Hazardous decomposition products Other decomposition products - No data available Hazardous decomposition products formed under fire conditions. - Carbon oxides In the event of fire: see section 5

# **SECTION 11: Toxicological information**

#### **11.1** Information on toxicological effects

#### Acute toxicity No data available

Inhalation: No data available

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Dermal: No data available

No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation No data available

**Respiratory or skin sensitisation** No data available

**Germ cell mutagenicity** No data available

#### Carcinogenicity

| IARC: | 3 - Grou | 3: Not classifiable as to its carcinogenicity to humans (Diazer | oam) |
|-------|----------|---|------|
|       |          |   |      |

- IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

# Reproductive toxicity

No data available

Specific target organ toxicity - single exposure No data available

Specific target organ toxicity - repeated exposure No data available

# Aspiration hazard

No data available

#### Additional Information

RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Methyl alcohol may be fatal or cause blindness if swallowed., Cannot be made nonpoisonous., Effects due to ingestion may include:, Nausea, Headache, Vomiting, Gastrointestinal disturbance, Dizziness, Weakness, Confusion.

Central nervous system - Breathing difficulties - Based on Human Evidence

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# **SECTION 12: Ecological information**

12.1 Toxicity

No data available

- **12.2 Persistence and degradability** No data available
- **12.3 Bioaccumulative potential** No data available
- **12.4 Mobility in soil** No data available
- 12.5 Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
- **12.6 Other adverse effects** No data available

#### **SECTION 13: Disposal considerations**

#### **13.1 Waste treatment methods**

#### Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

#### Contaminated packaging

Dispose of as unused product.

#### **SECTION 14: Transport information**

#### DOT (US)

UN number: 1230 Class: 3 Packing group: II Proper shipping name: MethanolSOLUTION

Reportable Quantity (RQ): Poison Inhalation Hazard: No

#### IMDG

UN number: 1230 Class: 3 (6.1) Packing group: II Proper shipping name: METHANOLSOLUTION

EMS-No: F-E, S-D

# ΙΑΤΑ

UN number: 1230 Class: 3 (6.1) Packing group: II Proper shipping name: MethanolSOLUTION

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# SECTION 15: Regulatory information

#### SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

# SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

|          | CAS-No. | Revision Date |
|----------|---------|---------------|
| Methanol | 67-56-1 | 2007-07-01    |

#### SARA 311/312 Hazards

Fire Hazard, Acute Health Hazard, Chronic Health Hazard

| Massachusetts Right To Know Components |         |               |
|--|---------|---------------|
|  | CAS-No. | Revision Date |
| Methanol                               | 67-56-1 | 2007-07-01    |

No components are subject to the Massachusetts Right to Know Act.

| <b>Pennsylvania Right To Know Components</b><br>Methanol   | CAS-No.<br>67-56-1             | Revision Date<br>2007-07-01               |
|--|--------------------------------|---|
| Methanol   | CAS-No.<br>67-56-1             | Revision Date<br>2007-07-01               |
| New Jersey Right To Know Components<br>Methanol  | CAS-No.<br>67-56-1             | Revision Date<br>2007-07-01               |
| Diazepam   | 439-14-5                       | 1993-04-24                                |
| <b>California Prop. 65 Components</b><br>WARNING: This product contains a chemical known to<br>the State of California to cause birth defects or other<br>reproductive harm.Methanol<br>Diazepam | CAS-No.<br>67-56-1<br>439-14-5 | Revision Date<br>2012-03-16<br>2007-09-28 |

# **SECTION 16: Other information**

#### **Further information**

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the

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present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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Version: 6.2

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Print Date: 02/20/2020

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# **SAFETY DATA SHEET**

Version 6.2 Revision Date 07/02/2019 Print Date 02/24/2020

#### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### **1.1 Product identifiers**

| Product name   | <sup>:</sup> Diazepam-d5 solution |
|----------------|-----------------------------------|
| Product Number | : D-910                           |
| Brand          | : Cerilliant                      |
| Index-No.      | : 603-001-00-X                    |

# 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Synthesis of substances

# 1.3 Details of the supplier of the safety data sheet

| Company          | : | Sigma-Aldrich Inc.<br>3050 Spruce Street<br>ST. LOUIS MO 63103<br>UNITED STATES |
|------------------|---|---|
| Telephone<br>Fax | - | +1 314 771-5765<br>+1 800 325-5052  |

#### **1.4 Emergency telephone number**

Emergency Phone # : +1-703-527-3887

#### **SECTION 2: Hazards identification**

# 2.1 Classification of the substance or mixture

#### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 2), H225 Acute toxicity, Oral (Category 3), H301 Acute toxicity, Inhalation (Category 3), H331 Acute toxicity, Dermal (Category 3), H311 Carcinogenicity (Category 2), H351 Specific target organ toxicity - single exposure (Category 1), H370

For the full text of the H-Statements mentioned in this Section, see Section 16.

# 2.2 GHS Label elements, including precautionary statements

Danger

Pictogram



Signal word Hazard statement(s) H225

Highly flammable liquid and vapour.

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| H301 + H311 + H331<br>H351<br>H370 | Toxic if swallowed, in contact with skin or if inhaled.<br>Suspected of causing cancer.<br>Causes damage to organs. |
|------------------------------------|---|
| Precautionary statement(s)         |   |
| P201                               | Obtain special instructions before use.   |
| P202                               | Do not handle until all safety precautions have been read and   |
|                                    | understood.   |
| P210                               | Keep away from heat/sparks/open flames/hot surfaces. No smoking.  |
| P233                               | Keep container tightly closed.  |
| P240                               | Ground/bond container and receiving equipment.  |
| P241                               | Use explosion-proof electrical/ ventilating/ lighting equipment.  |
| P242                               | Use only non-sparking tools.  |
| P243                               | Take precautionary measures against static discharge.   |
| P260                               | Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.   |
| P264                               | Wash skin thoroughly after handling.  |
| P270                               | Do not eat, drink or smoke when using this product.   |
| P271                               | Use only outdoors or in a well-ventilated area.   |
| P280                               | Wear protective gloves/ protective clothing/ eye protection/ face protection.                                       |
| P301 + P310                        | IF SWALLOWED: Immediately call a POISON CENTER/doctor.  |
| P303 + P361 + P353                 | IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.        |
| P304 + P340                        | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.                    |
| P307 + P311                        | IF exposed: Call a POISON CENTER or doctor/ physician.  |
| P322                               | Specific measures (see supplemental first aid instructions on   |
| 1 522                              | this label).  |
| P330                               | Rinse mouth.  |
| P361                               | Remove/Take off immediately all contaminated clothing.  |
| P363                               | Wash contaminated clothing before reuse.  |
| P370 + P378                        | In case of fire: Use dry sand, dry chemical or alcohol-resistant  |
|                                    | foam for extinction.  |
| P403 + P233                        | Store in a well-ventilated place. Keep container tightly closed.  |
| P403 + P235                        | Store in a well-ventilated place. Keep cool.  |
| P405                               | Store locked up.  |
| P501                               | Dispose of contents/ container to an approved waste disposal  |
|                                    | plant.  |

# 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

# **SECTION 3:** Composition/information on ingredients

# 3.2 Mixtures

| Component              |                           | Classification  | Concentration       |
|------------------------|---------------------------|---|---------------------|
| Methanol               |                           |   |                     |
| CAS-No.<br>EC-No.      | 67-56-1<br>200-659-6      | Flam. Liq. 2; Acute Tox. 3;<br>STOT SE 1; H225, H301, | >= 90 - <=<br>100 % |
| Index-No.              | 603-001-00-X              | H331, H311, H370                                      | 100 /0              |
| Registration<br>number | 01-2119433307-44-<br>XXXX |   |                     |

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For the full text of the H-Statements mentioned in this Section, see Section 16.

# SECTION 4: First aid measures

# 4.1 Description of first aid measures

# General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

# In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

# In case of eye contact

Flush eyes with water as a precaution.

#### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

#### 4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

**4.3 Indication of any immediate medical attention and special treatment needed** No data available

# SECTION 5: Firefighting measures

5.1 Extinguishing media

# Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**5.2** Special hazards arising from the substance or mixture Carbon oxides

# **5.3** Advice for firefighters Wear self-contained breathing apparatus for firefighting if necessary.

# **5.4 Further information** Use water spray to cool unopened containers.

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# SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

For personal protection see section 8.

#### **6.2 Environmental precautions** Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

**6.3 Methods and materials for containment and cleaning up** Contain spillage, and then collect with an electrically protected vacuum cleaner or by wetbrushing and place in container for disposal according to local regulations (see section 13).

# 6.4 Reference to other sections

For disposal see section 13.

# SECTION 7: Handling and storage

# 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use explosion-proof equipment.Keep away from sources of ignition - No smoking.Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2.

# 7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store under inert gas. hygroscopic

Recommended storage temperature -20 °C Storage class (TRGS 510): 3: Flammable liquids

#### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

# SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

#### **Components with workplace control parameters**

| Component | CAS-No. | Value        | Control<br>parameters | Basis                                      |
|-----------|---------|--------------|-----------------------|--|
| Methanol  | 67-56-1 | TWA          | 200 ppm               | USA. ACGIH Threshold Limit<br>Values (TLV) |
|           | Remarks | or Indices ( |                       |  |

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| STEL          | 250 ppm                              | USA. ACGIH Threshold Limit<br>Values (TLV)   |
|---------------|--------------------------------------|--|
|               | for which there                      | e is a Biological Exposure Index   |
|               | (see BEI® section<br>cutaneous absor |  |
| TWA           | 200 ppm<br>260 mg/m3                 | USA. NIOSH Recommended<br>Exposure Limits  |
| Potential for | or dermal absorp                     | tion   |
| ST            | 250 ppm<br>325 mg/m3                 | USA. NIOSH Recommended<br>Exposure Limits  |
|               | or dermal absorp                     |  |
| TWA           | 200 ppm<br>260 mg/m3                 | USA. Occupational Exposure<br>Limits (OSHA) - Table Z-1<br>Limits for Air Contaminants           |
| The value i   | n mg/m3 is app                       |  |
| С             | 1,000 ppm                            | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
| Skin          |                                      |  |
| PEL           | 200 ppm<br>260 mg/m3                 | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
| Skin          | 1                                    |  |
| STEL          | 250 ppm<br>325 mg/m3                 | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
| Skin          | •                                    |  |

# Biological occupational exposure limits

| Biological occupational exposure mints |         |                |            |                     |  |
|--|---------|----------------|------------|---------------------|--|
| Component                              | CAS-No. | Parameters     | Value      | Biological specimen | Basis  |
| Methanol                               | 67-56-1 | Methanol       | 15 mg/l    | Urine               | ACGIH -<br>Biological<br>Exposure Indices<br>(BEI) |
|  | Remarks | End of shift ( | As soon as | possible after exp  | oosure ceases)                                     |

# 8.2 Exposure controls

# Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

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# **Personal protective equipment**

# Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### **Skin protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact Material: butyl-rubber Minimum layer thickness: 0.3 mm Break through time: 480 min Material tested:Butoject® (KCL 897 / Aldrich Z677647, Size M)

Splash contact Material: Nitrile rubber Minimum layer thickness: 0.4 mm Break through time: 30 min Material tested:Camatril® (KCL 730 / Aldrich Z677442, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

#### **Body Protection**

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### **Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### **Control of environmental exposure**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

#### **SECTION 9: Physical and chemical properties**

# 9.1 Information on basic physical and chemical properties

- a) Appearance Form: liquid
- b) Odour No data available
- c) Odour Threshold No data available
- d) pH No data available

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| e) | Melting<br>point/freezing point                    | No data available   |
|----|--|---|
| f) | Initial boiling point<br>and boiling range         | 64 - 65 °C 147 - 149 °F at 1.013 hPa                            |
| g) | Flash point  | 9.7 °C (49.5 °F) - closed cup                                   |
| h) | Evaporation rate                                   | No data available   |
| i) | Flammability (solid,<br>gas)                       | No data available   |
| j) | Upper/lower<br>flammability or<br>explosive limits | Upper explosion limit: 36 %(V)<br>Lower explosion limit: 6 %(V) |
| k) | Vapour pressure                                    | No data available   |
| I) | Vapour density                                     | No data available   |
| m) | Relative density                                   | 0.791 g/cm3 at 20 °C (68 °F)                                    |
| n) | Water solubility                                   | No data available   |
| 0) | Partition coefficient:<br>n-octanol/water          | No data available   |
| p) | Auto-ignition<br>temperature                       | No data available   |
| q) | Decomposition<br>temperature                       | No data available   |
| r) | Viscosity  | No data available   |
| s) | Explosive properties                               | No data available   |
| t) | Oxidizing properties                               | No data available   |
|    |  |   |

9.2 Other safety information No data available

# SECTION 10: Stability and reactivity

#### **10.1 Reactivity**

No data available

#### **10.2** Chemical stability

Stable under recommended storage conditions.

# **10.3** Possibility of hazardous reactions

Vapours may form explosive mixture with air.

# 10.4 Conditions to avoid

Heat, flames and sparks. Extremes of temperature and direct sunlight.

# **10.5 Incompatible materials**

Acids, Oxidizing agents, Alkali metals, Strong oxidizing agents, Strong acids, Acid chlorides, Acid anhydrides, Reducing agents, Strong reducing agents, Phosphorus halides

#### **10.6 Hazardous decomposition products** Other decomposition products - No data available Hazardous decomposition products formed under fire conditions. - Carbon oxides

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# **SECTION 11: Toxicological information**

#### **11.1** Information on toxicological effects

#### Acute toxicity

No data available

Inhalation: No data available

Dermal: No data available

No data available

#### Skin corrosion/irritation No data available

Serious eye damage/eye irritation No data available

# **Respiratory or skin sensitisation** No data available

Germ cell mutagenicity

No data available

#### Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

- ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

# **Reproductive toxicity**

No data available

**Specific target organ toxicity - single exposure** No data available

**Specific target organ toxicity - repeated exposure** No data available

**Aspiration hazard** No data available

Additional Information

RTECS: Not available

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To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Methyl alcohol may be fatal or cause blindness if swallowed., Cannot be made nonpoisonous., Effects due to ingestion may include:, Nausea, Headache, Vomiting, Gastrointestinal disturbance, Dizziness, Weakness, Confusion.

Stomach - Irregularities - Based on Human Evidence

#### **SECTION 12: Ecological information**

#### **12.1 Toxicity**

No data available

- 12.2 Persistence and degradability No data available
- **12.3 Bioaccumulative potential** No data available
- **12.4 Mobility in soil** No data available
- 12.5 Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
- **12.6 Other adverse effects** No data available

#### **SECTION 13: Disposal considerations**

#### 13.1 Waste treatment methods

#### Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

#### **Contaminated packaging**

Dispose of as unused product.

# **SECTION 14: Transport information**

#### DOT (US)

UN number: 1230 Class: 3 Packing group: II Proper shipping name: MethanolSOLUTION

Reportable Quantity (RQ): Poison Inhalation Hazard: No

#### IMDG

UN number: 1230 Class: 3 (6.1)

Packing group: II

EMS-No: F-E, S-D

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The life science business of Merck KGaA, Darmstadt, Germany operates as MilliporeSigma in the US and Canada



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#### IATA UN number: 1230 Class: 3 (6.1) Packing group: II Proper shipping name: MethanolSOLUTION

| <b>SARA 302 Components</b><br>No chemicals in this material are subject to the reportin<br>Section 302.  | g requirement      | s of SARA Title III         |
|--|--------------------|-----------------------------|
| <b>SARA 313 Components</b><br>The following components are subject to reporting level<br>Section 313:  | s established b    | by SARA Title III,          |
| Methanol   | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |
| SARA 311/312 Hazards<br>Fire Hazard, Chronic Health Hazard   |                    |                             |
| Massachusetts Right To Know Components   |                    |                             |
| Methanol   | CAS-No.<br>67-56-1 | Revision Dat<br>2007-07-01  |
| No components are subject to the Massachusetts Right   | to Know Act.       |                             |
| Pennsylvania Right To Know Components<br>Methanol  | CAS-No.<br>67-56-1 | Revision Dat<br>2007-07-01  |
| Methanol   | CAS-No.<br>67-56-1 | Revision Dat<br>2007-07-01  |
| New Jersey Right To Know Components<br>Methanol  | CAS-No.<br>67-56-1 | Revision Dat<br>2007-07-01  |
| <b>California Prop. 65 Components</b><br>WARNING: This product contains a chemical known to<br>the State of California to cause birth defects or other<br>reproductive harm.Methanol | CAS-No.<br>67-56-1 | Revision Dat<br>2012-03-16  |

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# **SECTION 16: Other information**

#### Further information

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# SAFETY DATA SHEET

# SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### **1.1 Product identifiers**

| Relevant identified use | es | of the substance or mixture and uses advised agains |
|-------------------------|----|---|
| Index-No.               | :  | 603-001-00-X  |
| Brand                   | :  | Cerilliant  |
| Product Number          | :  | E-004   |
| Product name            | :  | Ecgonine hydrochloride solution                     |

# **1.2** Relevant identified uses of the substance or mixture and uses advised against

| Identified uses : | Laboratory | chemicals, Synthesis of substances |  |
|-------------------|------------|------------------------------------|--|
|-------------------|------------|------------------------------------|--|

# **1.3** Details of the supplier of the safety data sheet

# **1.4 Emergency telephone number**

Emergency Phone # : +1-703-527-3887

# **SECTION 2: Hazards identification**

#### 2.1 Classification of the substance or mixture

#### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 2), H225 Acute toxicity, Oral (Category 3), H301 Acute toxicity, Inhalation (Category 3), H331 Acute toxicity, Dermal (Category 3), H311 Specific target organ toxicity - single exposure (Category 1), H370

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### 2.2 GHS Label elements, including precautionary statements

Pictogram



Danger

Signal word Hazard statement(s) H225 H301 + H311 + H331

Highly flammable liquid and vapour. Toxic if swallowed, in contact with skin or if inhaled.

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| H370                       | Causes damage to organs.   |
|----------------------------|--|
| Precautionary statement(s) |  |
| P210                       | Keep away from heat/sparks/open flames/hot surfaces. No smoking.   |
| P233                       | Keep container tightly closed.   |
| P240                       | Ground/bond container and receiving equipment.   |
| P241                       | Use explosion-proof electrical/ ventilating/ lighting equipment.   |
| P242                       | Use only non-sparking tools.   |
| P243                       | Take precautionary measures against static discharge.  |
| P260                       | Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  |
| P264                       | Wash skin thoroughly after handling.   |
| P270                       | Do not eat, drink or smoke when using this product.  |
| P271                       | Use only outdoors or in a well-ventilated area.  |
| P280                       | Wear protective gloves/ protective clothing/ eye protection/ face protection.                                |
| P301 + P310                | IF SWALLOWED: Immediately call a POISON CENTER/doctor.   |
| P303 + P361 + P353         | IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. |
| P304 + P340                | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.             |
| P307 + P311                | IF exposed: Call a POISON CENTER or doctor/ physician.   |
| P322                       | Specific measures (see supplemental first aid instructions on this label).                                   |
| P330                       | Rinse mouth.   |
| P361                       | Remove/Take off immediately all contaminated clothing.   |
| P363                       | Wash contaminated clothing before reuse.   |
| P370 + P378                | In case of fire: Use dry sand, dry chemical or alcohol-resistant   |
|                            | foam for extinction.   |
| P403 + P233                | Store in a well-ventilated place. Keep container tightly closed.   |
| P403 + P235                | Store in a well-ventilated place. Keep cool.   |
| P405                       | Store locked up.   |
| P501                       | Dispose of contents/ container to an approved waste disposal plant.  |

# 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

# **SECTION 3:** Composition/information on ingredients

#### 3.2 Mixtures

| Component                      |                                      | Classification  | Concentration       |
|--------------------------------|--------------------------------------|---|---------------------|
| Methanol                       |                                      |   |                     |
| CAS-No.<br>EC-No.<br>Index-No. | 67-56-1<br>200-659-6<br>603-001-00-X | Flam. Liq. 2; Acute Tox. 3;<br>STOT SE 1; H225, H301,<br>H331, H311, H370 | >= 90 - <=<br>100 % |
| Registration                   | 01-2119433307-44-<br>XXXX            |   |                     |

For the full text of the H-Statements mentioned in this Section, see Section 16.

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#### **SECTION 4: First aid measures**

#### 4.1 Description of first aid measures

#### **General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

#### In case of eye contact

Flush eyes with water as a precaution.

#### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

- **4.2 Most important symptoms and effects, both acute and delayed** The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
- **4.3 Indication of any immediate medical attention and special treatment needed** No data available

#### **SECTION 5: Firefighting measures**

#### 5.1 Extinguishing media

#### **Suitable extinguishing media** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

- **5.2 Special hazards arising from the substance or mixture** Carbon oxides
- **5.3** Advice for firefighters Wear self-contained breathing apparatus for firefighting if necessary.

# 5.4 Further information

Use water spray to cool unopened containers.

#### **SECTION 6:** Accidental release measures

#### 6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

For personal protection see section 8.

#### **6.2 Environmental precautions** Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

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# 6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wetbrushing and place in container for disposal according to local regulations (see section 13).

# 6.4 Reference to other sections

For disposal see section 13.

# SECTION 7: Handling and storage

# 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use explosion-proof equipment.Keep away from sources of ignition - No smoking.Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2.

#### 7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage temperature -20 °C Storage class (TRGS 510): 3: Flammable liquids

#### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

# SECTION 8: Exposure controls/personal protection

# 8.1 Control parameters

#### **Components with workplace control parameters**

| Component | CAS-No. | Value                           | Control<br>parameters                                     | Basis  |  |
|-----------|---------|---------------------------------|---|--|--|
| Methanol  | 67-56-1 | TWA                             | 200 ppm   | USA. ACGIH Threshold Limit<br>Values (TLV)     |  |
|           | Remarks | or Indices (                    |   |  |  |
|           |         | STEL                            | 250 ppm   | USA. ACGIH Threshold Limit<br>Values (TLV)     |  |
|           |         | or Indices (<br>Danger of d     | s for which there<br>(see BEI® section<br>cutaneous absor | is a Biological Exposure Index<br>on)<br>ption |  |
|           |         | TWA                             | 200 ppm<br>260 mg/m3                                      | USA. NIOSH Recommended<br>Exposure Limits      |  |
|           |         | Potential for dermal absorption |   |  |  |

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| ST            | 250 ppm<br>325 mg/m3 | USA. NIOSH Recommended<br>Exposure Limits  |
|---------------|----------------------|--|
| Potential for | or dermal absorp     | tion   |
| TWA           | 200 ppm<br>260 mg/m3 | USA. Occupational Exposure<br>Limits (OSHA) - Table Z-1<br>Limits for Air Contaminants           |
| The value i   | n mg/m3 is app       | roximate.  |
| С             | 1,000 ppm            | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
| Skin          |                      |  |
| PEL           | 200 ppm<br>260 mg/m3 | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
| Skin          | ·                    |  |
| STEL          | 250 ppm<br>325 mg/m3 | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
| Skin          |                      |  |

# **Biological occupational exposure limits**

|           | zieregien eestepanen enpeen einnee |                |             |                     |  |  |
|-----------|------------------------------------|----------------|-------------|---------------------|--|--|
| Component | CAS-No.                            | Parameters     | Value       | Biological specimen | Basis  |  |
| Methanol  | 67-56-1                            | Methanol       | 15 mg/l     | Urine               | ACGIH -<br>Biological<br>Exposure Indices<br>(BEI) |  |
|           | Remarks                            | End of shift ( | (As soon as | s possible after ex | posure ceases)                                     |  |

#### 8.2 Exposure controls

#### Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

#### Personal protective equipment

#### Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### **Skin protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact Material: butyl-rubber Minimum layer thickness: 0.3 mm

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Break through time: 480 min Material tested:Butoject® (KCL 897 / Aldrich Z677647, Size M)

Splash contact Material: Nitrile rubber Minimum layer thickness: 0.4 mm Break through time: 30 min Material tested:Camatril® (KCL 730 / Aldrich Z677442, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

#### **Body Protection**

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### **Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### **Control of environmental exposure**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

#### **SECTION 9: Physical and chemical properties**

#### 9.1 Information on basic physical and chemical properties

| a) | Appearance   | Form: liquid  |
|----|--|---|
| b) | Odour  | No data available   |
| c) | Odour Threshold                                    | No data available   |
| d) | рН   | No data available   |
| e) | Melting<br>point/freezing point                    | No data available   |
| f) | Initial boiling point<br>and boiling range         | 64 - 65 °C 147 - 149 °F at 1.013 hPa                            |
| g) | Flash point  | 9.7 °C (49.5 °F) - closed cup                                   |
| h) | Evaporation rate                                   | No data available   |
| i) | Flammability (solid,<br>gas)                       | No data available   |
| j) | Upper/lower<br>flammability or<br>explosive limits | Upper explosion limit: 36 %(V)<br>Lower explosion limit: 6 %(V) |

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- k) Vapour pressure No data available
- I) Vapour density No data available
- m) Relative density 0.791 g/cm3 at 20 °C (68 °F)
- n) Water solubility No data available
- o) Partition coefficient: No data available n-octanol/water
- p) Auto-ignition No data available temperature
- q) Decomposition No data available temperature
- r) Viscosity No data available
- s) Explosive properties No data available
- t) Oxidizing properties No data available

#### **9.2 Other safety information** No data available

# **SECTION 10: Stability and reactivity**

# 10.1 Reactivity

No data available

# **10.2** Chemical stability

Stable under recommended storage conditions.

# **10.3** Possibility of hazardous reactions

Vapours may form explosive mixture with air.

# 10.4 Conditions to avoid

Heat, flames and sparks. Extremes of temperature and direct sunlight.

#### **10.5** Incompatible materials

Acids, Oxidizing agents, Alkali metals, Strong oxidizing agents, Strong acids, Acid chlorides, Acid anhydrides, Reducing agents, Strong reducing agents, Phosphorus halides

#### **10.6 Hazardous decomposition products** Other decomposition products - No data available Hazardous decomposition products formed under fire conditions. - Carbon oxides In the event of fire: see section 5

# **SECTION 11: Toxicological information**

# 11.1 Information on toxicological effects

# Acute toxicity

No data available

Inhalation: No data available

Dermal: No data available

No data available

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# Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

# Respiratory or skin sensitisation

No data available

#### Germ cell mutagenicity

No data available

#### Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

- ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

#### **Reproductive toxicity**

No data available

Specific target organ toxicity - single exposure No data available

#### **Specific target organ toxicity - repeated exposure** No data available

**Aspiration hazard** No data available

#### **Additional Information**

RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Methyl alcohol may be fatal or cause blindness if swallowed., Cannot be made nonpoisonous., Effects due to ingestion may include:, Nausea, Headache, Vomiting, Gastrointestinal disturbance, Dizziness, Weakness, Confusion.

Central nervous system - Breathing difficulties - Based on Human Evidence

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# SECTION 12: Ecological information

12.1 Toxicity

No data available

- **12.2 Persistence and degradability** No data available
- **12.3 Bioaccumulative potential** No data available
- **12.4 Mobility in soil** No data available
- 12.5 Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
- **12.6 Other adverse effects** No data available

#### SECTION 13: Disposal considerations

#### **13.1 Waste treatment methods**

#### Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

#### Contaminated packaging

Dispose of as unused product.

#### **SECTION 14: Transport information**

#### DOT (US)

UN number: 1230 Class: 3 Packing group: II Proper shipping name: MethanolSOLUTION

Reportable Quantity (RQ): Poison Inhalation Hazard: No

#### IMDG

UN number: 1230 Class: 3 (6.1) Packing group: II Proper shipping name: METHANOLSOLUTION

EMS-No: F-E, S-D

# ΙΑΤΑ

UN number: 1230 Class: 3 (6.1) Packing group: II Proper shipping name: MethanolSOLUTION

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| SECTION 15: Regulatory                     | SECTION 15: Regulatory information   |                    |                             |  |  |  |
|--|--|--------------------|-----------------------------|--|--|--|
|  | <b>SARA 302 Components</b><br>No chemicals in this material are subject to the reporting requirements of SARA Title III,<br>Section 302. |                    |                             |  |  |  |
|  | SARA 313 Components<br>The following components are subject to reporting levels established by SARA Title III,<br>Section 313:           |                    |                             |  |  |  |
| Methanol                                   |  | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |  |  |  |
| SARA 311/312 Haza<br>Fire Hazard, Acute He | <b>ards</b><br>alth Hazard, Chronic Health Hazar   | rd                 |                             |  |  |  |
| Massachusetts Righ                         | t To Know Components   |                    |                             |  |  |  |
| Methanol                                   |  | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |  |  |  |
| No components are su                       | ubject to the Massachusetts Right  | to Know Act.       |                             |  |  |  |
| <b>Pennsylvania Right</b><br>Methanol      | To Know Components   | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |  |  |  |
| Methanol                                   |  | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |  |  |  |
| <b>New Jersey Right T</b> e<br>Methanol    | o Know Components  | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |  |  |  |
|  | uct contains a chemical known to<br>a to cause birth defects or other  | CAS-No.<br>67-56-1 | Revision Date<br>2012-03-16 |  |  |  |

# **SECTION 16: Other information**

#### **Further information**

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See

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www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

The branding on the header and/or footer of this document may temporarily not visually match the product purchased as we transition our branding. However, all of the information in the document regarding the product remains unchanged and matches the product ordered. For further information please contact mlsbranding@sial.com.

Version: 6.1

Revision Date: 07/02/2019

Print Date: 11/18/2019

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Sigma-Aldrich.

# **SAFETY DATA SHEET**

Version 1.0 Revision Date 01/29/2020 Print Date 02/07/2020

# SECTION 1: Identification of the substance/mixture and of the company/undertaking

# 1.1 Product identifiers

| Product name   | : | Ecgonine-D3 HCl |
|----------------|---|-----------------|
| Product Number | : | E-010           |

**1.2** Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Synthesis of substances

# **1.3** Details of the supplier of the safety data sheet

| Company   | : Sigma-Aldrich Inc.<br>3050 Spruce Street<br>ST. LOUIS MO 63103<br>UNITED STATES |
|-----------|---|
| Telephone | : +1 314 771-5765   |
| Fax       | : +1 800 325-5052   |

# **1.4 Emergency telephone number**

Emergency Phone # : +1-703-527-3887

#### **SECTION 2: Hazards identification**

#### 2.1 Classification of the substance or mixture

# GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 2), H225 Acute toxicity, Oral (Category 3), H301 Acute toxicity, Inhalation (Category 3), H331 Acute toxicity, Dermal (Category 3), H311 Specific target organ toxicity - single exposure (Category 1), Eyes, H370

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### 2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s) H225 H301 + H311 + H331 H370

Highly flammable liquid and vapour. Toxic if swallowed, in contact with skin or if inhaled. Causes damage to organs (Eyes).

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| Precautionary statement(s) |   |
|----------------------------|---|
| P210                       | Keep away from heat/sparks/open flames/hot surfaces. No smoking.  |
| P233                       | Keep container tightly closed.  |
| P240                       | Ground/bond container and receiving equipment.  |
| P241                       | Use explosion-proof electrical/ ventilating/ lighting equipment.  |
| P242                       | Use only non-sparking tools.  |
| P243                       | Take precautionary measures against static discharge.   |
| P260                       | Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.   |
| P264                       | Wash skin thoroughly after handling.  |
| P270                       | Do not eat, drink or smoke when using this product.   |
| P271                       | Use only outdoors or in a well-ventilated area.   |
| P280                       | Wear protective gloves/ eye protection/ face protection.  |
| P301 + P310 + P330         | IF SWALLOWED: Immediately call a POISON CENTER/doctor.  |
|                            | Rinse mouth.  |
| P303 + P361 + P353         | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.     |
| P304 + P340 + P311         | IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor. |
| P307 + P311                | IF exposed: Call a POISON CENTER or doctor/ physician.  |
| P362                       | Take off contaminated clothing and wash before reuse.   |
| P370 + P378                | In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.                    |
| P403 + P233                | Store in a well-ventilated place. Keep container tightly closed.  |
| P403 + P235                | Store in a well-ventilated place. Keep cool.  |
| P405                       | Store locked up.  |
| P501                       | Dispose of contents/ container to an approved waste disposal plant.                                     |

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

# SECTION 3: Composition/information on ingredients

#### 3.2 Mixtures

| Component    |                   | Classification              | Concentration |
|--------------|-------------------|-----------------------------|---------------|
| Methanol     |                   |                             |               |
| CAS-No.      | 67-56-1           | Flam. Liq. 2; Acute Tox. 3; |               |
| EC-No.       | 200-659-6         | STOT SE 1; H225, H301,      | 100 %         |
| Index-No.    | 603-001-00-X      | H331, H311, H370            |               |
| Registration | 01-2119433307-44- |                             |               |
| number       | XXXX              |                             |               |

For the full text of the H-Statements mentioned in this Section, see Section 16.

# SECTION 4: First aid measures

#### 4.1 Description of first aid measures

#### **General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance.

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# If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

# In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

#### In case of eye contact

Flush eyes with water as a precaution.

#### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

# 4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

# 4.3 Indication of any immediate medical attention and special treatment needed No data available

# SECTION 5: Firefighting measures

# 5.1 Extinguishing media

**Suitable extinguishing media** Dry powder Dry sand

# Unsuitable extinguishing media

Do NOT use water jet.

**5.2** Special hazards arising from the substance or mixture Carbon oxides

#### **5.3** Advice for firefighters Wear self-contained breathing apparatus for firefighting if necessary.

**5.4 Further information** Use water spray to cool unopened containers.

#### **SECTION 6: Accidental release measures**

# 6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

For personal protection see section 8.

#### **6.2 Environmental precautions** Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

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# 6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

# 6.4 Reference to other sections

For disposal see section 13.

# SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use explosion-proof equipment.Keep away from sources of ignition - No smoking.Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2.

#### 7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage temperature -20 °C Storage class (TRGS 510): 3: Flammable liquids

#### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

# SECTION 8: Exposure controls/personal protection

# 8.1 Control parameters

#### Components with workplace control parameters

| Component | CAS-No. | Value   | Control<br>parameters | Basis                                      |  |
|-----------|---------|---|-----------------------|--|--|
| Methanol  | 67-56-1 | TWA   | 200 ppm               | USA. ACGIH Threshold Limit<br>Values (TLV) |  |
|           | Remarks | or Indices (  |                       | -  |  |
|           |         | STEL  | 250 ppm               | USA. ACGIH Threshold Limit<br>Values (TLV) |  |
|           |         | Headache<br>Nausea<br>Dizziness<br>Eye damage<br>Substances for which there is a Biological Exposure Index<br>or Indices (see BEI® section)<br>Danger of cutaneous absorption |                       |  |  |
|           |         | TWA   | 200 ppm<br>260 mg/m3  | USA. NIOSH Recommended<br>Exposure Limits  |  |
|           |         | Potential for dermal absorption   |                       |  |  |

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| ST            | 250 ppm<br>325 mg/m3 | USA. NIOSH Recommended<br>Exposure Limits  |
|---------------|----------------------|--|
| Potential for | or dermal absorp     | tion   |
| TWA           | 200 ppm<br>260 mg/m3 | USA. Occupational Exposure<br>Limits (OSHA) - Table Z-1<br>Limits for Air Contaminants           |
| The value i   | n mg/m3 is app       | roximate.  |
| С             | 1,000 ppm            | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
| Skin          |                      |  |
| PEL           | 200 ppm<br>260 mg/m3 | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
| Skin          |                      |  |
| STEL          | 250 ppm<br>325 mg/m3 | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
| Skin          |                      |  |

# **Biological occupational exposure limits**

| Component | CAS-No. | Parameters     | Value      | Biological         | Basis            |
|-----------|---------|----------------|------------|--------------------|------------------|
|           |         |                |            | specimen           |                  |
| Methanol  | 67-56-1 | Methanol       | 15 mg/l    | Urine              | ACGIH -          |
|           |         |                |            |                    | Biological       |
|           |         |                |            |                    | Exposure Indices |
|           |         |                |            |                    | (BEI)            |
|           | Remarks | End of shift ( | As soon as | possible after exp | oosure ceases)   |

#### 8.2 Exposure controls

#### Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

#### Personal protective equipment

#### Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### **Skin protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

#### **Body Protection**

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

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## **Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

## **Control of environmental exposure**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

## **SECTION 9: Physical and chemical properties**

## 9.1 Information on basic physical and chemical properties

| a) | Appearance   | Form: liquid      |
|----|--|-------------------|
| b) | Odour  | No data available |
| c) | Odour Threshold                                    | No data available |
| d) | рН   | No data available |
| e) | Melting<br>point/freezing point                    | No data available |
| f) | Initial boiling point and boiling range            | No data available |
| g) | Flash point  | No data available |
| h) | Evaporation rate                                   | No data available |
| i) | Flammability (solid,<br>gas)                       | No data available |
| j) | Upper/lower<br>flammability or<br>explosive limits | No data available |
| k) | Vapour pressure                                    | No data available |
| I) | Vapour density                                     | No data available |
| m) | Relative density                                   | No data available |
| n) | Water solubility                                   | No data available |
| o) | Partition coefficient:<br>n-octanol/water          | No data available |
| p) | Auto-ignition<br>temperature                       | No data available |
| q) | Decomposition<br>temperature                       | No data available |
| r) | Viscosity  | No data available |
| s) | Explosive properties                               | No data available |
| t) | Oxidizing properties                               | No data available |

# 9.2 Other safety information No data available

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## SECTION 10: Stability and reactivity

- **10.1 Reactivity** No data available
- **10.2 Chemical stability** Stable under recommended storage conditions.
- **10.3 Possibility of hazardous reactions** No data available
- **10.4 Conditions to avoid** Heat, flames and sparks.
- **10.5 Incompatible materials** Acid chlorides, Acid anhydrides, Oxidizing agents, Alkali metals, Reducing agents, Acids
- **10.6 Hazardous decomposition products** Hazardous decomposition products formed under fire conditions. - Carbon oxides In the event of fire: see section 5

## **SECTION 11: Toxicological information**

#### **11.1 Information on toxicological effects**

#### Acute toxicity

No data available

Inhalation: No data available

Dermal: No data available

No data available

Skin corrosion/irritation No data available

Serious eye damage/eye irritation No data available

**Respiratory or skin sensitisation** No data available

Germ cell mutagenicity No data available

#### Carcinogenicity

- IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
- OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

#### **Reproductive toxicity**

No data available

Specific target organ toxicity - single exposure No data available

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## Specific target organ toxicity - repeated exposure

No data available

## Aspiration hazard

No data available

## **Additional Information**

RTECS: Not available

Methyl alcohol may be fatal or cause blindness if swallowed. Effects due to ingestion may include:, Headache, Dizziness, Drowsiness, metabolic acidosis, Coma, Seizures. Symptoms may be delayed., Damage of the:, Liver, Kidney

## **SECTION 12: Ecological information**

- **12.1 Toxicity** No data available
- **12.2 Persistence and degradability** No data available
- **12.3 Bioaccumulative potential** No data available
- **12.4 Mobility in soil** No data available
- **12.5 Results of PBT and vPvB assessment** PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
- 12.6 Other adverse effects No data available

#### **SECTION 13: Disposal considerations**

#### 13.1 Waste treatment methods

#### Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable.

#### **Contaminated packaging**

Dispose of as unused product.

## **SECTION 14: Transport information**

DOT (US)

UN number: 1230 Class: 3 Packing group: II Proper shipping name: MethanolSOLUTION

Reportable Quantity (RQ):

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Poison Inhalation Hazard: No

## IMDG

UN number: 1230 Class: 3 (6.1) E, S-D Proper shipping name: METHANOLSOLUTION

## ΙΑΤΑ

UN number: 1230 Class: 3 (6.1) Packing group: II Proper shipping name: MethanolSOLUTION

## **SECTION 15: Regulatory information**

## Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

| Pennsylvania Right To Know Components |         |               |
|---------------------------------------|---------|---------------|
| Methanol                              | CAS-No. | Revision Date |
|                                       | 67-56-1 | 2007-07-01    |

## **SECTION 16: Other information**

#### **Further information**

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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Packing group: II EMS-No: F-



## SECTION 1: Identification of the substance/mixture and of the company/undertaking

## **1.1 Product identifiers**

| Product name   | : Hydrocodone solution |
|----------------|------------------------|
| Product Number | : H-003                |
| Brand          | : Cerilliant           |

## 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Synthesis of substances

#### **1.3** Details of the supplier of the safety data sheet

| Company          | : | Sigma-Aldrich Inc.<br>3050 Spruce Street<br>ST. LOUIS MO 63103<br>UNITED STATES |
|------------------|---|---|
| Telephone<br>Fax | - | +1 314 771-5765<br>+1 800 325-5052  |

## **1.4 Emergency telephone number**

Emergency Phone # : +1-703-527-3887

## **SECTION 2: Hazards identification**

#### 2.1 Classification of the substance or mixture

## GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 2), H225 Acute toxicity, Oral (Category 3), H301 Acute toxicity, Inhalation (Category 3), H331 Acute toxicity, Dermal (Category 3), H311 Specific target organ toxicity - single exposure (Category 1), Eyes, H370

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### 2.2 GHS Label elements, including precautionary statements

Pictogram

Signal word

Danger

Hazard statement(s) H225 H301 + H311 + H331 H370

Cerilliant - H-003

Highly flammable liquid and vapour. Toxic if swallowed, in contact with skin or if inhaled. Causes damage to organs (Eyes).

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| Precautionary statement(s) |   |
|----------------------------|---|
| P210                       | Keep away from heat/sparks/open flames/hot surfaces. No smoking.  |
| P233                       | Keep container tightly closed.  |
| P240                       | Ground/bond container and receiving equipment.  |
| P241                       | Use explosion-proof electrical/ ventilating/ lighting equipment.  |
| P242                       | Use only non-sparking tools.  |
| P243                       | Take precautionary measures against static discharge.   |
| P260                       | Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.   |
| P264                       | Wash skin thoroughly after handling.  |
| P270                       | Do not eat, drink or smoke when using this product.   |
| P271                       | Use only outdoors or in a well-ventilated area.   |
| P280                       | Wear protective gloves/ eye protection/ face protection.  |
| P301 + P310 + P330         | IF SWALLOWED: Immediately call a POISON CENTER/doctor.  |
|                            | Rinse mouth.  |
| P303 + P361 + P353         | IF ON SKIN (or hair): Take off immediately all contaminated   |
|                            | clothing. Rinse skin with water/shower.   |
| P304 + P340 + P311         | IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor. |
| P307 + P311                | IF exposed: Call a POISON CENTER or doctor/ physician.  |
| P362                       | Take off contaminated clothing and wash before reuse.   |
| P370 + P378                | In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.                    |
| P403 + P233                | Store in a well-ventilated place. Keep container tightly closed.  |
| P403 + P235                | Store in a well-ventilated place. Keep cool.  |
| P405                       | Store locked up.  |
| P501                       | Dispose of contents/ container to an approved waste disposal plant.                                     |
| Sensitising components:    |   |

hydrocodone May produce an allergic reaction.

## 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

## **SECTION 3:** Composition/information on ingredients

## 3.2 Mixtures

| Component  |   | Classification  | Concentration       |
|--|---|---|---------------------|
| Methanol   |   |   |                     |
| CAS-No.<br>EC-No.<br>Index-No.<br>Registration<br>number | 67-56-1<br>200-659-6<br>603-001-00-X<br>01-2119433307-44-<br>XXXX | Flam. Liq. 2; Acute Tox. 3;<br>STOT SE 1; H225, H301,<br>H331, H311, H370 | >= 90 - <=<br>100 % |

For the full text of the H-Statements mentioned in this Section, see Section 16.

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## **SECTION 4: First aid measures**

#### 4.1 Description of first aid measures

#### **General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

#### In case of eye contact

Flush eyes with water as a precaution.

#### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

- **4.2 Most important symptoms and effects, both acute and delayed** The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
- **4.3 Indication of any immediate medical attention and special treatment needed** No data available

#### **SECTION 5: Firefighting measures**

#### 5.1 Extinguishing media

Suitable extinguishing media Dry powder Dry sand

**Unsuitable extinguishing media** Do NOT use water jet.

- **5.2 Special hazards arising from the substance or mixture** Carbon oxides
- **5.3** Advice for firefighters Wear self-contained breathing apparatus for firefighting if necessary.
- 5.4 Further information

Use water spray to cool unopened containers.

#### **SECTION 6: Accidental release measures**

**6.1 Personal precautions, protective equipment and emergency procedures** Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

For personal protection see section 8.

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## 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

### 6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

#### **6.4 Reference to other sections** For disposal see section 13.

## SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use explosion-proof equipment.Keep away from sources of ignition - No smoking.Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2.

#### 7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage temperature -20 °C Storage class (TRGS 510): 3: Flammable liquids

## 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

#### **SECTION 8: Exposure controls/personal protection**

#### 8.1 Control parameters

#### **Components with workplace control parameters**

| Component | CAS-No. | Value  | Control<br>parameters | Basis                                      |
|-----------|---------|--|-----------------------|--|
| Methanol  | 67-56-1 | TWA  | 200 ppm               | USA. ACGIH Threshold Limit<br>Values (TLV) |
|           | Remarks | or Indices (   |                       | is a Biological Exposure Index<br>on)      |
|           |         | STEL   | 250 ppm               | USA. ACGIH Threshold Limit<br>Values (TLV) |
|           |         | Headache<br>Nausea<br>Dizziness<br>Eye damage<br>Substances for which there is a Biological E<br>or Indices (see BEI® section)<br>Danger of cutaneous absorption |                       | on)  |

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| TWA           | 200 ppm<br>260 mg/m3            | USA. NIOSH Recommended<br>Exposure Limits  |  |
|---------------|---------------------------------|--|--|
| Potential for | Potential for dermal absorption |  |  |
| ST            | 250 ppm<br>325 mg/m3            | USA. NIOSH Recommended<br>Exposure Limits  |  |
| Potential for | or dermal absorp                | tion   |  |
| TWA           | 200 ppm<br>260 mg/m3            | USA. Occupational Exposure<br>Limits (OSHA) - Table Z-1<br>Limits for Air Contaminants           |  |
| The value i   | n mg/m3 is app                  | roximate.  |  |
| С             | 1,000 ppm                       | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |  |
| Skin          |                                 |  |  |
| PEL           | 200 ppm<br>260 mg/m3            | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |  |
| Skin          |                                 |  |  |
| STEL          | 250 ppm<br>325 mg/m3            | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |  |
| Skin          |                                 |  |  |

## **Biological occupational exposure limits**

| Component | CAS-No. | Parameters     | Value      | Biological specimen | Basis  |
|-----------|---------|----------------|------------|---------------------|--|
| Methanol  | 67-56-1 | Methanol       | 15 mg/l    | Urine               | ACGIH -<br>Biological<br>Exposure Indices<br>(BEI) |
|           | Remarks | End of shift ( | As soon as | possible after exp  | osure ceases)                                      |

#### 8.2 Exposure controls

#### Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

#### Personal protective equipment

#### Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

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Full contact Material: butyl-rubber Minimum layer thickness: 0.3 mm Break through time: 480 min Material tested:Butoject® (KCL 897 / Aldrich Z677647, Size M)

Splash contact Material: Nitrile rubber Minimum layer thickness: 0.4 mm Break through time: 30 min Material tested:Camatril® (KCL 730 / Aldrich Z677442, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

#### **Body Protection**

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### **Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### **Control of environmental exposure**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

#### **SECTION 9: Physical and chemical properties**

#### 9.1 Information on basic physical and chemical properties

| a) | Appearance                                 | Form: liquid                         |
|----|--|--------------------------------------|
| b) | Odour                                      | No data available                    |
| c) | Odour Threshold                            | No data available                    |
| d) | рН   | No data available                    |
| e) | Melting<br>point/freezing point            | No data available                    |
| f) | Initial boiling point<br>and boiling range | 64 - 65 °C 147 - 149 °F at 1.013 hPa |
| g) | Flash point                                | 9.7 °C (49.5 °F) - closed cup        |
| h) | Evaporation rate                           | No data available                    |
| i) | Flammability (solid,<br>gas)               | No data available                    |

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| j)                       | Upper/lower<br>flammability or<br>explosive limits | Upper explosion limit: 36 %(V)<br>Lower explosion limit: 6 %(V) |  |  |
|--------------------------|--|---|--|--|
| k)                       | Vapour pressure                                    | No data available   |  |  |
| I)                       | Vapour density                                     | No data available   |  |  |
| m)                       | Relative density                                   | 0.791 g/cm3 at 20 °C (68 °F)                                    |  |  |
| n)                       | Water solubility                                   | No data available   |  |  |
| o)                       | Partition coefficient:<br>n-octanol/water          | No data available   |  |  |
| p)                       | Auto-ignition<br>temperature                       | No data available   |  |  |
| q)                       | Decomposition<br>temperature                       | No data available   |  |  |
| r)                       | Viscosity  | No data available   |  |  |
| s)                       | Explosive properties                               | No data available   |  |  |
| t)                       | Oxidizing properties                               | No data available   |  |  |
| Other safety information |  |   |  |  |

No data available

#### **SECTION 10: Stability and reactivity**

#### **10.1 Reactivity**

9.2

No data available

#### **10.2** Chemical stability

Stable under recommended storage conditions.

#### **10.3 Possibility of hazardous reactions** Vapours may form explosive mixture with air.

**10.4 Conditions to avoid** Heat, flames and sparks.

#### **10.5 Incompatible materials** Acids, Oxidizing agents, Alkali metals, Strong oxidizing agents, Strong acids, Acid chlorides, Acid anhydrides, Reducing agents, Strong reducing agents, Phosphorus halides

# 10.6 Hazardous decomposition products Other decomposition products - No data available Hazardous decomposition products formed under fire conditions. - Carbon oxides In the event of fire: see section 5

## **SECTION 11: Toxicological information**

#### **11.1** Information on toxicological effects

#### Acute toxicity No data available

Inhalation: No data available

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Dermal: No data available

No data available

#### Skin corrosion/irritation

No data available

#### Serious eye damage/eye irritation No data available

#### **Respiratory or skin sensitisation** No data available

#### Germ cell mutagenicity No data available

## Carcinogenicity

- IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
- OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

#### **Reproductive toxicity**

No data available

Specific target organ toxicity - single exposure No data available

#### Specific target organ toxicity - repeated exposure No data available

Aspiration hazard

#### **Additional Information**

RTECS: Not available

Methyl alcohol may be fatal or cause blindness if swallowed., Cannot be made nonpoisonous., Effects due to ingestion may include:, Nausea, Headache, Vomiting, Gastrointestinal disturbance, Dizziness, Weakness, Confusion.

Central nervous system - Breathing difficulties - Based on Human Evidence

#### **SECTION 12: Ecological information**

## 12.1 Toxicity

- No data available
- 12.2 Persistence and degradability No data available
- **12.3 Bioaccumulative potential** No data available
- **12.4 Mobility in soil** No data available

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#### 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

### 12.6 Other adverse effects

No data available

### **SECTION 13: Disposal considerations**

#### 13.1 Waste treatment methods

#### Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Contact a licensed professional waste disposal service to dispose of this material.

#### **Contaminated packaging**

Dispose of as unused product.

#### **SECTION 14: Transport information**

#### DOT (US)

UN number: 1230 Class: 3 Packing group: II Proper shipping name: MethanolSOLUTION

Reportable Quantity (RQ): Poison Inhalation Hazard: No

#### IMDG

UN number: 1230 Class: 3 (6.1) Packing group: II Proper shipping name: METHANOLSOLUTION

EMS-No: F-E, S-D

#### ΙΑΤΑ

UN number: 1230 Class: 3 (6.1) Packing group: II Proper shipping name: MethanolSOLUTION

#### **SECTION 15: Regulatory information**

#### SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

#### SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

| CAS-No. | Revision Date |
|---------|---------------|
| 67-56-1 | 2007-07-01    |

## Methanol

## SARA 311/312 Hazards

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| Fire Hazard, Acute Health Hazard, Chronic Health Hazard |                    |                             |  |
|---|--------------------|-----------------------------|--|
| Massachusetts Right To Know Components                  | CAS-No.            | Revision Date               |  |
| Methanol  | 67-56-1            | 2007-07-01                  |  |
|   |                    |                             |  |
| No components are subject to the Massachusetts Rig      | ht to Know Act.    |                             |  |
| Pennsylvania Right To Know Components<br>Methanol       | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |  |
| Methanol  | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |  |
| New Jersey Right To Know Components<br>Methanol         | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |  |

## **SECTION 16: Other information**

#### **Further information**

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## SAFETY DATA SHEET

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### **1.1 Product identifiers**

.

| Product name   | : Heroin-D9  |
|----------------|--------------|
| Product Number | : H-037      |
| Brand          | : Cerilliant |

## 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Synthesis of substances

#### 1.3 Details of the supplier of the safety data sheet

| Company          | : | Sigma-Aldrich Inc.<br>3050 Spruce Street<br>ST. LOUIS MO 63103<br>UNITED STATES |
|------------------|---|---|
| Telephone<br>Fax |   | +1 314 771-5765<br>+1 800 325-5052  |

### **1.4 Emergency telephone number**

Emergency Phone # : +1-703-527-3887

## **SECTION 2: Hazards identification**

#### 2.1 Classification of the substance or mixture

#### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 2), H225 Acute toxicity, Oral (Category 4), H302 Acute toxicity, Inhalation (Category 4), H332 Acute toxicity, Dermal (Category 4), H312 Eye irritation (Category 2A), H319

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### 2.2 GHS Label elements, including precautionary statements



| Signal word   | Danger   |
|---|--|
| Hazard statement(s)<br>H225<br>H302 + H312 + H332<br>H319 | Highly flammable liquid and vapour.<br>Harmful if swallowed, in contact with skin or if inhaled.<br>Causes serious eye irritation. |
| Precautionary statement(s)<br>P210                        | Keep away from heat/sparks/open flames/hot surfaces. No  |

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| P233<br>P240       | smoking.<br>Keep container tightly closed.<br>Ground/bond container and receiving equipment.   |
|--------------------|--|
| P241<br>P242       | Use explosion-proof electrical/ ventilating/ lighting equipment.<br>Use only non-sparking tools.                                       |
| P243               | Take precautionary measures against static discharge.  |
| P261               | Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.   |
| P264               | Wash skin thoroughly after handling.   |
| P270               | Do not eat, drink or smoke when using this product.  |
| P271               | Use only outdoors or in a well-ventilated area.  |
| P280               | Wear protective gloves/ protective clothing/ eye protection/ face protection.  |
| P301 + P312 + P330 | IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.   |
| P303 + P361 + P353 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.                                    |
| P304 + P340 + P312 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.             |
| P305 + P351 + P338 | IF IN EYES: Rinse cautiously with water for several minutes.<br>Remove contact lenses, if present and easy to do. Continue<br>rinsing. |
| P337 + P313        | If eye irritation persists: Get medical advice/ attention.   |
| P363               | Wash contaminated clothing before reuse.   |
| P370 + P378        | In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.   |
| P403 + P235        | Store in a well-ventilated place. Keep cool.   |
| P501               | Dispose of contents/ container to an approved waste disposal plant.  |

## 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

## **SECTION 3: Composition/information on ingredients**

## 3.2 Mixtures

| Component  |   | Classification  | Concentration       |
|--|---|---|---------------------|
| Acetonitrile   |   |   |                     |
| CAS-No.<br>EC-No.<br>Index-No.<br>Registration<br>number | 75-05-8<br>200-835-2<br>608-001-00-3<br>01-2119471307-38-<br>XXXX | Flam. Liq. 2; Acute Tox. 4;<br>Eye Irrit. 2A; H225, H302,<br>H332, H312, H319 | >= 90 - <=<br>100 % |
| Heroin-D9  |   |   |                     |
|  |   | Acute Tox. 3; H301  | >= 0.1 - < 1<br>%   |

For the full text of the H-Statements mentioned in this Section, see Section 16.

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## **SECTION 4: First aid measures**

#### 4.1 Description of first aid measures

#### **General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

#### In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

#### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

#### **4.2 Most important symptoms and effects, both acute and delayed** The most important known symptoms and effects are described in the labelling (see section

- 2.2) and/or in section 11
- **4.3 Indication of any immediate medical attention and special treatment needed** No data available

## **SECTION 5: Firefighting measures**

#### 5.1 Extinguishing media

## Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**5.2** Special hazards arising from the substance or mixture Carbon oxides, Nitrogen oxides (NOx)

#### **5.3** Advice for firefighters Wear self-contained breathing apparatus for firefighting if necessary.

**5.4 Further information** Use water spray to cool unopened containers.

#### **SECTION 6:** Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. For personal protection see section 8.

## **6.2 Environmental precautions** Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

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## 6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wetbrushing and place in container for disposal according to local regulations (see section 13).

## 6.4 Reference to other sections

For disposal see section 13.

## SECTION 7: Handling and storage

## 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use explosion-proof equipment.Keep away from sources of ignition - No smoking.Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2.

## 7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store under inert gas. hygroscopic

Recommended storage temperature -20 °C Storage class (TRGS 510): 3: Flammable liquids

## 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

## **SECTION 8: Exposure controls/personal protection**

#### 8.1 Control parameters

#### **Components with workplace control parameters**

| components with workplace control parameters |         |  |                       |  |
|--|---------|--|-----------------------|--|
| Component                                    | CAS-No. | Value  | Control<br>parameters | Basis  |
| Acetonitrile                                 | 75-05-8 | TWA  | 20 ppm                | USA. ACGIH Threshold Limit<br>Values (TLV)   |
|  | Remarks | Lower Respiratory Tract irritation<br>Not classifiable as a human carcinogen<br>Danger of cutaneous absorption |                       |  |
|  |         | TWA  | 20 ppm<br>34 mg/m3    | USA. NIOSH Recommended<br>Exposure Limits  |
|  |         | Forms cyanide in the body.   |                       |  |
|  |         | TWA  | 40 ppm<br>70 mg/m3    | USA. Occupational Exposure<br>Limits (OSHA) - Table Z-1<br>Limits for Air Contaminants           |
|  |         | The value i  | n mg/m3 is appi       | roximate.  |
|  |         | PEL  | 40 ppm<br>70 mg/m3    | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
|  |         | Skin   |                       |  |

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|  | STEL | 60 ppm<br>105 mg/m3 | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
|--|------|---------------------|--|
|  | Skin |                     |  |

#### 8.2 Exposure controls

#### Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

#### **Personal protective equipment**

#### Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### **Skin protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

#### **Body Protection**

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### **Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### **Control of environmental exposure**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

hPa

#### **SECTION 9: Physical and chemical properties**

#### 9.1 Information on basic physical and chemical properties

| a) | Appearance                                 | Form: liquid                     |
|----|--|----------------------------------|
| b) | Odour                                      | No data available                |
| c) | Odour Threshold                            | No data available                |
| d) | рН   | No data available                |
| e) | Melting<br>point/freezing point            | No data available                |
| f) | Initial boiling point<br>and boiling range | 81 - 82 °C 178 - 180 °F at 1.013 |
| g) | Flash point                                | 2 °C (36 °F) - closed cup        |
| h) | Evaporation rate                           | No data available                |
|    |  |                                  |

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| i)                       | Flammability (solid,<br>gas)                       | No data available   |  |  |
|--------------------------|--|---|--|--|
| j)                       | Upper/lower<br>flammability or<br>explosive limits | Upper explosion limit: 16 %(V)<br>Lower explosion limit: 4.4 %(V) |  |  |
| k)                       | Vapour pressure                                    | No data available   |  |  |
| I)                       | Vapour density                                     | No data available   |  |  |
| m)                       | Relative density                                   | 0.782 g/cm3 at 20 °C (68 °F)                                      |  |  |
| n)                       | Water solubility                                   | No data available   |  |  |
| o)                       | Partition coefficient:<br>n-octanol/water          | No data available   |  |  |
| p)                       | Auto-ignition<br>temperature                       | No data available   |  |  |
| q)                       | Decomposition<br>temperature                       | No data available   |  |  |
| r)                       | Viscosity  | No data available   |  |  |
| s)                       | Explosive properties                               | No data available   |  |  |
| t)                       | Oxidizing properties                               | No data available   |  |  |
| Other safety information |  |   |  |  |

#### **9.2 Other safety information** No data available

#### **SECTION 10: Stability and reactivity**

- **10.1 Reactivity** No data available
- **10.2 Chemical stability** Stable under recommended storage conditions.
- **10.3 Possibility of hazardous reactions** Vapours may form explosive mixture with air.
- **10.4 Conditions to avoid** Heat, flames and sparks.
- **10.5 Incompatible materials** acids, Bases, Oxidizing agents, Alkali metals

# 10.6 Hazardous decomposition products Other decomposition products - No data available Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NOx) In the event of fire: see section 5

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## SECTION 11: Toxicological information

## **11.1 Information on toxicological effects**

#### **Acute toxicity**

No data available

Inhalation: No data available

Dermal: No data available

No data available

Skin corrosion/irritation No data available

Serious eye damage/eye irritation

No data available

**Respiratory or skin sensitisation** No data available

Germ cell mutagenicity

No data available

#### Carcinogenicity

- IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
- OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

#### **Reproductive toxicity**

No data available

Specific target organ toxicity - single exposure No data available

Specific target organ toxicity - repeated exposure No data available

Aspiration hazard

No data available

#### **Additional Information**

RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Treat as cyanide poisoning., Always have on hand a cyanide first-aid kit, together with proper instructions., The onset of symptoms is generally delayed pending conversion to cyanide., Nausea, Vomiting, Diarrhoea, Headache, Dizziness, Rash, Cyanosis

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## **SECTION 12: Ecological information**

12.1 Toxicity

No data available

- **12.2 Persistence and degradability** No data available
- **12.3 Bioaccumulative potential** No data available
- **12.4 Mobility in soil** No data available
- 12.5 Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
- **12.6 Other adverse effects** No data available

#### **SECTION 13: Disposal considerations**

#### **13.1 Waste treatment methods**

#### Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

#### Contaminated packaging

Dispose of as unused product.

#### **SECTION 14: Transport information**

#### DOT (US)

UN number: 1648 Class: 3 Packing group: II Proper shipping name: AcetonitrileSOLUTION

Reportable Quantity (RQ): Poison Inhalation Hazard: No

#### IMDG

UN number: 1648 Class: 3 Packing group: II Proper shipping name: ACETONITRILESOLUTION

EMS-No: F-E, S-D

## ΙΑΤΑ

UN number: 1648 Class: 3 Packing group: II Proper shipping name: AcetonitrileSOLUTION

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## **SECTION 15: Regulatory information**

#### SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

#### SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

| Acetonitrile   | CAS-No.<br>75-05-8 | Revision Date<br>2007-07-01 |
|--|--------------------|-----------------------------|
| SARA 311/312 Hazards<br>Fire Hazard, Acute Health Hazard |                    |                             |
| Massachusetts Right To Know Components                   |                    |                             |
| Acetonitrile   | CAS-No.<br>75-05-8 | Revision Date 2007-07-01    |
| Penneylyania Bight To Know Components                    |                    |                             |
| Pennsylvania Right To Know Components<br>Acetonitrile    | CAS-No.<br>75-05-8 | Revision Date<br>2007-07-01 |
|  |                    |                             |
| New Jersey Right To Know Components<br>Acetonitrile      | CAS-No.<br>75-05-8 | Revision Date<br>2007-07-01 |

#### **California Prop. 65 Components**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

## **SECTION 16: Other information**

#### **Further information**

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Version: 6.1

Revision Date: 07/02/2019

Print Date: 04/24/2020

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## SECTION 1: Identification of the substance/mixture and of the company/undertaking

## **1.1 Product identifiers**

| Product name   | : Heroin |
|----------------|----------|
| Product Number | : H-038  |

Brand : Cerilliant

## 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Synthesis of substances

#### **1.3** Details of the supplier of the safety data sheet

| Company   | : Sigma-Aldrich Inc.<br>3050 Spruce Street<br>ST. LOUIS MO 63103<br>UNITED STATES |
|-----------|---|
| Telephone | : +1 314 771-5765   |
| Fax       | : +1 800 325-5052   |

### **1.4 Emergency telephone number**

Emergency Phone # : 800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week

## **SECTION 2: Hazards identification**

#### 2.1 Classification of the substance or mixture

## GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 2), H225 Acute toxicity, Oral (Category 4), H302 Acute toxicity, Inhalation (Category 4), H332 Eye irritation (Category 2A), H319

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### 2.2 GHS Label elements, including precautionary statements

Pictogram



Danger

Signal word Hazard statement(s) H225 H302 + H332

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Highly flammable liquid and vapour.

Harmful if swallowed or if inhaled.

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| H319                       | Causes serious eye irritation.   |
|----------------------------|--|
| Precautionary statement(s) |  |
| P210                       | Keep away from heat/sparks/open flames/hot surfaces. No  |
|                            | smoking.   |
| P233                       | Keep container tightly closed.   |
| P240                       | Ground/bond container and receiving equipment.   |
| P241                       | Use explosion-proof electrical/ ventilating/ lighting equipment.   |
| P242                       | Use only non-sparking tools.   |
| P243                       | Take precautionary measures against static discharge.  |
| P261                       | Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.   |
| P264                       | Wash skin thoroughly after handling.   |
| P270                       | Do not eat, drink or smoke when using this product.  |
| P271                       | Use only outdoors or in a well-ventilated area.  |
| P280                       | Wear protective gloves/ eye protection/ face protection.   |
| P301 + P312 + P330         | IF SWALLOWED: Call a POISON CENTER/doctor if you feel  |
|                            | unwell. Rinse mouth.   |
| P303 + P361 + P353         | IF ON SKIN (or hair): Take off immediately all contaminated  |
| P304 + P340 + P312         | clothing. Rinse skin with water/shower.  |
| P304 + P340 + P312         | IF INHALED: Remove person to fresh air and keep comfortable  |
| P305 + P351 + P338         | for breathing. Call a POISON CENTER/doctor if you feel unwell.   |
| P305 + P351 + P358         | IF IN EYES: Rinse cautiously with water for several minutes.<br>Remove contact lenses, if present and easy to do. Continue |
|                            | rinsing.   |
| P337 + P313                | If eye irritation persists: Get medical advice/ attention.   |
| P370 + P378                | In case of fire: Use dry sand, dry chemical or alcohol-resistant   |
| 13/0113/0                  | foam to extinguish.  |
| P403 + P235                | Store in a well-ventilated place. Keep cool.   |
| P501                       | Dispose of contents/ container to an approved waste disposal   |
|                            | plant.   |

## 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

## SECTION 3: Composition/information on ingredients

## 3.2 Mixtures

| Component   |                                      | Classification  | Concentration       |
|---|--------------------------------------|---|---------------------|
| Acetonitrile  |                                      |   |                     |
| CAS-No.<br>EC-No.<br>Index-No.                      | 75-05-8<br>200-835-2<br>608-001-00-3 | Flam. Liq. 2; Acute Tox. 4;<br>Eye Irrit. 2A; H225, H302,<br>H332, H312, H319 | >= 90 - <=<br>100 % |
| Registration<br>number<br><b>O,O'-DiacetyImorpl</b> | 01-2119471307-38-<br>XXXX            |   |                     |
| CAS-No.<br>EC-No.                                   | 561-27-3<br>209-217-7                | Acute Tox. 2; H300, H330,<br>H310   | >= 0.1 - < 1<br>%   |

For the full text of the H-Statements mentioned in this Section, see Section 16.

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## **SECTION 4: First aid measures**

#### 4.1 Description of first aid measures

#### **General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

#### In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

#### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

#### 4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

**4.3 Indication of any immediate medical attention and special treatment needed** No data available

## **SECTION 5: Firefighting measures**

#### 5.1 Extinguishing media

Suitable extinguishing media Dry powder Dry sand

**Unsuitable extinguishing media** Do NOT use water jet.

- **5.2** Special hazards arising from the substance or mixture Carbon oxides, Nitrogen oxides (NOx) Combustible.
- **5.3** Advice for firefighters Wear self-contained breathing apparatus for firefighting if necessary.
- **5.4 Further information** Use water spray to cool unopened containers.

#### **SECTION 6: Accidental release measures**

**6.1 Personal precautions, protective equipment and emergency procedures** Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

For personal protection see section 8.

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## 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

### 6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

#### **6.4 Reference to other sections** For disposal see section 13.

#### SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use explosion-proof equipment.Keep away from sources of ignition - No smoking.Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2.

#### 7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage temperature -20 °C Storage class (TRGS 510): 3: Flammable liquids

## 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

#### **SECTION 8: Exposure controls/personal protection**

#### 8.1 Control parameters

#### **Components with workplace control parameters**

| components with | montplace | control pu   | ametero               |  |
|-----------------|-----------|--|-----------------------|--|
| Component       | CAS-No.   | Value  | Control<br>parameters | Basis  |
| Acetonitrile    | 75-05-8   | TWA  | 20 ppm                | USA. ACGIH Threshold Limit<br>Values (TLV)   |
|                 | Remarks   | Lower Respiratory Tract irritation<br>Not classifiable as a human carcinogen<br>Danger of cutaneous absorption |                       | carcinogen   |
|                 |           | TWA  | 20 ppm<br>34 mg/m3    | USA. NIOSH Recommended<br>Exposure Limits  |
|                 |           | Forms cyanide in the body.   |                       |  |
|                 |           | TWA  | 40 ppm<br>70 mg/m3    | USA. Occupational Exposure<br>Limits (OSHA) - Table Z-1<br>Limits for Air Contaminants           |
|                 |           | The value i  | n mg/m3 is appi       | roximate.  |
|                 |           | PEL  | 40 ppm<br>70 mg/m3    | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
|                 |           | Skin   | 1                     |  |

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|  | STEL | 60 ppm<br>105 mg/m3 | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
|--|------|---------------------|--|
|  | Skin |                     |  |

#### 8.2 Exposure controls

#### Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

#### **Personal protective equipment**

#### Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### **Skin protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

#### **Body Protection**

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### **Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### **Control of environmental exposure**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

hPa

#### **SECTION 9: Physical and chemical properties**

#### 9.1 Information on basic physical and chemical properties

| a) | Appearance                                 | Form: liquid                     |
|----|--|----------------------------------|
| b) | Odour                                      | No data available                |
| c) | Odour Threshold                            | No data available                |
| d) | рН   | No data available                |
| e) | Melting<br>point/freezing point            | No data available                |
| f) | Initial boiling point<br>and boiling range | 81 - 82 °C 178 - 180 °F at 1.013 |
| g) | Flash point                                | 2 °C (36 °F) - closed cup        |
| h) | Evaporation rate                           | No data available                |
|    |  |                                  |

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| i)  | Flammability (solid,<br>gas)                       | No data available   |
|-----|--|---|
| j)  | Upper/lower<br>flammability or<br>explosive limits | Upper explosion limit: 16 %(V)<br>Lower explosion limit: 4.4 %(V) |
| k)  | Vapour pressure                                    | No data available   |
| I)  | Vapour density                                     | No data available   |
| m)  | Relative density                                   | 0.782 g/cm3 at 20 °C (68 °F)                                      |
| n)  | Water solubility                                   | No data available   |
| o)  | Partition coefficient:<br>n-octanol/water          | No data available   |
| p)  | Auto-ignition<br>temperature                       | No data available   |
| q)  | Decomposition<br>temperature                       | No data available   |
| r)  | Viscosity  | No data available   |
| s)  | Explosive properties                               | No data available   |
| t)  | Oxidizing properties                               | No data available   |
| Oth | er safety informatio                               | n   |

#### **9.2 Other safety information** No data available

#### **SECTION 10: Stability and reactivity**

- **10.1 Reactivity** No data available
- **10.2 Chemical stability** Stable under recommended storage conditions.
- **10.3 Possibility of hazardous reactions** Vapours may form explosive mixture with air.
- **10.4 Conditions to avoid** Heat, flames and sparks.
- **10.5 Incompatible materials** acids, Bases, Oxidizing agents, Alkali metals

# 10.6 Hazardous decomposition products Other decomposition products - No data available Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NOx) In the event of fire: see section 5

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## SECTION 11: Toxicological information

## **11.1** Information on toxicological effects

#### **Acute toxicity**

No data available

Inhalation: No data available

Dermal: No data available

No data available

**Skin corrosion/irritation** No data available

Serious eye damage/eye irritation

No data available

**Respiratory or skin sensitisation** No data available

Germ cell mutagenicity

No data available

#### Carcinogenicity

- IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
- OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

#### **Reproductive toxicity**

No data available

#### Specific target organ toxicity - single exposure No data available

Specific target organ toxicity - repeated exposure No data available

#### Aspiration hazard

No data available

#### **Additional Information**

RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Treat as cyanide poisoning., Always have on hand a cyanide first-aid kit, together with proper instructions., The onset of symptoms is generally delayed pending conversion to cyanide., Nausea, Vomiting, Diarrhoea, Headache, Dizziness, Rash, Cyanosis

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## **SECTION 12: Ecological information**

12.1 Toxicity

No data available

- **12.2 Persistence and degradability** No data available
- **12.3 Bioaccumulative potential** No data available
- **12.4 Mobility in soil** No data available
- 12.5 Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
- **12.6 Other adverse effects** No data available

#### **SECTION 13: Disposal considerations**

#### **13.1 Waste treatment methods**

#### Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Contact a licensed professional waste disposal service to dispose of this material.

#### Contaminated packaging

Dispose of as unused product.

#### **SECTION 14: Transport information**

#### DOT (US)

UN number: 1648 Class: 3 Packing group: II Proper shipping name: AcetonitrileSOLUTION

Reportable Quantity (RQ): Poison Inhalation Hazard: No

#### IMDG

UN number: 1648 Class: 3 Packing group: II Proper shipping name: ACETONITRILESOLUTION

EMS-No: F-E, S-D

## ΙΑΤΑ

UN number: 1648 Class: 3 Packing group: II Proper shipping name: AcetonitrileSOLUTION

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## SECTION 15: Regulatory information

#### SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

## SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

| Acetonitrile   | CAS-No.<br>75-05-8 | Revision Date<br>2007-07-01 |
|--|--------------------|-----------------------------|
| SARA 311/312 Hazards<br>Fire Hazard, Acute Health Hazard |                    |                             |
| Massachusetts Right To Know Components                   | CAS-No.            | Revision Date               |
| Acetonitrile   | 75-05-8            | 2007-07-01                  |
|  |                    |                             |
| No components are subject to the Massachusetts Right     | to Know Act.       |                             |
| Pennsylvania Right To Know Components<br>Acetonitrile    | CAS-No.            | Revision Date               |
|  | 75-05-8            | 2007-07-01                  |
| Acetonitrile   | CAS-No.            | Revision Date               |
| Acetonitrile   |                    |                             |
|  | 75-05-8            | 2007-07-01                  |
| New Jersey Right To Know Components                      | 0.10 1101          |                             |
| New Jersey Right To Know Components<br>Acetonitrile      | 0.10 1101          |                             |

## **SECTION 16: Other information**

#### **Further information**

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Version: 6.3

Revision Date: 01/24/2020

Print Date: 07/14/2020

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## SAFETY DATA SHEET

Version 6.2 Revision Date 07/07/2020 Print Date 07/08/2020

#### SECTION 1: Identification of the substance/mixture and of the company/undertaking 1.1 Product identifiers Product name Hydrocodone-D6 solution Product Number : H-048 Brand : Cerilliant 1.2 Relevant identified uses of the substance or mixture and uses advised against Identified uses : Laboratory chemicals, Synthesis of substances 1.3 Details of the supplier of the safety data sheet Company : Sigma-Aldrich Inc. 3050 Spruce Street ST. LOUIS MO 63103 UNITED STATES Telephone : +1 314 771-5765 Fax +1 800 325-5052 1.4 **Emergency telephone**

Emergency Phone # : 800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week

## SECTION 2: Hazards identification

## 2.1 Classification of the substance or mixture

## GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 2), H225 Acute toxicity, Oral (Category 3), H301 Acute toxicity, Inhalation (Category 3), H331 Acute toxicity, Dermal (Category 3), H311 Respiratory sensitization (Category 1), H334 Skin sensitization (Category 1), H317 Specific target organ toxicity - single exposure (Category 1), Eyes, H370 Short-term (acute) aquatic hazard (Category 3), H402 Long-term (chronic) aquatic hazard (Category 3), H412

For the full text of the H-Statements mentioned in this Section, see Section 16.

## 2.2 GHS Label elements, including precautionary statements

Pictogram

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| Signal word  | Danger   |
|--|--|
| Hazard statement(s)<br>H225<br>H301 + H311 + H331<br>H317<br>H334  | Highly flammable liquid and vapor.<br>Toxic if swallowed, in contact with skin or if inhaled.<br>May cause an allergic skin reaction.<br>May cause allergy or asthma symptoms or breathing difficulties<br>if inhaled.   |
| H370<br>H412   | Causes damage to organs (Eyes).<br>Harmful to aquatic life with long lasting effects.  |
| Precautionary statement(s)<br>P210   | Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.  |
| P233<br>P240<br>P241<br>P242<br>P243<br>P260<br>P264<br>P270<br>P271<br>P272<br>P273<br>P280<br>P285<br>P301 + P310 + P330<br>P303 + P361 + P353<br>P304 + P340 + P311<br>P307 + P311<br>P307 + P311<br>P307 + P313<br>P362<br>P370 + P378 | <ul> <li>smoking.</li> <li>Keep container tightly closed.</li> <li>Ground/bond container and receiving equipment.</li> <li>Use explosion-proof electrical/ ventilating/ lighting/ equipment.</li> <li>Use only non-sparking tools.</li> <li>Take precautionary measures against static discharge.</li> <li>Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.</li> <li>Wash skin thoroughly after handling.</li> <li>Do not eat, drink or smoke when using this product.</li> <li>Use only outdoors or in a well-ventilated area.</li> <li>Contaminated work clothing must not be allowed out of the workplace.</li> <li>Avoid release to the environment.</li> <li>Wear protective gloves/ eye protection/ face protection.</li> <li>In case of inadequate ventilation wear respiratory protection.</li> <li>IF SWALLOWED: Immediately call a POISON CENTER/ doctor.</li> <li>Rinse mouth.</li> <li>IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.</li> <li>IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor.</li> <li>IF exposed: Call a POISON CENTER or doctor/ physician.</li> <li>If skin irritation or rash occurs: Get medical advice/ attention.</li> <li>Take off contaminated clothing and wash before reuse.</li> <li>In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.</li> </ul> |
| P403 + P233<br>P403 + P235<br>P405<br>P501   | Store in a well-ventilated place. Keep container tightly closed.<br>Store in a well-ventilated place. Keep cool.<br>Store locked up.<br>Dispose of contents/ container to an approved waste disposal<br>plant.   |

Sensitizing components: Hydrocodone-D6 May produce an allergic reaction.

## 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

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## **SECTION 3: Composition/information on ingredients**

#### 3.2 Mixtures

Molecular weight : 305.40 g/mol

| Component  |   | Classification   | Concentration       |
|--|---|--|---------------------|
| Methanol   |   |  |                     |
| CAS-No.<br>EC-No.<br>Index-No.<br>Registration<br>number | 67-56-1<br>200-659-6<br>603-001-00-X<br>01-2119433307-44-<br>XXXX | Flam. Liq. 2; Acute Tox. 3;<br>STOT SE 1; H225, H301,<br>H331, H311, H370  | >= 90 - <=<br>100 % |
| Hydrocodone-D6   |   |  |                     |
| CAS-No.  | 1007844-38-3  | Acute Tox. 4; Resp. Sens.<br>1; Skin Sens. 1; Aquatic<br>Acute 1; Aquatic Chronic<br>1; H302, H334, H317,<br>H400, H410<br>M-Factor - Aquatic Acute:<br>10 | >= 0.1 - < 1<br>%   |

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### **SECTION 4: First aid measures**

#### 4.1 Description of first-aid measures

## **General advice**

First aider needs to protect himself. Show this material safety data sheet to the doctor in attendance.

#### If inhaled

After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

#### In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.

#### In case of eye contact

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

#### If swallowed

After swallowing: fresh air. Make victim drink ethanol (e.g. 1 drinking glass of a 40% alcoholic beverage). Call a doctor immediately (mention methanol ingestion). Only in exceptional cases, if no medical care is available within one hour, induce vomiting (only in fully conscious persons) and make victim drink ethanol again (approx. 0.3 ml of a 40% alcoholic beverage/kg body weight/hour).

#### 4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

#### **4.3 Indication of any immediate medical attention and special treatment needed** No data available

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#### **SECTION 5: Firefighting measures**

#### 5.1 Extinguishing media

**Suitable extinguishing media** Foam Carbon dioxide (CO2) Dry powder

#### Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

#### 5.2 Special hazards arising from the substance or mixture

Nature of decomposition products not known.
Mixture with combustible ingredients.
Pay attention to flashback.
Vapors are heavier than air and may spread along floors.
Development of hazardous combustion gases or vapours possible in the event of fire.
Forms explosive mixtures with air at ambient temperatures.

#### 5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

#### 5.4 Further information

Remove container from danger zone and cool with water. Prevent fire extinguishing water from contaminating surface water or the ground water system.

#### **SECTION 6:** Accidental release measures

#### 6.1 Personal precautions, protective equipment and emergency procedures Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.

#### 6.2 Environmental precautions

Do not let product enter drains. Risk of explosion.

#### 6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

#### 6.4 Reference to other sections

For disposal see section 13.

#### SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols. Keep away from open flames, hot surfaces and sources of ignition.Take precautionary measures against static discharge. For precautions see section 2.2.

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#### 7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition. Keep locked up or in an area accessible only to qualified or authorized persons.

Recommended storage temperature -20 °C Storage class (TRGS 510): 3: Flammable liquids

#### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

#### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

#### Ingredients with workplace control parameters

| Ingredients with |         | -   |                 |                                 |
|------------------|---------|---|-----------------|---------------------------------|
| Component        | CAS-No. | Value   | Control         | Basis                           |
|                  |         |   | parameters      |                                 |
| Methanol         | 67-56-1 | TWA   | 200 ppm         | USA. ACGIH Threshold Limit      |
|                  |         |   |                 | Values (TLV)                    |
|                  | Remarks | Headache  | L               |                                 |
|                  |         | Nausea  |                 |                                 |
|                  |         | Dizziness   |                 |                                 |
|                  |         | Eye damag   | e               |                                 |
|                  |         |   |                 | is a Biological Exposure Index  |
|                  |         |   | see BEI® sectio |                                 |
|                  |         |   | cutaneous absor |                                 |
|                  |         | STEL  |                 | USA. ACGIH Threshold Limit      |
|                  |         | SIEL  | 250 ppm         |                                 |
|                  |         |   |                 | Values (TLV)                    |
|                  |         | Headache  |                 |                                 |
|                  |         | Nausea  |                 |                                 |
|                  |         | Dizziness<br>Eye damage<br>Substances for which there is a Biological Exposure Index<br>or Indices (see BEI® section) |                 |                                 |
|                  |         |   |                 |                                 |
|                  |         |   |                 |                                 |
|                  |         |   |                 |                                 |
|                  |         |   | utaneous absor  |                                 |
|                  |         | TWA   | 200 ppm         | USA. NIOSH Recommended          |
|                  |         |   | 260 mg/m3       | Exposure Limits                 |
|                  |         | Potential fo  | r dermal absorp | tion                            |
|                  |         | ST  | 250 ppm         | USA. NIOSH Recommended          |
|                  |         |   | 325 mg/m3       | Exposure Limits                 |
|                  |         | Potential fo  | r dermal absorp |                                 |
|                  |         | TWA   | 200 ppm         | USA. Occupational Exposure      |
|                  |         |   | 260 mg/m3       | Limits (OSHA) - Table Z-1       |
|                  |         |   | 200 mg/mo       | Limits for Air Contaminants     |
|                  |         | The value i   | n mg/m3 is appi |                                 |
|                  |         | C   | 1,000 ppm       | California permissible exposure |
|                  |         |   | , rr            | limits for chemical             |
|                  |         |   |                 | contaminants (Title 8, Article  |
|                  |         |   |                 | 107)                            |
|                  |         | Skin  | l               |                                 |
|                  |         | JKIII   |                 |                                 |

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| PEL  | 200 ppm<br>260 mg/m3 | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
|------|----------------------|--|
| Skin |                      |  |
| STEL | 250 ppm<br>325 mg/m3 | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
| Skin |                      |  |

#### Biological occupational exposure limits

| Biological occ | biological occupational exposule initio |  |         |                     |  |  |
|----------------|---|--|---------|---------------------|--|--|
| Component      | CAS-No.                                 | Parameters   | Value   | Biological specimen | Basis  |  |
| Methanol       | 67-56-1                                 | Methanol   | 15 mg/l | Urine               | ACGIH -<br>Biological<br>Exposure Indices<br>(BEI) |  |
|                | Remarks                                 | End of shift (As soon as possible after exposure ceases) |         |                     |  |  |

#### 8.2 Exposure controls

#### Appropriate engineering controls

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

#### **Personal protective equipment**

#### Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

#### **Skin protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact Material: butyl-rubber Minimum layer thickness: 0.3 mm Break through time: 480 min Material tested:Butoject® (KCL 897 / Aldrich Z677647, Size M)

Splash contact Material: Nitrile rubber Minimum layer thickness: 0.4 mm Break through time: 30 min Material tested:Camatril® (KCL 730 / Aldrich Z677442, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374 If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the EC approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist

and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

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#### **Body Protection**

Flame retardant antistatic protective clothing.

#### **Respiratory protection**

required when vapours/aerosols are generated. Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

#### **Control of environmental exposure**

Do not let product enter drains. Risk of explosion.

#### **SECTION 9: Physical and chemical properties**

#### 9.1 Information on basic physical and chemical properties

| a)                       | Appearance   | Form: liquid  |  |  |
|--------------------------|--|---|--|--|
| b)                       | Odor   | No data available   |  |  |
| c)                       | Odor Threshold                                     | No data available   |  |  |
| d)                       | рН   | No data available   |  |  |
| e)                       | Melting<br>point/freezing point                    | No data available   |  |  |
| f)                       | Initial boiling point and boiling range            | 64 - 65 °C 147 - 149 °F at 1.013 hPa                            |  |  |
| g)                       | Flash point  | 9.7 °C (49.5 °F) - closed cup                                   |  |  |
| h)                       | Evaporation rate                                   | No data available   |  |  |
| i)                       | Flammability (solid,<br>gas)                       | No data available   |  |  |
| j)                       | Upper/lower<br>flammability or<br>explosive limits | Upper explosion limit: 36 %(V)<br>Lower explosion limit: 6 %(V) |  |  |
| k)                       | Vapor pressure                                     | No data available   |  |  |
| I)                       | Vapor density                                      | No data available   |  |  |
| m)                       | Relative density                                   | 0.791 g/cm3 at 20 °C (68 °F)                                    |  |  |
| n)                       | Water solubility                                   | No data available   |  |  |
| o)                       | Partition coefficient:<br>n-octanol/water          | No data available   |  |  |
| p)                       | Autoignition<br>temperature                        | No data available   |  |  |
| q)                       | Decomposition<br>temperature                       | No data available   |  |  |
| r)                       | Viscosity  | No data available   |  |  |
| s)                       | Explosive properties                               | No data available   |  |  |
| t)                       | Oxidizing properties                               | No data available   |  |  |
| Other safety information |  |   |  |  |

#### 9.2 Other safety information No data available

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#### **SECTION 10: Stability and reactivity**

#### **10.1 Reactivity**

Vapors may form explosive mixture with air.

#### **10.2 Chemical stability**

The product is chemically stable under standard ambient conditions (room temperature).

- **10.3 Possibility of hazardous reactions** No data available
- 10.4 Conditions to avoid Warming.
- **10.5** Incompatible materials Acid chlorides, Acid anhydrides, Oxidizing agents, Alkali metals, Reducing agents, Acids

#### 10.6 Hazardous decomposition products

Other decomposition products - No data available Hazardous decomposition products formed under fire conditions. - Nature of decomposition products not known. In the event of fire: see section 5

#### **SECTION 11: Toxicological information**

#### 11.1 Information on toxicological effects

Acute toxicity No data available

Inhalation: No data available

Dermal: No data available

No data available

Skin corrosion/irritation No data available

#### Serious eye damage/eye irritation

No data available

#### **Respiratory or skin sensitization**

Mixture may cause allergy or asthma symptoms or breathing difficulties if inhaled. Mixture may cause an allergic skin reaction.

#### Germ cell mutagenicity

No data available

#### Carcinogenicity

- IARC: No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- NTP: No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
- OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

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#### **Reproductive toxicity**

No data available

#### Specific target organ toxicity - single exposure

Mixture causes damage to organs. - Eyes

#### Specific target organ toxicity - repeated exposure

No data available

#### **Aspiration hazard** No data available

**Additional Information** 

RTECS: Not available

Methyl alcohol may be fatal or cause blindness if swallowed. Effects due to ingestion may include:, Headache, Dizziness, Drowsiness, metabolic acidosis, Coma, Seizures. Symptoms may be delayed., Damage of the:, Liver, Kidney

Hazardous properties cannot be excluded but are unlikely when the product is handled appropriately.

Central nervous system - Breathing difficulties - Based on Human Evidence

#### SECTION 12: Ecological information

- **12.1 Toxicity** No data available
- **12.2 Persistence and degradability** No data available
- **12.3 Bioaccumulative potential** No data available
- **12.4 Mobility in soil** No data available

#### 12.5 Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

#### 12.6 Other adverse effects

No data available

#### SECTION 13: Disposal considerations

#### **13.1 Waste treatment methods**

#### Product

Waste material must be disposed of in accordance with the national and loc No mixing with other waste. Handle uncleaned containers like the product See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

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#### **SECTION 14: Transport information**

#### DOT (US)

UN number: 1230 Class: 3 Packing group: II Proper shipping name: MethanolSOLUTION

Reportable Quantity (RQ): Poison Inhalation Hazard: No

#### IMDG

UN number: 1230 Class: 3 (6.1) Packing group: II EMS-No: F-E, S-D Proper shipping name: METHANOLSOLUTION

#### ΙΑΤΑ

UN number: 1230 Class: 3 (6.1) Packing group: II Proper shipping name: MethanolSOLUTION

#### **SECTION 15: Regulatory information**

#### **SARA 302 Components** This material does not contain any components with a section 302 EHS TPQ.

#### SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

|          | CAS-No. | Revision Date |
|----------|---------|---------------|
| Methanol | 67-56-1 | 2007-07-01    |

#### SARA 311/312 Hazards

Fire Hazard, Acute Health Hazard, Chronic Health Hazard

| Massachusetts Right To Know Components |         |               |
|--|---------|---------------|
|  | CAS-No. | Revision Date |
| Methanol                               | 67-56-1 | 2007-07-01    |

No components are subject to the Massachusetts Right to Know Act.

| Pennsylvania Right To Know Components | CAS-No. | Revision Date |
|---------------------------------------|---------|---------------|
| Methanol                              | 67-56-1 | 2007-07-01    |
| New Jersey Right To Know Components   | CAS-No. | Revision Date |
| Methanol                              | 67-56-1 | 2007-07-01    |

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#### **SECTION 16: Other information**

#### Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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#### SAFETY DATA SHEET

# SECTION 1: Identification of the substance/mixture and of the company/undertaking 1.1 Product identifiers Product name : (-)-Levamisole hydrochloride solution Product Number : L-025 Brand : Cerilliant

#### **1.2** Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Synthesis of substances

#### 1.3 Details of the supplier of the safety data sheet

#### **1.4 Emergency telephone number**

Emergency Phone # : +1-703-527-3887

#### **SECTION 2: Hazards identification**

#### 2.1 Classification of the substance or mixture

#### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 2), H225 Acute toxicity, Oral (Category 3), H301 Acute toxicity, Inhalation (Category 3), H331 Acute toxicity, Dermal (Category 3), H311 Specific target organ toxicity - single exposure (Category 1), H370

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### 2.2 GHS Label elements, including precautionary statements

Pictogram

Signal word

Danger

Hazard statement(s) H225 H301 + H311 + H331 H370

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Highly flammable liquid and vapour. Toxic if swallowed, in contact with skin or if inhaled. Causes damage to organs.

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| Precautionary statement(s) |  |
|----------------------------|--|
| P210                       | Keep away from heat/sparks/open flames/hot surfaces. No smoking.   |
| P233                       | Keep container tightly closed.   |
| P240                       | Ground/bond container and receiving equipment.   |
| P241                       | Use explosion-proof electrical/ ventilating/ lighting equipment.   |
| P242                       | Use only non-sparking tools.   |
| P243                       | Take precautionary measures against static discharge.  |
| P260                       | Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  |
| P264                       | Wash skin thoroughly after handling.   |
| P270                       | Do not eat, drink or smoke when using this product.  |
| P271                       | Use only outdoors or in a well-ventilated area.  |
| P280                       | Wear protective gloves/ protective clothing/ eye protection/ face protection.                                |
| P301 + P310                | IF SWALLOWED: Immediately call a POISON CENTER/doctor.   |
| P303 + P361 + P353         | IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. |
| P304 + P340                | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.             |
| P307 + P311                | IF exposed: Call a POISON CENTER or doctor/ physician.   |
| P322                       | Specific measures (see supplemental first aid instructions on this label).                                   |
| P330                       | Rinse mouth.   |
| P361                       | Remove/Take off immediately all contaminated clothing.   |
| P363                       | Wash contaminated clothing before reuse.   |
| P370 + P378                | In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.                        |
| P403 + P233                | Store in a well-ventilated place. Keep container tightly closed.   |
| P403 + P235                | Store in a well-ventilated place. Keep cool.   |
| P405                       | Store locked up.   |
| P501                       | Dispose of contents/ container to an approved waste disposal plant.  |

#### 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

#### **SECTION 3: Composition/information on ingredients**

#### 3.2 Mixtures

| Component  |   | Classification  | Concentration       |
|--|---|---|---------------------|
| Methanol   |   |   |                     |
| CAS-No.<br>EC-No.<br>Index-No.<br>Registration<br>number | 67-56-1<br>200-659-6<br>603-001-00-X<br>01-2119433307-44-<br>XXXX | Flam. Liq. 2; Acute Tox. 3;<br>STOT SE 1; H225, H301,<br>H331, H311, H370 | >= 90 - <=<br>100 % |
| Levamisole hydroc  | hloride   |   |                     |
| CAS-No.<br>EC-No.  | 16595-80-5<br>240-654-6   | Acute Tox. 3; H301  | >= 0.1 - < 1<br>%   |

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#### **SECTION 4: First aid measures**

#### 4.1 Description of first aid measures

#### **General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

#### In case of eye contact

Flush eyes with water as a precaution.

#### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

- **4.2 Most important symptoms and effects, both acute and delayed** The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
- **4.3 Indication of any immediate medical attention and special treatment needed** No data available

#### **SECTION 5: Firefighting measures**

#### 5.1 Extinguishing media

#### Suitable extinguishing media Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

- **5.2** Special hazards arising from the substance or mixture Carbon oxides
- **5.3** Advice for firefighters Wear self-contained breathing apparatus for firefighting if necessary.

#### **5.4 Further information** Use water spray to cool unopened containers.

#### **SECTION 6: Accidental release measures**

**6.1 Personal precautions, protective equipment and emergency procedures** Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

For personal protection see section 8.

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#### 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

- **6.3 Methods and materials for containment and cleaning up** Contain spillage, and then collect with an electrically protected vacuum cleaner or by wetbrushing and place in container for disposal according to local regulations (see section 13).
- **6.4 Reference to other sections** For disposal see section 13.

#### **SECTION 7: Handling and storage**

#### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use explosion-proof equipment.Keep away from sources of ignition - No smoking.Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2.

#### 7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage temperature -20 °C Storage class (TRGS 510): 3: Flammable liquids

#### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

#### **SECTION 8: Exposure controls/personal protection**

#### 8.1 Control parameters

#### **Components with workplace control parameters**

| Component | CAS-No. | Value   | Control<br>parameters | Basis                                      |
|-----------|---------|---|-----------------------|--|
| Methanol  | 67-56-1 | TWA   | 200 ppm               | USA. ACGIH Threshold Limit<br>Values (TLV) |
|           | Remarks | Headache<br>Nausea<br>Dizziness<br>Eye damage<br>Substances for which there is a Biological Exposure Index<br>or Indices (see BEI® section)<br>Danger of cutaneous absorption |                       |  |
|           |         | STEL  | 250 ppm               | USA. ACGIH Threshold Limit<br>Values (TLV) |
|           |         | or Indices (  |                       |  |

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| TWA         | 200 ppm<br>260 mg/m3            | USA. NIOSH Recommended<br>Exposure Limits  |  |
|-------------|---------------------------------|--|--|
| Potential f | Potential for dermal absorption |  |  |
| ST          | 250 ppm<br>325 mg/m3            | USA. NIOSH Recommended<br>Exposure Limits  |  |
| Potential f | Potential for dermal absorption |  |  |
| TWA         | 200 ppm<br>260 mg/m3            | USA. Occupational Exposure<br>Limits (OSHA) - Table Z-1<br>Limits for Air Contaminants           |  |
| The value   | in mg/m3 is app                 | proximate.   |  |
| С           | 1,000 ppm                       | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |  |
| Skin        | •                               |  |  |
| PEL         | 200 ppm<br>260 mg/m3            | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |  |
| Skin        | 1                               |  |  |
| STEL        | 250 ppm<br>325 mg/m3            | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |  |
| Skin        |                                 |  |  |

#### **Biological occupational exposure limits**

| Component | CAS-No. | Parameters     | Value      | Biological specimen | Basis  |
|-----------|---------|----------------|------------|---------------------|--|
| Methanol  | 67-56-1 | Methanol       | 15 mg/l    | Urine               | ACGIH -<br>Biological<br>Exposure Indices<br>(BEI) |
|           | Remarks | End of shift ( | As soon as | possible after exp  | osure ceases)                                      |

#### 8.2 Exposure controls

#### Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

#### Personal protective equipment

#### Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

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Full contact Material: butyl-rubber Minimum layer thickness: 0.3 mm Break through time: 480 min Material tested:Butoject® (KCL 897 / Aldrich Z677647, Size M)

Splash contact Material: Nitrile rubber Minimum layer thickness: 0.4 mm Break through time: 30 min Material tested:Camatril® (KCL 730 / Aldrich Z677442, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

#### **Body Protection**

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### **Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### **Control of environmental exposure**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

#### **SECTION 9: Physical and chemical properties**

#### 9.1 Information on basic physical and chemical properties

| a) | Appearance                              | Form: liquid                         |
|----|---|--------------------------------------|
| b) | Odour                                   | No data available                    |
| c) | Odour Threshold                         | No data available                    |
| d) | рН                                      | No data available                    |
| e) | Melting<br>point/freezing point         | No data available                    |
| f) | Initial boiling point and boiling range | 64 - 65 °C 147 - 149 °F at 1.013 hPa |
| g) | Flash point                             | 9.7 °C (49.5 °F) - closed cup        |
| h) | Evaporation rate                        | No data available                    |
| i) | Flammability (solid,<br>gas)            | No data available                    |

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|     | j)  | Upper/lower<br>flammability or<br>explosive limits | Upper explosion limit: 36 %(V)<br>Lower explosion limit: 6 %(V) |
|-----|-----|--|---|
|     | k)  | Vapour pressure                                    | No data available   |
|     | I)  | Vapour density                                     | No data available   |
|     | m)  | Relative density                                   | 0.791 g/cm3 at 20 °C (68 °F)                                    |
|     | n)  | Water solubility                                   | No data available   |
|     | o)  | Partition coefficient:<br>n-octanol/water          | No data available   |
|     | p)  | Auto-ignition<br>temperature                       | No data available   |
|     | q)  | Decomposition<br>temperature                       | No data available   |
|     | r)  | Viscosity  | No data available   |
|     | s)  | Explosive properties                               | No data available   |
|     | t)  | Oxidizing properties                               | No data available   |
| 9.2 | Oth | ner safety informatio                              | n   |

No data available

#### **SECTION 10: Stability and reactivity**

#### **10.1 Reactivity**

No data available

#### **10.2** Chemical stability

Stable under recommended storage conditions.

#### 10.3 Possibility of hazardous reactions

#### Vapours may form explosive mixture with air.

#### **10.4 Conditions to avoid** Heat, flames and sparks. Extremes of temperature and direct sunlight.

#### **10.5** Incompatible materials

Acids, Oxidizing agents, Alkali metals, Strong oxidizing agents, Strong acids, Acid chlorides, Acid anhydrides, Reducing agents, Strong reducing agents, Phosphorus halides

## 10.6 Hazardous decomposition products Other decomposition products - No data available Hazardous decomposition products formed under fire conditions. - Carbon oxides In the event of fire: see section 5

#### **SECTION 11: Toxicological information**

#### **11.1** Information on toxicological effects

#### Acute toxicity No data available

Inhalation: No data available

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Dermal: No data available

No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation No data available

**Respiratory or skin sensitisation** No data available

#### **Germ cell mutagenicity** No data available

#### Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

- ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

#### **Reproductive toxicity**

No data available

Specific target organ toxicity - single exposure No data available

**Specific target organ toxicity - repeated exposure** No data available

#### Aspiration hazard

No data available

#### **Additional Information**

RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Methyl alcohol may be fatal or cause blindness if swallowed., Cannot be made nonpoisonous., Effects due to ingestion may include:, Nausea, Headache, Vomiting, Gastrointestinal disturbance, Dizziness, Weakness, Confusion.

Central nervous system - Breathing difficulties - Based on Human Evidence

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#### **SECTION 12: Ecological information**

12.1 Toxicity

No data available

- **12.2 Persistence and degradability** No data available
- **12.3 Bioaccumulative potential** No data available
- **12.4 Mobility in soil** No data available
- 12.5 Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
- **12.6 Other adverse effects** No data available

#### **SECTION 13: Disposal considerations**

#### **13.1 Waste treatment methods**

#### Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

#### Contaminated packaging

Dispose of as unused product.

#### **SECTION 14: Transport information**

#### DOT (US)

UN number: 1230 Class: 3 Packing group: II Proper shipping name: MethanolSOLUTION

Reportable Quantity (RQ): Poison Inhalation Hazard: No

#### IMDG

UN number: 1230 Class: 3 (6.1) Packing group: II Proper shipping name: METHANOLSOLUTION

EMS-No: F-E, S-D

#### ΙΑΤΑ

UN number: 1230 Class: 3 (6.1) Packing group: II Proper shipping name: MethanolSOLUTION

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| SEC | ION 15: Regulatory information   |                    |                             |
|-----|--|--------------------|-----------------------------|
|     | <b>SARA 302 Components</b><br>No chemicals in this material are subject to the reportin<br>Section 302.  | g requirements of  | SARA Title III,             |
|     | <b>SARA 313 Components</b><br>The following components are subject to reporting level<br>Section 313:  |                    | ARA Title III,              |
|     | Methanol   | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |
|     | SARA 311/312 Hazards<br>Fire Hazard, Acute Health Hazard, Chronic Health Hazar   | ď                  |                             |
|     | Massachusetts Right To Know Components   |                    |                             |
|     | Methanol   | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |
|     | No components are subject to the Massachusetts Right   | to Know Act.       |                             |
|     | Pennsylvania Right To Know Components<br>Methanol  | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |
|     | Methanol   | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |
|     | New Jersey Right To Know Components<br>Methanol  | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |
|     | <b>California Prop. 65 Components</b><br>WARNING: This product contains a chemical known to<br>the State of California to cause birth defects or other<br>reproductive harm.Methanol | CAS-No.<br>67-56-1 | Revision Date<br>2012-03-16 |

#### **SECTION 16: Other information**

#### **Further information**

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See

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www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

The branding on the header and/or footer of this document may temporarily not visually match the product purchased as we transition our branding. However, all of the information in the document regarding the product remains unchanged and matches the product ordered. For further information please contact mlsbranding@sial.com.

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#### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### **1.1 Product identifiers**

| 1.2 | Relevant identified us  | es | of the substance or mixture and uses advised against |
|-----|-------------------------|----|--|
|     | Product Number<br>Brand |    | L-058<br>Cerilliant                                  |
|     | Product name            | :  | (-)-LEVAMISOLE-D5 HCL                                |

Identified uses : Laboratory chemicals, Synthesis of substances

#### **1.3** Details of the supplier of the safety data sheet

Company

: Cerilliant Corporation 811 Paloma Drive, Suite A ROUND ROCK TX 78665 UNITED STATES

#### 1.4 Emergency telephone

Emergency Phone # : 800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week

#### **SECTION 2: Hazards identification**

#### 2.1 Classification of the substance or mixture

#### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 2), H225 Acute toxicity, Oral (Category 3), H301 Acute toxicity, Inhalation (Category 3), H331 Acute toxicity, Dermal (Category 3), H311 Reproductive toxicity (Category 2), H361 Specific target organ toxicity - single exposure (Category 1), Eyes, H370

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### 2.2 GHS Label elements, including precautionary statements

Pictogram



Danger

Signal word Hazard statement(s) H225 H301 + H311 + H331

Highly flammable liquid and vapor. Toxic if swallowed, in contact with skin or if inhaled.

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| H361<br>H370               | Suspected of damaging fertility or the unborn child.<br>Causes damage to organs (Eyes).                  |
|----------------------------|--|
| Precautionary statement(s) |  |
| P201                       | Obtain special instructions before use.  |
| P202                       | Do not handle until all safety precautions have been read and understood.                                |
| P210                       | Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.                                      |
| P233                       | Keep container tightly closed.   |
| P240                       | Ground/bond container and receiving equipment.   |
| P241                       | Use explosion-proof electrical/ ventilating/ lighting/ equipment.  |
| P242                       | Use only non-sparking tools.   |
| P243                       | Take precautionary measures against static discharge.  |
| P260                       | Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.   |
| P264                       | Wash skin thoroughly after handling.   |
| P270                       | Do not eat, drink or smoke when using this product.  |
| P271                       | Use only outdoors or in a well-ventilated area.  |
| P280                       | Wear protective gloves/ protective clothing/ eye protection/ face protection.                            |
| P301 + P310 + P330         | IF SWALLOWED: Immediately call a POISON CENTER/ doctor.<br>Rinse mouth.                                  |
| P303 + P361 + P353         | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.     |
| P304 + P340 + P311         | IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor. |
| P307 + P311                | IF exposed: Call a POISON CENTER or doctor/ physician.   |
| P362                       | Take off contaminated clothing and wash before reuse.  |
| P370 + P378                | In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.                     |
| P403 + P233                | Store in a well-ventilated place. Keep container tightly closed.   |
| P403 + P235                | Store in a well-ventilated place. Keep cool.   |
| P405                       | Store locked up.   |
| P501                       | Dispose of contents/ container to an approved waste disposal plant.                                      |

#### 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

#### **SECTION 3: Composition/information on ingredients**

#### 3.2 Mixtures

| Component  |   | Classification  | Concentration       |
|--|---|---|---------------------|
| Methanol   |   |   |                     |
| CAS-No.<br>EC-No.<br>Index-No.<br>Registration<br>number | 67-56-1<br>200-659-6<br>603-001-00-X<br>01-2119433307-44-<br>XXXX | Flam. Liq. 2; Acute Tox. 3;<br>STOT SE 1; H225, H301,<br>H331, H311, H370 | >= 90 - <=<br>100 % |
| (6S)-6-(2,3,4,5,6-F<br>b][1,3]thiazole hyd               |   | .3,5,6-tetrahydroimidazo[2  | ,1-                 |
| CAS-No.  | 1246819-64-6  | Acute Tox. 3; Repr. 2;<br>STOT SE 3; H301, H361,                          | >= 0.1 - < 1<br>%   |

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| H336 |  |
|------|--|
|      |  |

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### SECTION 4: First aid measures

#### 4.1 Description of first-aid measures

#### **General advice**

First aider needs to protect himself. Show this material safety data sheet to the doctor in attendance.

#### If inhaled

After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

#### In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.

#### In case of eye contact

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

#### If swallowed

After swallowing: fresh air. Make victim drink ethanol (e.g. 1 drinking glass of a 40% alcoholic beverage). Call a doctor immediately (mention methanol ingestion). Only in exceptional cases, if no medical care is available within one hour, induce vomiting (only in fully conscious persons) and make victim drink ethanol again (approx. 0.3 ml of a 40% alcoholic beverage/kg body weight/hour).

#### 4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

**4.3 Indication of any immediate medical attention and special treatment needed** No data available

#### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

#### **Suitable extinguishing media** Foam Carbon dioxide (CO2) Dry powder

#### Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

#### 5.2 Special hazards arising from the substance or mixture

Nature of decomposition products not known. Mixture with combustible ingredients. Pay attention to flashback. Vapors are heavier than air and may spread along floors. Development of hazardous combustion gases or vapours possible in the event of fire. Forms explosive mixtures with air at ambient temperatures.

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#### 5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

#### 5.4 Further information

Remove container from danger zone and cool with water. Prevent fire extinguishing water from contaminating surface water or the ground water system.

#### **SECTION 6:** Accidental release measures

**6.1 Personal precautions, protective equipment and emergency procedures** Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.

#### **6.2 Environmental precautions** Do not let product enter drains. Risk of explosion.

- **6.3 Methods and materials for containment and cleaning up** Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.
- **6.4 Reference to other sections** For disposal see section 13.

#### SECTION 7: Handling and storage

# Precautions for safe handling Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge. For precautions see section 2.2.

#### 7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition. Keep locked up or in an area accessible only to qualified or authorized persons.

Recommended storage temperature -20 °C Storage class (TRGS 510): 3: Flammable liquids

#### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

#### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

Ingredients with workplace control parameters

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| Component       | CAS-No.   | Value                  | Control  |                 | Basis                               |                                |  |
|-----------------|-----------|------------------------|--|-----------------|-------------------------------------|--------------------------------|--|
|                 |           |                        | parameters   |                 |                                     |                                |  |
| Methanol        | 67-56-1   | TWA                    | 200 ppm  |                 |                                     | Threshold Limit                |  |
|                 |           |                        |  |                 | Values (TLV)                        |                                |  |
|                 | Remarks   | Headache               |  |                 |                                     |                                |  |
|                 |           | Nausea                 |  |                 |                                     |                                |  |
|                 |           | Dizziness              |  |                 |                                     |                                |  |
|                 |           | Eye damag              |  |                 |                                     |                                |  |
|                 |           |                        |  |                 |                                     | Exposure Index                 |  |
|                 |           |                        | see BEI® se  |                 |                                     |                                |  |
|                 |           |                        | utaneous ab  |                 |                                     |                                |  |
|                 |           | STEL                   | 250 ppm  |                 |                                     | Threshold Limit                |  |
|                 |           |                        |  |                 | Values (TLV)                        |                                |  |
|                 |           | Headache<br>Nausea     |  |                 |                                     |                                |  |
|                 |           |                        |  |                 |                                     |                                |  |
|                 |           | Dizziness<br>Eye damag | 9  |                 |                                     |                                |  |
|                 |           |                        |  | oro             |                                     | Exposure Index                 |  |
|                 |           |                        | see BEI® se  |                 |                                     |                                |  |
|                 |           |                        | utaneous ab  |                 |                                     |                                |  |
|                 |           | TWA                    | 200 ppm  |                 |                                     | Recommended                    |  |
|                 |           |                        | 260 mg/m3  |                 | Exposure Lim                        |                                |  |
|                 |           | Potential fo           | r dermal abs   |                 |                                     |                                |  |
|                 |           | ST                     | 250 ppm  |                 |                                     | Recommended                    |  |
|                 |           |                        | 325 mg/m3  |                 | Exposure Lim                        |                                |  |
| _               |           | Potential fo           |  |                 |                                     |                                |  |
|                 |           | TWA                    | 200 ppm  |                 |                                     | Occupational Exposure          |  |
|                 |           |                        | 260 mg/m3  |                 | Limits (OSHA) - Table Z-1           |                                |  |
|                 |           |                        |  |                 | Limits for Air Contaminants         |                                |  |
|                 |           | The value in           | n mg/m3 is a   | appr            | oximate.                            |                                |  |
|                 |           | С                      | 1,000 ppm  |                 | California per                      | missible exposure              |  |
|                 |           |                        |  |                 | limits for cher                     | mical                          |  |
|                 |           |                        |  |                 | contaminants (Title 8, Article      |                                |  |
|                 |           |                        |  |                 | 107)                                |                                |  |
|                 |           | Skin                   |  |                 |                                     |                                |  |
|                 |           | PEL                    | 200 ppm  |                 |                                     | missible exposure              |  |
|                 |           |                        | 260 mg/m3 limits for chemical contaminants (Title 8, Art |                 |                                     |                                |  |
|                 |           |                        |  |                 | ( litle 8, Article                  |                                |  |
|                 |           | Chi                    |  |                 | 107)                                |                                |  |
|                 |           | Skin                   | 250  |                 |                                     |                                |  |
|                 |           | STEL                   | 250 ppm  |                 |                                     | missible exposure              |  |
|                 | 325 mg/m3 |                        |  | limits for cher |                                     |                                |  |
|                 |           |                        |  |                 | contaminants (Title 8, Article 107) |                                |  |
|                 |           | Skin                   |  |                 | 107)                                |                                |  |
|                 |           |                        |  |                 |                                     |                                |  |
| Biological occu |           |                        |  |                 |                                     |                                |  |
| Component       | CAS-No.   | Parameters             | Value  |                 | logical                             | Basis                          |  |
| Mathanal        | 67 56 1   | Mothanal               | 15 mg/l  |                 | ecimen                              |                                |  |
| Methanol        | 67-56-1   | Methanol               | 15 mg/l  | Uriı            | ne                                  | ACGIH -                        |  |
|                 |           |                        |  |                 |                                     | Biological<br>Exposure Indices |  |
|                 |           |                        |  |                 |                                     | (BEI)                          |  |

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Remarks



(BEI)

End of shift (As soon as possible after exposure ceases)

#### 8.2 Exposure controls

#### **Appropriate engineering controls**

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

#### Personal protective equipment

#### Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

#### **Skin protection**

required

#### **Body Protection**

Flame retardant antistatic protective clothing.

#### **Respiratory protection**

required when vapours/aerosols are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

#### **Control of environmental exposure**

Do not let product enter drains. Risk of explosion.

#### **SECTION 9: Physical and chemical properties**

#### 9.1 Information on basic physical and chemical properties

a) Appearance Form: liquid b) Odor No data available c) Odor Threshold No data available No data available d) pH No data available e) Melting point/freezing point Initial boiling point No data available f) and boiling range g) Flash point 11.0 °C (51.8 °F) - closed cup h) Evaporation rate No data available Flammability (solid, No data available i) qas) j) Upper/lower No data available flammability or explosive limits k) Vapor pressure No data available I) Vapor density No data available m) Relative density No data available n) Water solubility No data available No data available o) Partition coefficient:

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n-octanol/water

- p) Autoignition No data available temperature
- q) Decomposition No data available temperature
- r) Viscosity No data available
- s) Explosive properties No data available
- t) Oxidizing properties No data available

9.2 Other safety information No data available

#### **SECTION 10: Stability and reactivity**

#### **10.1 Reactivity**

Vapors may form explosive mixture with air.

#### **10.2** Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

10.3 Possibility of hazardous reactions No data available

**10.4 Conditions to avoid** Warming.

**10.5 Incompatible materials** Acid chlorides, Acid anhydrides, Oxidizing agents, Alkali metals, Reducing agents, Acids

#### **10.6 Hazardous decomposition products**

Hazardous decomposition products formed under fire conditions. - Nature of decomposition products not known.

In the event of fire: see section 5

#### **SECTION 11: Toxicological information**

#### 11.1 Information on toxicological effects

Acute toxicity No data available

**Skin corrosion/irritation** No data available

Serious eye damage/eye irritation No data available

**Respiratory or skin sensitization** No data available

#### Germ cell mutagenicity

#### Carcinogenicity

IARC: No ingredient of this product present at levels greater than or equal to 0.1% is

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identified as probable, possible or confirmed human carcinogen by IARC.

- NTP: No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
- OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

#### **Reproductive toxicity**

Suspected of damaging the unborn child. Suspected of damaging fertility.

**Specific target organ toxicity - single exposure** Mixture causes damage to organs. - Eyes

**Specific target organ toxicity - repeated exposure** No data available

**Aspiration hazard** No data available

#### Additional Information

RTECS: Not available

Methyl alcohol may be fatal or cause blindness if swallowed. Effects due to ingestion may include:, Headache, Dizziness, Drowsiness, metabolic acidosis, Coma, Seizures. Symptoms may be delayed., Damage of the:, Liver, Kidney

Hazardous properties cannot be excluded but are unlikely when the product is handled appropriately.

#### **SECTION 12: Ecological information**

- 12.1 Toxicity No data available
- **12.2 Persistence and degradability** No data available
- **12.3 Bioaccumulative potential** No data available
- **12.4 Mobility in soil** No data available

#### 12.5 Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

**12.6 Other adverse effects** No data available

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#### SECTION 13: Disposal considerations

#### 13.1 Waste treatment methods

#### Product

Waste material must be disposed of in accordance with the national and loc No mixing with other waste. Handle uncleaned containers like the product See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

#### **SECTION 14: Transport information**

#### DOT (US)

UN number: 1230 Class: 3 Packing group: II Proper shipping name: MethanolSOLUTION

Reportable Quantity (RQ): Poison Inhalation Hazard: No

#### IMDG

UN number: 1230 Class: 3 (6.1) Packing group: II EMS-No: F-E, S-D Proper shipping name: METHANOLSOLUTION

#### ΙΑΤΑ

UN number: 1230 Class: 3 (6.1) Packing group: II Proper shipping name: MethanolSOLUTION

#### **SECTION 15: Regulatory information**

#### SARA 302 Components

This material does not contain any components with a section 302 EHS TPQ.

#### SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

|          | CAS-No. | Revision Date |
|----------|---------|---------------|
| Methanol | 67-56-1 | 2007-07-01    |

#### **Massachusetts Right To Know Components**

No components are subject to the Massachusetts Right to Know Act.

#### **SECTION 16: Other information**

#### Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of

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Version: 8.3

Revision Date: 07/23/2020

Print Date: 07/28/2020

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#### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### **1.1 Product identifiers**

| Product name   | : Morphine solution |
|----------------|---------------------|
| Product Number | : M-005             |
| Brand          | : Cerilliant        |

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Synthesis of substances

#### **1.3** Details of the supplier of the safety data sheet

| Company          | : | Sigma-Aldrich Inc.<br>3050 Spruce Street<br>ST. LOUIS MO 63103<br>UNITED STATES |
|------------------|---|---|
| Telephone<br>Fax | - | +1 314 771-5765<br>+1 800 325-5052  |

#### **1.4 Emergency telephone number**

Emergency Phone # : +1-703-527-3887

#### **SECTION 2: Hazards identification**

#### 2.1 Classification of the substance or mixture

#### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 2), H225 Acute toxicity, Oral (Category 3), H301 Acute toxicity, Inhalation (Category 3), H331 Acute toxicity, Dermal (Category 3), H311 Specific target organ toxicity - single exposure (Category 1), H370

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### 2.2 GHS Label elements, including precautionary statements

Pictogram

Signal word

Danger

Hazard statement(s) H225 H301 + H311 + H331 H370

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Highly flammable liquid and vapour. Toxic if swallowed, in contact with skin or if inhaled. Causes damage to organs.

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| Precautionary statement(s) |   |
|----------------------------|---|
| P210                       | Keep away from heat/sparks/open flames/hot surfaces. No smoking.  |
| P233                       | Keep container tightly closed.  |
| P240                       | Ground/bond container and receiving equipment.  |
| P241                       | Use explosion-proof electrical/ ventilating/ lighting equipment.  |
| P242                       | Use only non-sparking tools.  |
| P243                       | Take precautionary measures against static discharge.   |
| P260                       | Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.   |
| P264                       | Wash skin thoroughly after handling.  |
| P270                       | Do not eat, drink or smoke when using this product.   |
| P271                       | Use only outdoors or in a well-ventilated area.   |
| P280                       | Wear protective gloves/ eye protection/ face protection.  |
| P301 + P310 + P330         | IF SWALLOWED: Immediately call a POISON CENTER/doctor.<br>Rinse mouth.                                  |
| P303 + P361 + P353         | IF ON SKIN (or hair): Take off immediately all contaminated   |
|                            | clothing. Rinse skin with water/shower.   |
| P304 + P340 + P311         | IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor. |
| P307 + P311                | IF exposed: Call a POISON CENTER or doctor/ physician.  |
| P362                       | Take off contaminated clothing and wash before reuse.   |
| P370 + P378                | In case of fire: Use dry sand, dry chemical or alcohol-resistant  |
|                            | foam to extinguish.   |
| P403 + P233                | Store in a well-ventilated place. Keep container tightly closed.  |
| P403 + P235                | Store in a well-ventilated place. Keep cool.  |
| P405                       | Store locked up.  |
| P501                       | Dispose of contents/ container to an approved waste disposal  |
|                            | plant.  |

#### 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

#### SECTION 3: Composition/information on ingredients

#### 3.2 Mixtures

| Molecular weight  | : 285.34 g/mol  |
|-------------------|-----------------|
| nonceului weigine | 1 205.51 9/1101 |

| Component    |                   | Classification              | Concentration |
|--------------|-------------------|-----------------------------|---------------|
| Methanol     |                   |                             |               |
| CAS-No.      | 67-56-1           | Flam. Liq. 2; Acute Tox. 3; | >= 90 - <=    |
| EC-No.       | 200-659-6         | STOT SE 1; H225, H301,      | 100 %         |
| Index-No.    | 603-001-00-X      | H331, H311, H370            |               |
| Registration | 01-2119433307-44- |                             |               |
| number       | XXXX              |                             |               |

For the full text of the H-Statements mentioned in this Section, see Section 16.

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#### **SECTION 4: First aid measures**

#### 4.1 Description of first aid measures

#### **General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

#### In case of eye contact

Flush eyes with water as a precaution.

#### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

- **4.2 Most important symptoms and effects, both acute and delayed** The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
- **4.3 Indication of any immediate medical attention and special treatment needed** No data available

#### **SECTION 5: Firefighting measures**

#### 5.1 Extinguishing media

Suitable extinguishing media Dry powder Dry sand

**Unsuitable extinguishing media** Do NOT use water jet.

- **5.2** Special hazards arising from the substance or mixture Carbon oxides
- **5.3** Advice for firefighters Wear self-contained breathing apparatus for firefighting if necessary.
- 5.4 Further information

Use water spray to cool unopened containers.

#### **SECTION 6: Accidental release measures**

**6.1 Personal precautions, protective equipment and emergency procedures** Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

For personal protection see section 8.

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#### 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

#### 6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

#### **6.4 Reference to other sections** For disposal see section 13.

#### SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use explosion-proof equipment.Keep away from sources of ignition - No smoking.Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2.

#### 7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage temperature -20 °C Storage class (TRGS 510): 3: Flammable liquids

#### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

#### **SECTION 8: Exposure controls/personal protection**

#### 8.1 Control parameters

#### **Components with workplace control parameters**

| Component | CAS-No. | Value  | Control<br>parameters | Basis                                      |
|-----------|---------|--|-----------------------|--|
| Methanol  | 67-56-1 | TWA  | 200 ppm               | USA. ACGIH Threshold Limit<br>Values (TLV) |
|           | Remarks | or Indices (   |                       | is a Biological Exposure Index<br>on)      |
|           |         | STEL   | 250 ppm               | USA. ACGIH Threshold Limit<br>Values (TLV) |
|           |         | Headache<br>Nausea<br>Dizziness<br>Eye damage<br>Substances for which there is a Biological E<br>or Indices (see BEI® section)<br>Danger of cutaneous absorption |                       | on)  |

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| TWA                             | 200 ppm<br>260 mg/m3 | USA. NIOSH Recommended<br>Exposure Limits  |
|---------------------------------|----------------------|--|
| Potential for dermal absorption |                      |  |
| ST                              | 250 ppm<br>325 mg/m3 | USA. NIOSH Recommended<br>Exposure Limits  |
| Potential f                     | or dermal absor      |  |
| TWA                             | 200 ppm<br>260 mg/m3 | USA. Occupational Exposure<br>Limits (OSHA) - Table Z-1<br>Limits for Air Contaminants           |
| The value                       | in mg/m3 is app      | proximate.   |
| С                               | 1,000 ppm            | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
| Skin                            | •                    |  |
| PEL                             | 200 ppm<br>260 mg/m3 | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
| Skin                            | 1                    |  |
| STEL                            | 250 ppm<br>325 mg/m3 | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
| Skin                            |                      |  |

#### **Biological occupational exposure limits**

| Component | CAS-No. | Parameters     | Value      | Biological specimen | Basis  |
|-----------|---------|----------------|------------|---------------------|--|
| Methanol  | 67-56-1 | Methanol       | 15 mg/l    | Urine               | ACGIH -<br>Biological<br>Exposure Indices<br>(BEI) |
|           | Remarks | End of shift ( | As soon as | possible after exp  | osure ceases)                                      |

#### 8.2 Exposure controls

#### Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

#### Personal protective equipment

#### Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

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Full contact Material: butyl-rubber Minimum layer thickness: 0.3 mm Break through time: 480 min Material tested:Butoject® (KCL 897 / Aldrich Z677647, Size M)

Splash contact Material: Nitrile rubber Minimum layer thickness: 0.4 mm Break through time: 30 min Material tested:Camatril® (KCL 730 / Aldrich Z677442, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

#### **Body Protection**

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### **Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### **Control of environmental exposure**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

#### **SECTION 9: Physical and chemical properties**

#### 9.1 Information on basic physical and chemical properties

| a) | Appearance                                 | Form: liquid                         |
|----|--|--------------------------------------|
| b) | Odour                                      | No data available                    |
| c) | Odour Threshold                            | No data available                    |
| d) | рН   | No data available                    |
| e) | Melting<br>point/freezing point            | No data available                    |
| f) | Initial boiling point<br>and boiling range | 64 - 65 °C 147 - 149 °F at 1.013 hPa |
| g) | Flash point                                | 9.7 °C (49.5 °F) - closed cup        |
| h) | Evaporation rate                           | No data available                    |
| i) | Flammability (solid,<br>gas)               | No data available                    |

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| j)  | Upper/lower<br>flammability or<br>explosive limits | Upper explosion limit: 36 %(V)<br>Lower explosion limit: 6 %(V) |  |
|-----|--|---|--|
| k)  | Vapour pressure                                    | No data available   |  |
| I)  | Vapour density                                     | No data available   |  |
| m)  | Relative density                                   | 0.791 g/cm3 at 20 °C (68 °F)                                    |  |
| n)  | Water solubility                                   | No data available   |  |
| o)  | Partition coefficient:<br>n-octanol/water          | No data available   |  |
| p)  | Auto-ignition<br>temperature                       | No data available   |  |
| q)  | Decomposition<br>temperature                       | No data available   |  |
| r)  | Viscosity  | No data available   |  |
| s)  | Explosive properties                               | No data available   |  |
| t)  | Oxidizing properties                               | No data available   |  |
| Oth | Other safety information                           |   |  |

No data available

#### **SECTION 10: Stability and reactivity**

#### **10.1 Reactivity**

9.2

No data available

#### **10.2** Chemical stability

Stable under recommended storage conditions.

#### **10.3 Possibility of hazardous reactions** Vapours may form explosive mixture with air.

**10.4 Conditions to avoid** Heat, flames and sparks.

#### **10.5 Incompatible materials** Acids, Oxidizing agents, Alkali metals, Strong oxidizing agents, Strong acids, Acid chlorides, Acid anhydrides, Reducing agents, Strong reducing agents, Phosphorus halides

## 10.6 Hazardous decomposition products Other decomposition products - No data available Hazardous decomposition products formed under fire conditions. - Carbon oxides In the event of fire: see section 5

#### **SECTION 11: Toxicological information**

#### **11.1** Information on toxicological effects

#### Acute toxicity No data available

Inhalation: No data available

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Dermal: No data available

No data available

#### Skin corrosion/irritation

No data available

#### Serious eye damage/eye irritation No data available

#### **Respiratory or skin sensitisation** No data available

#### Germ cell mutagenicity No data available

NU Uala available

#### Carcinogenicity

- IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
- OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

#### **Reproductive toxicity**

No data available

Specific target organ toxicity - single exposure No data available

#### Specific target organ toxicity - repeated exposure No data available

Aspiration hazard

#### **Additional Information**

RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Methyl alcohol may be fatal or cause blindness if swallowed., Cannot be made nonpoisonous., Effects due to ingestion may include:, Nausea, Headache, Vomiting, Gastrointestinal disturbance, Dizziness, Weakness, Confusion.

Stomach - Irregularities - Based on Human Evidence

#### **SECTION 12: Ecological information**

**12.1 Toxicity** 

No data available

- 12.2 Persistence and degradability No data available
- 12.3 Bioaccumulative potential

No data available

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#### 12.4 Mobility in soil

No data available

#### 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

#### **12.6 Other adverse effects**

No data available

#### **SECTION 13: Disposal considerations**

#### **13.1 Waste treatment methods**

#### Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Contact a licensed professional waste disposal service to dispose of this material.

#### **Contaminated packaging**

Dispose of as unused product.

#### **SECTION 14: Transport information**

#### DOT (US)

UN number: 1230 Class: 3 Packing group: II Proper shipping name: MethanolSOLUTION

Reportable Quantity (RQ): Poison Inhalation Hazard: No

#### IMDG

UN number: 1230 Class: 3 (6.1) Packing group: II EMS-No: F-E, S-D Proper shipping name: METHANOLSOLUTION

IATA UN number: 1230 Class: 3 (6.1) Packing group: II Proper shipping name: MethanolSOLUTION

#### **SECTION 15: Regulatory information**

## SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

#### SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

|          | CAS-No. | Revision Date |
|----------|---------|---------------|
| Methanol | 67-56-1 | 2007-07-01    |

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#### SARA 311/312 Hazards

Fire Hazard, Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components No components are subject to the Massachusetts Right to Know Act.

### Pennsylvania Right To Know Components

Methanol

CAS-No. 67-56-1 Revision Date 2007-07-01

#### **SECTION 16: Other information**

#### Further information

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#### SECTION 1: Identification of the substance/mixture and of the company/undertaking

**1.1 Product identifiers** 

| Product name                         | : | (±)-Methadone solution              |
|--------------------------------------|---|-------------------------------------|
| Product Number<br>Brand<br>Index-No. | : | M-007<br>Cerilliant<br>603-001-00-X |

# 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Synthesis of substances

#### **1.3** Details of the supplier of the safety data sheet

| Company   | : Sigma-Aldrich Inc.<br>3050 Spruce Street<br>ST. LOUIS MO 63103<br>UNITED STATES |
|-----------|---|
| Telephone | : +1 314 771-5765   |
| Fax       | : +1 800 325-5052   |

#### **1.4 Emergency telephone number**

Emergency Phone # : +1-703-527-3887

#### **SECTION 2: Hazards identification**

#### 2.1 Classification of the substance or mixture

#### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 2), H225 Acute toxicity, Oral (Category 3), H301 Acute toxicity, Inhalation (Category 3), H331 Acute toxicity, Dermal (Category 3), H311 Specific target organ toxicity - single exposure (Category 1), H370

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### 2.2 GHS Label elements, including precautionary statements

Pictogram



Danger

Signal word Hazard statement(s) H225 H301 + H311 + H331

Highly flammable liquid and vapour. Toxic if swallowed, in contact with skin or if inhaled.

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| H370                       | Causes damage to organs.   |
|----------------------------|--|
| Precautionary statement(s) |  |
| P210 , ()                  | Keep away from heat/sparks/open flames/hot surfaces. No smoking.   |
| P233                       | Keep container tightly closed.   |
| P240                       | Ground/bond container and receiving equipment.   |
| P241                       | Use explosion-proof electrical/ ventilating/ lighting equipment.   |
| P242                       | Use only non-sparking tools.   |
| P243                       | Take precautionary measures against static discharge.  |
| P260                       | Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  |
| P264                       | Wash skin thoroughly after handling.   |
| P270                       | Do not eat, drink or smoke when using this product.  |
| P271                       | Use only outdoors or in a well-ventilated area.  |
| P280                       | Wear protective gloves/ protective clothing/ eye protection/ face protection.                                |
| P301 + P310                | IF SWALLOWED: Immediately call a POISON CENTER/doctor.   |
| P303 + P361 + P353         | IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. |
| P304 + P340                | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.             |
| P307 + P311                | IF exposed: Call a POISON CENTER or doctor/ physician.   |
| P322                       | Specific measures (see supplemental first aid instructions on this label).                                   |
| P330                       | Rinse mouth.   |
| P361                       | Remove/Take off immediately all contaminated clothing.   |
| P363                       | Wash contaminated clothing before reuse.   |
| P370 + P378                | In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.                        |
| P403 + P233                | Store in a well-ventilated place. Keep container tightly closed.   |
| P403 + P235                | Store in a well-ventilated place. Keep cool.   |
| P405                       | Store locked up.   |
| P501                       | Dispose of contents/ container to an approved waste disposal plant.  |

#### 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

## **SECTION 3:** Composition/information on ingredients

#### 3.2 Mixtures

Molecular weight : 309.45 g/mol

| Component    |                   | Classification              | Concentration |
|--------------|-------------------|-----------------------------|---------------|
| Methanol     |                   |                             |               |
| CAS-No.      | 67-56-1           | Flam. Liq. 2; Acute Tox. 3; | >= 90 - <=    |
| EC-No.       | 200-659-6         | STOT SE 1; H225, H301,      | 100 %         |
| Index-No.    | 603-001-00-X      | H331, H311, H370            |               |
| Registration | 01-2119433307-44- |                             |               |
| number       | XXXX              |                             |               |

For the full text of the H-Statements mentioned in this Section, see Section 16.

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#### **SECTION 4: First aid measures**

#### 4.1 Description of first aid measures

#### **General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

#### In case of eye contact

Flush eyes with water as a precaution.

#### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

- **4.2 Most important symptoms and effects, both acute and delayed** The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
- **4.3 Indication of any immediate medical attention and special treatment needed** No data available

#### **SECTION 5: Firefighting measures**

#### 5.1 Extinguishing media

#### **Suitable extinguishing media** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

- **5.2** Special hazards arising from the substance or mixture Carbon oxides
- **5.3** Advice for firefighters Wear self-contained breathing apparatus for firefighting if necessary.

#### 5.4 Further information

Use water spray to cool unopened containers.

#### **SECTION 6: Accidental release measures**

#### 6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

For personal protection see section 8.

# 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

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#### 6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wetbrushing and place in container for disposal according to local regulations (see section 13).

#### 6.4 Reference to other sections

For disposal see section 13.

#### SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use explosion-proof equipment.Keep away from sources of ignition - No smoking.Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2.

#### 7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage temperature -25 - -10 °C Storage class (TRGS 510): 3: Flammable liquids

#### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

#### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

#### **Components with workplace control parameters**

| Component | CAS-No. | Value                       | Control<br>parameters                                     | Basis  |
|-----------|---------|-----------------------------|---|--|
| Methanol  | 67-56-1 | TWA                         | 200 ppm   | USA. ACGIH Threshold Limit<br>Values (TLV)     |
|           | Remarks | or Indices (                |   | •  |
|           |         | STEL                        | 250 ppm   | USA. ACGIH Threshold Limit<br>Values (TLV)     |
|           |         | or Indices (<br>Danger of d | s for which there<br>(see BEI® section<br>cutaneous absor | is a Biological Exposure Index<br>on)<br>ption |
|           |         | TWA                         | 200 ppm<br>260 mg/m3                                      | USA. NIOSH Recommended<br>Exposure Limits      |
|           |         | Potential for               | or dermal absorp  | tion   |

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| ST            | 250 ppm<br>325 mg/m3 | USA. NIOSH Recommended<br>Exposure Limits  |
|---------------|----------------------|--|
| Potential for | or dermal absorp     | tion   |
| TWA           | 200 ppm<br>260 mg/m3 | USA. Occupational Exposure<br>Limits (OSHA) - Table Z-1<br>Limits for Air Contaminants           |
| The value i   | n mg/m3 is app       | roximate.  |
| С             | 1,000 ppm            | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
| Skin          |                      |  |
| PEL           | 200 ppm<br>260 mg/m3 | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
| Skin          | ·                    |  |
| STEL          | 250 ppm<br>325 mg/m3 | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
| Skin          |                      |  |

#### **Biological occupational exposure limits**

| Component | CAS-No. | Parameters     | Value      | Biological specimen | Basis  |
|-----------|---------|----------------|------------|---------------------|--|
| Methanol  | 67-56-1 | Methanol       | 15 mg/l    | Urine               | ACGIH -<br>Biological<br>Exposure Indices<br>(BEI) |
|           | Remarks | End of shift ( | As soon as | possible after exp  | oosure ceases)                                     |

#### 8.2 Exposure controls

#### Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

#### Personal protective equipment

#### Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### **Skin protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact Material: butyl-rubber Minimum layer thickness: 0.3 mm

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Break through time: 480 min Material tested:Butoject® (KCL 897 / Aldrich Z677647, Size M)

Splash contact Material: Nitrile rubber Minimum layer thickness: 0.4 mm Break through time: 30 min Material tested:Camatril® (KCL 730 / Aldrich Z677442, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

#### **Body Protection**

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### **Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### **Control of environmental exposure**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

#### **SECTION 9: Physical and chemical properties**

#### 9.1 Information on basic physical and chemical properties

| a) | Appearance   | Form: liquid  |
|----|--|---|
| b) | Odour  | No data available   |
| c) | Odour Threshold                                    | No data available   |
| d) | рН   | No data available   |
| e) | Melting<br>point/freezing point                    | No data available   |
| f) | Initial boiling point<br>and boiling range         | 64 - 65 °C 147 - 149 °F at 1.013 hPa                            |
| g) | Flash point  | 9.7 °C (49.5 °F) - closed cup                                   |
| h) | Evaporation rate                                   | No data available   |
| i) | Flammability (solid,<br>gas)                       | No data available   |
| j) | Upper/lower<br>flammability or<br>explosive limits | Upper explosion limit: 36 %(V)<br>Lower explosion limit: 6 %(V) |

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- k) Vapour pressure No data available
- I) Vapour density No data available
- m) Relative density 0.791 g/cm3 at 20 °C (68 °F)
- n) Water solubility No data available
- o) Partition coefficient: No data available n-octanol/water
- p) Auto-ignition No data available temperature
- q) Decomposition No data available temperature
- r) Viscosity No data available
- s) Explosive properties No data available
- t) Oxidizing properties No data available

#### **9.2 Other safety information** No data available

## **SECTION 10: Stability and reactivity**

# 10.1 Reactivity

No data available

# **10.2** Chemical stability

Stable under recommended storage conditions.

# **10.3** Possibility of hazardous reactions

Vapours may form explosive mixture with air.

#### 10.4 Conditions to avoid

Heat, flames and sparks. Extremes of temperature and direct sunlight.

#### **10.5** Incompatible materials

Acids, Oxidizing agents, Alkali metals, Strong oxidizing agents, Strong acids, Acid chlorides, Acid anhydrides, Reducing agents, Strong reducing agents, Phosphorus halides

#### **10.6 Hazardous decomposition products** Other decomposition products - No data available Hazardous decomposition products formed under fire conditions. - Carbon oxides In the event of fire: see section 5

#### **SECTION 11: Toxicological information**

### **11.1 Information on toxicological effects**

#### Acute toxicity

No data available

Inhalation: No data available

Dermal: No data available

No data available

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#### Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

## Respiratory or skin sensitisation

No data available

#### Germ cell mutagenicity

No data available

#### Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

- ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

#### **Reproductive toxicity**

No data available

Specific target organ toxicity - single exposure No data available

#### **Specific target organ toxicity - repeated exposure** No data available

Aspiration hazard No data available

#### **Additional Information**

RTECS: Not available

Methyl alcohol may be fatal or cause blindness if swallowed., Cannot be made nonpoisonous., Effects due to ingestion may include:, Nausea, Headache, Vomiting, Gastrointestinal disturbance, Dizziness, Weakness, Confusion.

Central nervous system - Breathing difficulties - Based on Human Evidence

#### **SECTION 12: Ecological information**

#### **12.1 Toxicity**

No data available

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#### 12.2 Persistence and degradability No data available

**12.3 Bioaccumulative potential** No data available

#### **12.4 Mobility in soil** No data available

#### 12.5 Results of PBT and vPvB assessment

 $\mathsf{PBT}/\mathsf{vPvB}$  assessment not available as chemical safety assessment not required/not conducted

# **12.6 Other adverse effects**

No data available

#### SECTION 13: Disposal considerations

#### 13.1 Waste treatment methods

#### Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

#### **Contaminated packaging**

Dispose of as unused product.

## **SECTION 14:** Transport information

#### DOT (US)

UN number: 1230 Class: 3 Packing group: II Proper shipping name: MethanolSOLUTION

Reportable Quantity (RQ): Poison Inhalation Hazard: No

#### IMDG

UN number: 1230 Class: 3 (6.1) Packing group: II EMS-No: F-E, S-D Proper shipping name: METHANOLSOLUTION

#### ΙΑΤΑ

UN number: 1230 Class: 3 (6.1) Packing group: II Proper shipping name: MethanolSOLUTION

#### **SECTION 15: Regulatory information**

#### SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

#### SARA 313 Components

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| The following components are subject to reporting levels established by SARA Title III, Section 313:   |                    |                             |  |  |
|--|--------------------|-----------------------------|--|--|
| Methanol   | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |  |  |
| SARA 311/312 Hazards<br>Fire Hazard, Acute Health Hazard, Chronic Health Hazar   | rd                 |                             |  |  |
| Massachusetts Right To Know Components   |                    |                             |  |  |
| Methanol   | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |  |  |
| No components are subject to the Massachusetts Right   | to Know Act.       |                             |  |  |
| <b>Pennsylvania Right To Know Components</b><br>Methanol   | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |  |  |
| Methanol   | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |  |  |
| New Jersey Right To Know Components<br>Methanol  | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |  |  |
| <b>California Prop. 65 Components</b><br>WARNING: This product contains a chemical known to<br>the State of California to cause birth defects or other<br>reproductive harm.Methanol | CAS-No.<br>67-56-1 | Revision Date<br>2012-03-16 |  |  |

#### **SECTION 16: Other information**

#### **Further information**

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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#### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### **1.1 Product identifiers**

| 1.2 | Relevant identified us | es | of the substance or mixture and uses advised against |
|-----|------------------------|----|--|
|     | Brand                  | :  | Cerilliant   |
|     | Product Number         | :  | M-009  |
|     | Product name           | :  | (±)-Methamphetamine solution                         |

Identified uses : Laboratory chemicals, Synthesis of substances

#### 1.3 Details of the supplier of the safety data sheet

| Company          | : | Sigma-Aldrich Inc.<br>3050 Spruce Street<br>ST. LOUIS MO 63103<br>UNITED STATES |
|------------------|---|---|
| Telephone<br>Fax | - | +1 314 771-5765<br>+1 800 325-5052  |

#### **1.4 Emergency telephone number**

Emergency Phone # : +1-703-527-3887

#### **SECTION 2: Hazards identification**

#### 2.1 Classification of the substance or mixture

#### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 2), H225 Acute toxicity, Oral (Category 3), H301 Acute toxicity, Inhalation (Category 3), H331 Acute toxicity, Dermal (Category 3), H311 Specific target organ toxicity - single exposure (Category 1), H370

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### 2.2 GHS Label elements, including precautionary statements

Pictogram

Signal word

Danger

Hazard statement(s) H225 H301 + H311 + H331 H370

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Highly flammable liquid and vapour. Toxic if swallowed, in contact with skin or if inhaled. Causes damage to organs.

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| Precautionary statement(s) |  |
|----------------------------|--|
| P210                       | Keep away from heat/sparks/open flames/hot surfaces. No smoking.   |
| P233                       | Keep container tightly closed.   |
| P240                       | Ground/bond container and receiving equipment.   |
| P241                       | Use explosion-proof electrical/ ventilating/ lighting equipment.   |
| P242                       | Use only non-sparking tools.   |
| P243                       | Take precautionary measures against static discharge.  |
| P260                       | Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  |
| P264                       | Wash skin thoroughly after handling.   |
| P270                       | Do not eat, drink or smoke when using this product.  |
| P271                       | Use only outdoors or in a well-ventilated area.  |
| P280                       | Wear protective gloves/ protective clothing/ eye protection/ face protection.                                |
| P301 + P310                | IF SWALLOWED: Immediately call a POISON CENTER/doctor.   |
| P303 + P361 + P353         | IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. |
| P304 + P340                | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.             |
| P307 + P311                | IF exposed: Call a POISON CENTER or doctor/ physician.   |
| P322                       | Specific measures (see supplemental first aid instructions on this label).                                   |
| P330                       | Rinse mouth.   |
| P361                       | Remove/Take off immediately all contaminated clothing.   |
| P363                       | Wash contaminated clothing before reuse.   |
| P370 + P378                | In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.                        |
| P403 + P233                | Store in a well-ventilated place. Keep container tightly closed.   |
| P403 + P235                | Store in a well-ventilated place. Keep cool.   |
| P405                       | Store locked up.   |
| P501                       | Dispose of contents/ container to an approved waste disposal plant.  |

# 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

#### **SECTION 3: Composition/information on ingredients**

#### 3.2 Mixtures

Molecular weight : 149.24 g/mol

| Component  |   | Classification  | Concentration       |
|--|---|---|---------------------|
| lethanol   |   |   |                     |
| CAS-No.<br>EC-No.<br>Index-No.<br>Registration<br>number | 67-56-1<br>200-659-6<br>603-001-00-X<br>01-2119433307-44-<br>XXXX | Flam. Liq. 2; Acute Tox. 3;<br>STOT SE 1; H225, H301,<br>H331, H311, H370 | >= 90 - <=<br>100 % |
| S(+)-Methampheta   | mine  |   |                     |
| CAS-No.<br>EC-No.  | 537-46-2<br>208-668-7   | Acute Tox. 2; STOT SE 3;<br>H300, H336                                    | >= 0.1 - < 1<br>%   |

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#### **SECTION 4: First aid measures**

#### 4.1 Description of first aid measures

#### **General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

#### In case of eye contact

Flush eyes with water as a precaution.

#### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

- **4.2 Most important symptoms and effects, both acute and delayed** The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
- **4.3 Indication of any immediate medical attention and special treatment needed** No data available

#### **SECTION 5: Firefighting measures**

#### 5.1 Extinguishing media

### Suitable extinguishing media Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

- **5.2** Special hazards arising from the substance or mixture Carbon oxides
- **5.3** Advice for firefighters Wear self-contained breathing apparatus for firefighting if necessary.

#### **5.4 Further information** Use water spray to cool unopened containers.

#### **SECTION 6:** Accidental release measures

**6.1 Personal precautions, protective equipment and emergency procedures** Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

For personal protection see section 8.

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#### 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

- **6.3 Methods and materials for containment and cleaning up** Contain spillage, and then collect with an electrically protected vacuum cleaner or by wetbrushing and place in container for disposal according to local regulations (see section 13).
- **6.4 Reference to other sections** For disposal see section 13.

#### **SECTION 7: Handling and storage**

#### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use explosion-proof equipment.Keep away from sources of ignition - No smoking.Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2.

#### 7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage temperature -20 °C Storage class (TRGS 510): 3: Flammable liquids

#### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

#### **SECTION 8: Exposure controls/personal protection**

#### 8.1 Control parameters

#### **Components with workplace control parameters**

| Component | CAS-No. | Value   | Control<br>parameters | Basis                                      |  |
|-----------|---------|---|-----------------------|--|--|
| Methanol  | 67-56-1 | TWA   | 200 ppm               | USA. ACGIH Threshold Limit<br>Values (TLV) |  |
|           | Remarks | Headache<br>Nausea<br>Dizziness<br>Eye damage<br>Substances for which there is a Biological Exposure Index<br>or Indices (see BEI® section)<br>Danger of cutaneous absorption |                       |  |  |
|           |         | STEL  | 250 ppm               | USA. ACGIH Threshold Limit<br>Values (TLV) |  |
|           |         | Headache<br>Nausea<br>Dizziness<br>Eye damage<br>Substances for which there is a Biological Exposure Index<br>or Indices (see BEI® section)<br>Danger of cutaneous absorption |                       |  |  |

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| TWA         | 200 ppm<br>260 mg/m3            | USA. NIOSH Recommended<br>Exposure Limits  |  |  |
|-------------|---------------------------------|--|--|--|
| Potential f | al for dermal absorption        |  |  |  |
| ST          | 250 ppm<br>325 mg/m3            | USA. NIOSH Recommended<br>Exposure Limits  |  |  |
| Potential f | Potential for dermal absorption |  |  |  |
| TWA         | 200 ppm<br>260 mg/m3            | USA. Occupational Exposure<br>Limits (OSHA) - Table Z-1<br>Limits for Air Contaminants           |  |  |
| The value   | in mg/m3 is app                 | proximate.   |  |  |
| С           | 1,000 ppm                       | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |  |  |
| Skin        | •                               |  |  |  |
| PEL         | 200 ppm<br>260 mg/m3            | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |  |  |
| Skin        | 1                               |  |  |  |
| STEL        | 250 ppm<br>325 mg/m3            | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |  |  |
| Skin        |                                 |  |  |  |

#### **Biological occupational exposure limits**

| Component | CAS-No. | Parameters   | Value   | Biological specimen | Basis  |
|-----------|---------|--|---------|---------------------|--|
| Methanol  | 67-56-1 | Methanol   | 15 mg/l | Urine               | ACGIH -<br>Biological<br>Exposure Indices<br>(BEI) |
|           | Remarks | End of shift (As soon as possible after exposure ceases) |         |                     |  |

#### 8.2 Exposure controls

#### Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

#### Personal protective equipment

#### Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

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Full contact Material: butyl-rubber Minimum layer thickness: 0.3 mm Break through time: 480 min Material tested:Butoject® (KCL 897 / Aldrich Z677647, Size M)

Splash contact Material: Nitrile rubber Minimum layer thickness: 0.4 mm Break through time: 30 min Material tested:Camatril® (KCL 730 / Aldrich Z677442, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

#### **Body Protection**

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### **Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### **Control of environmental exposure**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

#### **SECTION 9: Physical and chemical properties**

#### 9.1 Information on basic physical and chemical properties

| a) | Appearance                              | Form: liquid                         |
|----|---|--------------------------------------|
| b) | Odour                                   | No data available                    |
| c) | Odour Threshold                         | No data available                    |
| d) | рН                                      | No data available                    |
| e) | Melting<br>point/freezing point         | No data available                    |
| f) | Initial boiling point and boiling range | 64 - 65 °C 147 - 149 °F at 1.013 hPa |
| g) | Flash point                             | 9.7 °C (49.5 °F) - closed cup        |
| h) | Evaporation rate                        | No data available                    |
| i) | Flammability (solid,<br>gas)            | No data available                    |

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|     | j)  | Upper/lower<br>flammability or<br>explosive limits | Upper explosion limit: 36 %(V)<br>Lower explosion limit: 6 %(V) |
|-----|-----|--|---|
|     | k)  | Vapour pressure                                    | No data available   |
|     | I)  | Vapour density                                     | No data available   |
|     | m)  | Relative density                                   | 0.791 g/cm3 at 20 °C (68 °F)                                    |
|     | n)  | Water solubility                                   | No data available   |
|     | o)  | Partition coefficient:<br>n-octanol/water          | No data available   |
|     | p)  | Auto-ignition<br>temperature                       | No data available   |
|     | q)  | Decomposition<br>temperature                       | No data available   |
|     | r)  | Viscosity  | No data available   |
|     | s)  | Explosive properties                               | No data available   |
|     | t)  | Oxidizing properties                               | No data available   |
| 9.2 | Oth | ner safety informatio                              | n   |

No data available

#### **SECTION 10: Stability and reactivity**

#### **10.1 Reactivity**

No data available

#### **10.2** Chemical stability

Stable under recommended storage conditions.

# 10.3 Possibility of hazardous reactions

Vapours may form explosive mixture with air.

# 10.4 Conditions to avoid

Heat, flames and sparks. Extremes of temperature and direct sunlight.

#### **10.5** Incompatible materials

Acids, Oxidizing agents, Alkali metals, Strong oxidizing agents, Strong acids, Acid chlorides, Acid anhydrides, Reducing agents, Strong reducing agents, Phosphorus halides

# 10.6 Hazardous decomposition products Other decomposition products - No data available Hazardous decomposition products formed under fire conditions. - Carbon oxides In the event of fire: see section 5

#### **SECTION 11: Toxicological information**

#### **11.1 Information on toxicological effects**

#### Acute toxicity No data available

Inhalation: No data available

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Dermal: No data available

No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation No data available

**Respiratory or skin sensitisation** No data available

#### **Germ cell mutagenicity** No data available

#### Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

- ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

#### **Reproductive toxicity**

No data available

Specific target organ toxicity - single exposure No data available

**Specific target organ toxicity - repeated exposure** No data available

#### Aspiration hazard

No data available

#### **Additional Information**

RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Methyl alcohol may be fatal or cause blindness if swallowed., Cannot be made nonpoisonous., Effects due to ingestion may include:, Nausea, Headache, Vomiting, Gastrointestinal disturbance, Dizziness, Weakness, Confusion.

Central nervous system - Breathing difficulties - Based on Human Evidence

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#### **SECTION 12: Ecological information**

12.1 Toxicity

No data available

- **12.2 Persistence and degradability** No data available
- **12.3 Bioaccumulative potential** No data available
- **12.4 Mobility in soil** No data available
- 12.5 Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
- **12.6 Other adverse effects** No data available

#### **SECTION 13: Disposal considerations**

#### **13.1 Waste treatment methods**

#### Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

#### Contaminated packaging

Dispose of as unused product.

#### **SECTION 14: Transport information**

#### DOT (US)

UN number: 1230 Class: 3 Packing group: II Proper shipping name: MethanolSOLUTION

Reportable Quantity (RQ): Poison Inhalation Hazard: No

#### IMDG

UN number: 1230 Class: 3 (6.1) Packing group: II Proper shipping name: METHANOLSOLUTION

EMS-No: F-E, S-D

#### ΙΑΤΑ

UN number: 1230 Class: 3 (6.1) Packing group: II Proper shipping name: MethanolSOLUTION

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| SECTION 15: Regulatory                                    | SECTION 15: Regulatory information   |                    |                             |  |
|---|--|--------------------|-----------------------------|--|
|   | <b>SARA 302 Components</b><br>No chemicals in this material are subject to the reporting requirements of SARA Title III,<br>Section 302. |                    |                             |  |
| SARA 313 Compone<br>The following compone<br>Section 313: | mponents<br>components are subject to reporting levels established by SARA Title III,  |                    |                             |  |
| Methanol  |  | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |  |
| SARA 311/312 Haza<br>Fire Hazard, Acute Hea               | ards<br>alth Hazard, Chronic Health Hazar  | rd                 |                             |  |
| Massachusetts Righ  | t To Know Components   |                    |                             |  |
| Methanol  |  | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |  |
| No components are su                                      | bject to the Massachusetts Right   | to Know Act.       |                             |  |
| <b>Pennsylvania Right</b><br>Methanol                     | To Know Components   | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |  |
| Methanol  |  | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |  |
| <b>New Jersey Right To</b><br>Methanol                    | o Know Components  | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |  |
|   | ict contains a chemical known to<br>to cause birth defects or other  | CAS-No.<br>67-56-1 | Revision Date<br>2012-03-16 |  |

# **SECTION 16: Other information**

#### **Further information**

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See

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Version: 6.1

Revision Date: 07/02/2019

Print Date: 02/21/2020

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# SAFETY DATA SHEET

#### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifiers

Product name : (±)-Methamphetamine-D5 solution Product Number : M-023 Brand : Cerilliant Index-No. : 603-001-00-X

#### Relevant identified uses of the substance or mixture and uses advised against 1.2

Identified uses : Laboratory chemicals, Synthesis of substances

#### 1.3 Details of the supplier of the safety data sheet

| Company          | : | Sigma-Aldrich Inc.<br>3050 Spruce Street<br>ST. LOUIS MO 63103<br>UNITED STATES |
|------------------|---|---|
| Telephone<br>Fax | - | +1 314 771-5765<br>+1 800 325-5052  |

#### 1.4 **Emergency telephone number**

Emergency Phone # : +1-703-527-3887

#### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

#### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 2), H225 Acute toxicity, Oral (Category 3), H301 Acute toxicity, Inhalation (Category 3), H331 Acute toxicity, Dermal (Category 3), H311 Reproductive toxicity (Category 2), H361 Specific target organ toxicity - single exposure (Category 1), Eyes, H370

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### GHS Label elements, including precautionary statements 2.2

Danger

Pictogram



Signal word Hazard statement(s) H225

Highly flammable liquid and vapour.

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| H301 + H311 + H331<br>H361<br>H370 | Toxic if swallowed, in contact with skin or if inhaled.<br>Suspected of damaging fertility or the unborn child.<br>Causes damage to organs (Eyes). |
|------------------------------------|--|
| Precautionary statement(s)         |  |
| P201                               | Obtain special instructions before use.  |
| P202                               | Do not handle until all safety precautions have been read and understood.  |
| P210                               | Keep away from heat/sparks/open flames/hot surfaces. No smoking.   |
| P233                               | Keep container tightly closed.   |
| P240                               | Ground/bond container and receiving equipment.   |
| P241                               | Use explosion-proof electrical/ ventilating/ lighting equipment.   |
| P242                               | Use only non-sparking tools.   |
| P243                               | Take precautionary measures against static discharge.  |
| P260                               | Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  |
| P264                               | Wash skin thoroughly after handling.   |
| P270                               | Do not eat, drink or smoke when using this product.  |
| P271                               | Use only outdoors or in a well-ventilated area.  |
| P280                               | Wear protective gloves/ protective clothing/ eye protection/ face protection.  |
| P301 + P310 + P330                 | IF SWALLOWED: Immediately call a POISON CENTER/doctor.<br>Rinse mouth.   |
| P303 + P361 + P353                 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  |
| P304 + P340 + P311                 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor.  |
| P307 + P311                        | IF exposed: Call a POISON CENTER or doctor/ physician.   |
| P362                               | Take off contaminated clothing and wash before reuse.  |
| P370 + P378                        | In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.   |
| P403 + P233                        | Store in a well-ventilated place. Keep container tightly closed.   |
| P403 + P235                        | Store in a well-ventilated place. Keep cool.   |
| P405                               | Store locked up.   |
| P501                               | Dispose of contents/ container to an approved waste disposal plant.  |

## 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

# SECTION 3: Composition/information on ingredients

#### 3.2 Mixtures

| : 154.26 g/mol    |   |   |
|-------------------|---|---|
|                   | Classification  | Concentration   |
|                   |   |   |
| 67-56-1           | Flam. Liq. 2; Acute Tox. 3;                                       | >= 90 - <=  |
| 200-659-6         | STOT SE 1; H225, H301,  | 100 %   |
| 603-001-00-X      | H331, H311, H370  |   |
| 01-2119433307-44- |   |   |
| XXXX              |   |   |
| nine-D5,          |   |   |
| 60124-88-1        | Acute Tox. 2; Repr. 2;  | >= 0.1 - < 1  |
|                   | 67-56-1<br>200-659-6<br>603-001-00-X<br>01-2119433307-44-<br>XXXX | Classification<br>67-56-1<br>200-659-6<br>603-001-00-X<br>01-2119433307-44-<br>XXXX<br>hine-D5, |

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| STOT SE 3; H300, H361,<br>H336 | % |
|--------------------------------|---|
|                                |   |

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### **SECTION 4: First aid measures**

#### 4.1 Description of first aid measures

#### **General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

#### In case of eye contact

Flush eyes with water as a precaution.

#### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

#### **4.3 Indication of any immediate medical attention and special treatment needed** No data available

#### **SECTION 5: Firefighting measures**

#### 5.1 Extinguishing media

#### Suitable extinguishing media Dry powder Dry sand

#### **Unsuitable extinguishing media** Do NOT use water jet.

**5.2 Special hazards arising from the substance or mixture** Carbon oxides

#### **5.3** Advice for firefighters Wear self-contained breathing apparatus for firefighting if necessary.

#### **5.4 Further information** Use water spray to cool unopened containers.

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#### SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

For personal protection see section 8.

#### **6.2 Environmental precautions** Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

**6.3 Methods and materials for containment and cleaning up** Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

#### 6.4 Reference to other sections

For disposal see section 13.

#### SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use explosion-proof equipment.Keep away from sources of ignition - No smoking.Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2.

#### 7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store under inert gas. hygroscopic

Recommended storage temperature -20 °C Storage class (TRGS 510): 3: Flammable liquids

#### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

#### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

#### Components with workplace control parameters

| Component | CAS-No. | Value        | Control<br>parameters | Basis                                      |
|-----------|---------|--------------|-----------------------|--|
| Methanol  | 67-56-1 | TWA          | 200 ppm               | USA. ACGIH Threshold Limit<br>Values (TLV) |
|           | Remarks | or Indices ( |                       | ,  |

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| STEL  | 250 ppm                         | USA. ACGIH Threshold Limit<br>Values (TLV)   |  |  |  |
|---|---------------------------------|--|--|--|--|
| Headache<br>Nausea<br>Dizziness                           |                                 |  |  |  |  |
| Eye damage  |                                 |  |  |  |  |
| Substances for which there is a Biological Exposure Index |                                 |  |  |  |  |
| or Indices (see BEI® section)                             |                                 |  |  |  |  |
|   | Danger of cutaneous absorption  |  |  |  |  |
| TWA   | 200 ppm                         | USA. NIOSH Recommended   |  |  |  |
|   | 260 mg/m3                       | Exposure Limits  |  |  |  |
|   | Potential for dermal absorption |  |  |  |  |
| ST  | 250 ppm                         | USA. NIOSH Recommended   |  |  |  |
|   | 325 mg/m3                       | Exposure Limits  |  |  |  |
| Potential for dermal absorption                           |                                 |  |  |  |  |
| TWA   | 200 ppm<br>260 mg/m3            | USA. Occupational Exposure<br>Limits (OSHA) - Table Z-1  |  |  |  |
| <br>  |                                 | Limits for Air Contaminants  |  |  |  |
| <br>The value i   |                                 |  |  |  |  |
| С   | 1,000 ppm                       | California permissible exposure limits for chemical  |  |  |  |
|   |                                 | contaminants (Title 8, Article 107)  |  |  |  |
| Skin  |                                 | · · · ·  |  |  |  |
| PEL   | 200 ppm<br>260 mg/m3            | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |  |  |  |
| Skin  |                                 |  |  |  |  |
| STEL  | 250 ppm<br>325 mg/m3            | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |  |  |  |
| Skin  |                                 |  |  |  |  |

#### **Biological occupational exposure limits**

| Component | CAS-No. | Parameters     | Value      | Biological specimen | Basis  |  |  |
|-----------|---------|----------------|------------|---------------------|--|--|--|
| Methanol  | 67-56-1 | Methanol       | 15 mg/l    | Urine               | ACGIH -<br>Biological<br>Exposure Indices<br>(BEI) |  |  |
|           | Remarks | End of shift ( | As soon as | possible after exp  | osure ceases)                                      |  |  |

#### 8.2 Exposure controls

#### Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

#### Personal protective equipment

#### Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

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#### **Skin protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact Material: butyl-rubber Minimum layer thickness: 0.3 mm Break through time: 480 min Material tested:Butoject® (KCL 897 / Aldrich Z677647, Size M)

Splash contact Material: Nitrile rubber Minimum layer thickness: 0.4 mm Break through time: 30 min Material tested:Camatril® (KCL 730 / Aldrich Z677442, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

#### **Body Protection**

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### **Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### **Control of environmental exposure**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

## **SECTION 9: Physical and chemical properties**

#### 9.1 Information on basic physical and chemical properties

| a) | Appearance                              | Form: liquid<br>Colour: colourless   |
|----|---|--------------------------------------|
| b) | Odour                                   | characteristic                       |
| c) | Odour Threshold                         | No data available                    |
| d) | рН                                      | No data available                    |
| e) | Melting<br>point/freezing point         | Melting point: -98.0 °C (-144.4 °F)  |
| f) | Initial boiling point and boiling range | 64 - 65 °C 147 - 149 °F at 1.013 hPa |

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| g)  | Flash point  | 11.0 °C (51.8 °F) - closed cup   |
|-----|--|--|
| h)  | Evaporation rate                                   | 6.3 - Diethylether1.9 - n-butyl acetate                                    |
| i)  | Flammability (solid,<br>gas)                       | No data available  |
| j)  | Upper/lower<br>flammability or<br>explosive limits | Upper explosion limit: 36 %(V)<br>Lower explosion limit: 6 %(V)            |
| k)  | Vapour pressure                                    | 128 hPa at 20.0 °C (68.0 °F)   |
| I)  | Vapour density                                     | 1.11   |
| m)  | Relative density                                   | 0.791 g/cm3 at 20 °C (68 °F)   |
| n)  | Water solubility                                   | soluble  |
| 0)  | Partition coefficient:<br>n-octanol/water          | log Pow: -0.77 at 25 °C (77 °F) - (Lit.), Bioaccumulation is not expected. |
| p)  | Auto-ignition<br>temperature                       | 455.0 °C (851.0 °F) at 1,013 hPa - DIN 51794                               |
| q)  | Decomposition<br>temperature                       | Distillable in an undecomposed state at normal pressure.                   |
| r)  | Viscosity  | 0.54 - 0.59 mm2/s at 20 °C (68 °F) -                                       |
| s)  | Explosive properties                               | No data available  |
| t)  | Oxidizing properties                               | No data available  |
| Oth | ner safety informatio                              | n  |

| Minimum ignition           | 0.14 mJ   |
|----------------------------|-----------|
| energy                     |           |
| Conductivity               | < 1 µS/cm |
| Relative vapour<br>density | 1.11      |

## SECTION 10: Stability and reactivity

#### **10.1 Reactivity**

9.2

No data available

- **10.2 Chemical stability** Stable under recommended storage conditions.
- **10.3 Possibility of hazardous reactions** Vapours may form explosive mixture with air.
- **10.4 Conditions to avoid** Heat, flames and sparks.
- **10.5 Incompatible materials** Acid chlorides, Acid anhydrides, Oxidizing agents, Alkali metals, Reducing agents, Acids
- 10.6 Hazardous decomposition products
   Other decomposition products No data available
   Hazardous decomposition products formed under fire conditions. Carbon oxides
   In the event of fire: see section 5

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#### **SECTION 11: Toxicological information**

#### **11.1 Information on toxicological effects**

#### Acute toxicity

No data available

Inhalation: No data available

Dermal: No data available

No data available

#### **Skin corrosion/irritation** No data available

#### Serious eye damage/eye irritation No data available

#### **Respiratory or skin sensitisation** No data available

Germ cell mutagenicity

# No data available

#### Carcinogenicity

- IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
- OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

#### **Reproductive toxicity**

No data available

Specific target organ toxicity - single exposure No data available

#### **Specific target organ toxicity - repeated exposure** No data available

#### Aspiration hazard

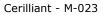
No data available

#### **Additional Information**

RTECS: Not available

Methyl alcohol may be fatal or cause blindness if swallowed. Effects due to ingestion may include:, Headache, Dizziness, Drowsiness, metabolic acidosis, Coma, Seizures. Symptoms may be delayed., Damage of the:, Liver, Kidney

Stomach - Irregularities - Based on Human Evidence



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#### SECTION 12: Ecological information

12.1 Toxicity

No data available

- **12.2 Persistence and degradability** No data available
- **12.3 Bioaccumulative potential** No data available
- **12.4 Mobility in soil** No data available
- 12.5 Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
- **12.6 Other adverse effects** No data available

#### **SECTION 13: Disposal considerations**

#### **13.1 Waste treatment methods**

#### Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Contact a licensed professional waste disposal service to dispose of this material.

#### Contaminated packaging

Dispose of as unused product.

#### **SECTION 14: Transport information**

#### DOT (US)

UN number: 1230 Class: 3 Packing group: II Proper shipping name: MethanolSOLUTION

Reportable Quantity (RQ): Poison Inhalation Hazard: No

#### IMDG

UN number: 1230 Class: 3 (6.1) Packing group: II Proper shipping name: METHANOLSOLUTION

EMS-No: F-E, S-D

#### ΙΑΤΑ

UN number: 1230 Class: 3 (6.1) Packing group: II Proper shipping name: MethanolSOLUTION

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#### SECTION 15: Regulatory information

#### SARA 302 Components

This material does not contain any components with a section 302 EHS TPQ.

#### SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

|          | CAS-No. | Revision Date |
|----------|---------|---------------|
| Methanol | 67-56-1 | 2007-07-01    |

#### SARA 311/312 Hazards

Fire Hazard, Chronic Health Hazard

#### Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

#### **SECTION 16: Other information**

#### **Further information**

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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Version: 6.3

Revision Date: 05/08/2020

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# SAFETY DATA SHEET

Version 6.2 Revision Date 07/02/2019 Print Date 08/23/2019

#### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### **1.1 Product identifiers**

| Product name            | <sup>:</sup> Morphine-D <sub>6</sub> solution |
|-------------------------|---|
| Product Number<br>Brand | : M-086<br>: Cerilliant                       |
| Diallu                  |   |
| Index-No.               | : 603-001-00-X                                |

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

| Identified uses | : | Laborator | chemicals, | , S' | ynthesis o | f substances |
|-----------------|---|-----------|------------|------|------------|--------------|
|-----------------|---|-----------|------------|------|------------|--------------|

#### 1.3 Details of the supplier of the safety data sheet

| Company          | : | Sigma-Aldrich Inc.<br>3050 Spruce Street<br>ST. LOUIS MO 63103<br>UNITED STATES |
|------------------|---|---|
| Telephone<br>Fax | - | +1 314 771-5765<br>+1 800 325-5052  |

#### **1.4 Emergency telephone number**

Emergency Phone # : +1-703-527-3887

#### **SECTION 2: Hazards identification**

#### 2.1 Classification of the substance or mixture

#### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 2), H225 Acute toxicity, Oral (Category 3), H301 Acute toxicity, Inhalation (Category 3), H331 Acute toxicity, Dermal (Category 3), H311 Specific target organ toxicity - single exposure (Category 1), H370

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### 2.2 GHS Label elements, including precautionary statements

Danger

Pictogram

Signal word Hazard statement(s) H225 H301 + H311 + H331

Cerilliant - M-086

Highly flammable liquid and vapour. Toxic if swallowed, in contact with skin or if inhaled.

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| H370                       | Causes damage to organs.   |
|----------------------------|--|
| Precautionary statement(s) |  |
| P210 , ()                  | Keep away from heat/sparks/open flames/hot surfaces. No smoking.   |
| P233                       | Keep container tightly closed.   |
| P240                       | Ground/bond container and receiving equipment.   |
| P241                       | Use explosion-proof electrical/ ventilating/ lighting equipment.   |
| P242                       | Use only non-sparking tools.   |
| P243                       | Take precautionary measures against static discharge.  |
| P260                       | Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  |
| P264                       | Wash skin thoroughly after handling.   |
| P270                       | Do not eat, drink or smoke when using this product.  |
| P271                       | Use only outdoors or in a well-ventilated area.  |
| P280                       | Wear protective gloves/ protective clothing/ eye protection/ face protection.                                |
| P301 + P310                | IF SWALLOWED: Immediately call a POISON CENTER/doctor.   |
| P303 + P361 + P353         | IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. |
| P304 + P340                | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.             |
| P307 + P311                | IF exposed: Call a POISON CENTER or doctor/ physician.   |
| P322                       | Specific measures (see supplemental first aid instructions on this label).                                   |
| P330                       | Rinse mouth.   |
| P361                       | Remove/Take off immediately all contaminated clothing.   |
| P363                       | Wash contaminated clothing before reuse.   |
| P370 + P378                | In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.                        |
| P403 + P233                | Store in a well-ventilated place. Keep container tightly closed.   |
| P403 + P235                | Store in a well-ventilated place. Keep cool.   |
| P405                       | Store locked up.   |
| P501                       | Dispose of contents/ container to an approved waste disposal plant.  |

# 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

# **SECTION 3:** Composition/information on ingredients

#### 3.2 Mixtures

| Component                           |   | Classification  | Concentration       |
|-------------------------------------|---|---|---------------------|
| Methanol                            |   |   |                     |
| CAS-No.<br>EC-No.                   | 67-56-1<br>200-659-6                      | Flam. Liq. 2; Acute Tox. 3;<br>STOT SE 1; H225, H301, | >= 90 - <=<br>100 % |
| Index-No.<br>Registration<br>number | 603-001-00-X<br>01-2119433307-44-<br>XXXX | H331, H311, H370                                      |                     |

For the full text of the H-Statements mentioned in this Section, see Section 16.

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#### **SECTION 4: First aid measures**

#### 4.1 Description of first aid measures

#### **General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

#### In case of eye contact

Flush eyes with water as a precaution.

#### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

- **4.2 Most important symptoms and effects, both acute and delayed** The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
- **4.3 Indication of any immediate medical attention and special treatment needed** No data available

#### **SECTION 5: Firefighting measures**

#### 5.1 Extinguishing media

#### **Suitable extinguishing media** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

- **5.2 Special hazards arising from the substance or mixture** Carbon oxides
- **5.3** Advice for firefighters Wear self-contained breathing apparatus for firefighting if necessary.

#### 5.4 Further information

Use water spray to cool unopened containers.

#### **SECTION 6: Accidental release measures**

#### 6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

For personal protection see section 8.

# 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

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### 6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wetbrushing and place in container for disposal according to local regulations (see section 13).

### 6.4 Reference to other sections

For disposal see section 13.

#### SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use explosion-proof equipment.Keep away from sources of ignition - No smoking.Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2.

#### 7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store under inert gas. hygroscopic

Recommended storage temperature -20 °C Storage class (TRGS 510): 3: Flammable liquids

#### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

#### **SECTION 8: Exposure controls/personal protection**

#### 8.1 Control parameters

#### Components with workplace control parameters

| Component | CAS-No. | Value   | Control<br>parameters | Basis                                      |
|-----------|---------|---|-----------------------|--|
| Methanol  | 67-56-1 | TWA   | 200 ppm               | USA. ACGIH Threshold Limit<br>Values (TLV) |
|           | Remarks | or Indices (  |                       |  |
|           |         | STEL  | 250 ppm               | USA. ACGIH Threshold Limit<br>Values (TLV) |
|           |         | Headache<br>Nausea<br>Dizziness<br>Eye damage<br>Substances for which there is a Biological Exposure Index<br>or Indices (see BEI® section)<br>Danger of cutaneous absorption |                       |  |

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| TWA           | 200 ppm<br>260 mg/m3 | USA. NIOSH Recommended<br>Exposure Limits  |
|---------------|----------------------|--|
| Potential for | or dermal absorp     | tion   |
| ST            | 250 ppm<br>325 mg/m3 | USA. NIOSH Recommended<br>Exposure Limits  |
| Potential for | or dermal absorp     | tion   |
| TWA           | 200 ppm<br>260 mg/m3 | USA. Occupational Exposure<br>Limits (OSHA) - Table Z-1<br>Limits for Air Contaminants           |
| The value i   | n mg/m3 is app       | roximate.  |
| С             | 1,000 ppm            | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
| Skin          |                      |  |
| PEL           | 200 ppm<br>260 mg/m3 | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
| Skin          |                      |  |
| STEL          | 250 ppm<br>325 mg/m3 | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
| Skin          |                      |  |

#### **Biological occupational exposure limits**

| Component | CAS-No. | Parameters     | Value      | Biological specimen | Basis  |
|-----------|---------|----------------|------------|---------------------|--|
| Methanol  | 67-56-1 | Methanol       | 15 mg/l    | Urine               | ACGIH -<br>Biological<br>Exposure Indices<br>(BEI) |
|           | Remarks | End of shift ( | As soon as | possible after exp  | osure ceases)                                      |

#### 8.2 Exposure controls

#### Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

#### Personal protective equipment

#### Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

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Full contact Material: butyl-rubber Minimum layer thickness: 0.3 mm Break through time: 480 min Material tested:Butoject® (KCL 897 / Aldrich Z677647, Size M)

Splash contact Material: Nitrile rubber Minimum layer thickness: 0.4 mm Break through time: 30 min Material tested:Camatril® (KCL 730 / Aldrich Z677442, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

#### **Body Protection**

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### **Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### **Control of environmental exposure**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

#### **SECTION 9: Physical and chemical properties**

#### 9.1 Information on basic physical and chemical properties

| a) | Appearance                              | Form: liquid                         |
|----|---|--------------------------------------|
| b) | Odour                                   | No data available                    |
| c) | Odour Threshold                         | No data available                    |
| d) | рН                                      | No data available                    |
| e) | Melting<br>point/freezing point         | No data available                    |
| f) | Initial boiling point and boiling range | 64 - 65 °C 147 - 149 °F at 1.013 hPa |
| g) | Flash point                             | 9.7 °C (49.5 °F) - closed cup        |
| h) | Evaporation rate                        | No data available                    |
| i) | Flammability (solid,<br>gas)            | No data available                    |

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|     | j)  | Upper/lower<br>flammability or<br>explosive limits | Upper explosion limit: 36 %(V)<br>Lower explosion limit: 6 %(V) |
|-----|-----|--|---|
|     | k)  | Vapour pressure                                    | No data available   |
|     | I)  | Vapour density                                     | No data available   |
|     | m)  | Relative density                                   | 0.791 g/cm3 at 20 °C (68 °F)                                    |
|     | n)  | Water solubility                                   | No data available   |
|     | o)  | Partition coefficient:<br>n-octanol/water          | No data available   |
|     | p)  | Auto-ignition<br>temperature                       | No data available   |
|     | q)  | Decomposition<br>temperature                       | No data available   |
|     | r)  | Viscosity  | No data available   |
|     | s)  | Explosive properties                               | No data available   |
|     | t)  | Oxidizing properties                               | No data available   |
| 9.2 | Oth | ner safety informatio                              | n   |

No data available

#### **SECTION 10: Stability and reactivity**

#### **10.1 Reactivity**

No data available

#### **10.2** Chemical stability

Stable under recommended storage conditions.

# 10.3 Possibility of hazardous reactions

### Vapours may form explosive mixture with air.

#### **10.4 Conditions to avoid** Heat, flames and sparks. Extremes of temperature and direct sunlight.

### 10.5 Incompatible materials

Acids, Öxidizing agents, Alkali metals, Strong oxidizing agents, Strong acids, Acid chlorides, Acid anhydrides, Reducing agents, Strong reducing agents, Phosphorus halides

# 10.6 Hazardous decomposition products Other decomposition products - No data available Hazardous decomposition products formed under fire conditions. - Carbon oxides In the event of fire: see section 5

### **SECTION 11: Toxicological information**

#### **11.1** Information on toxicological effects

#### Acute toxicity No data available

Inhalation: No data available

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Dermal: No data available

No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation No data available

**Respiratory or skin sensitisation** No data available

#### **Germ cell mutagenicity** No data available

#### Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

- ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

#### **Reproductive toxicity**

No data available

Specific target organ toxicity - single exposure No data available

**Specific target organ toxicity - repeated exposure** No data available

Aspiration hazard

No data available

#### **Additional Information**

RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Methyl alcohol may be fatal or cause blindness if swallowed., Cannot be made nonpoisonous., Effects due to ingestion may include:, Nausea, Headache, Vomiting, Gastrointestinal disturbance, Dizziness, Weakness, Confusion.

Stomach - Irregularities - Based on Human Evidence

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#### **SECTION 12: Ecological information**

12.1 Toxicity

No data available

- **12.2 Persistence and degradability** No data available
- **12.3 Bioaccumulative potential** No data available
- **12.4 Mobility in soil** No data available
- 12.5 Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
- **12.6 Other adverse effects** No data available

#### **SECTION 13: Disposal considerations**

#### **13.1 Waste treatment methods**

#### Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

#### Contaminated packaging

Dispose of as unused product.

#### **SECTION 14: Transport information**

#### DOT (US)

UN number: 1230 Class: 3 Packing group: II Proper shipping name: MethanolSOLUTION

Reportable Quantity (RQ): Poison Inhalation Hazard: No

#### IMDG

UN number: 1230 Class: 3 (6.1) Packing group: II Proper shipping name: METHANOLSOLUTION

EMS-No: F-E, S-D

### ΙΑΤΑ

UN number: 1230 Class: 3 (6.1) Packing group: II Proper shipping name: MethanolSOLUTION

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| SECTION 15: Regulatory information   |                    |                             |
|--|--------------------|-----------------------------|
| <b>SARA 302 Components</b><br>No chemicals in this material are subject to the reportin<br>Section 302.  | g requirements of  | SARA Title III,             |
| SARA 313 Components<br>The following components are subject to reporting levels<br>Section 313:  | s established by S | ARA Title III,              |
| Methanol   | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |
| SARA 311/312 Hazards<br>Fire Hazard, Chronic Health Hazard   |                    |                             |
| Massachusetts Right To Know Components   |                    |                             |
| Methanol   | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |
| No components are subject to the Massachusetts Right   | to Know Act.       |                             |
| Pennsylvania Right To Know Components<br>Methanol  | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |
| Methanol   | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |
| New Jersey Right To Know Components<br>Methanol  | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |
| <b>California Prop. 65 Components</b><br>WARNING: This product contains a chemical known to<br>the State of California to cause birth defects or other<br>reproductive harm.Methanol | CAS-No.<br>67-56-1 | Revision Date<br>2012-03-16 |

# **SECTION 16: Other information**

#### **Further information**

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See

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www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

The branding on the header and/or footer of this document may temporarily not visually match the product purchased as we transition our branding. However, all of the information in the document regarding the product remains unchanged and matches the product ordered. For further information please contact mlsbranding@sial.com.

Version: 6.2

Revision Date: 07/02/2019

Print Date: 08/23/2019

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SAFETY DATA SHEET

Version 5.6 Revision Date 09/23/2016 Print Date 09/21/2018

a SIGMA-ALDRICH<sup>\*</sup>company

### 1. PRODUCT AND COMPANY IDENTIFICATION

#### 1.1 Product identifiers Product name

| 1.1 | Product name   | : | (±)-Methadone-Dg solution |
|-----|----------------|---|---------------------------|
|     | Product Number | : | M-089                     |
|     | Brand          | : | Cerilliant                |
|     | Index-No.      | : | 603-001-00-X              |

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Synthesis of substances

#### Details of the supplier of the safety data sheet 1.3

| Company          | : | Sigma-Aldrich<br>3050 Spruce Street<br>SAINT LOUIS MO 63103<br>USA |
|------------------|---|--|
| Telephone<br>Fax | - | +1 800-325-5832<br>+1 800-325-5052                                 |

#### 1.4 **Emergency telephone number**

**Emergency Phone #** : +1-703-527-3887 (CHEMTREC)

#### 2. HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

#### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 2), H225 Acute toxicity, Oral (Category 3), H301 Acute toxicity, Inhalation (Category 3), H331 Acute toxicity, Dermal (Category 3), H311 Specific target organ toxicity - single exposure (Category 1), H370

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### 2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

| Hazard statement(s)<br>H225<br>H301 + H311 + H331<br>H370          | Highly flammable liquid and vapour.<br>Toxic if swallowed, in contact with skin or if inhaled<br>Causes damage to organs.   |
|--|---|
| Precautionary statement(s)<br>P210<br>P233<br>P240<br>P241<br>P242 | Keep away from heat/sparks/open flames/hot surfaces. No smoking.<br>Keep container tightly closed.<br>Ground/bond container and receiving equipment.<br>Use explosion-proof electrical/ ventilating/ lighting/ equipment.<br>Use only non-sparking tools. |

| P243<br>P260<br>P264<br>P270<br>P271 | Take precautionary measures against static discharge.<br>Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.<br>Wash skin thoroughly after handling.<br>Do not eat, drink or smoke when using this product.<br>Use only outdoors or in a well-ventilated area. |
|--------------------------------------|--|
| P280                                 | Wear protective gloves/ protective clothing/ eye protection/ face protection.  |
| P301 + P310                          | IF SWALLOWED: Immediately call a POISON CENTER/doctor.   |
| P303 + P361 + P353                   | IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.   |
| P304 + P340                          | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.   |
| P307 + P311                          | IF exposed: Call a POISON CENTER or doctor/ physician.   |
| P322                                 | Specific measures (see supplemental first aid instructions on this label).   |
| P330                                 | Rinse mouth.   |
| P361                                 | Remove/Take off immediately all contaminated clothing.   |
| P363                                 | Wash contaminated clothing before reuse.   |
| P370 + P378                          | In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.  |
| P403 + P233                          | Store in a well-ventilated place. Keep container tightly closed.   |
| P403 + P235                          | Store in a well-ventilated place. Keep cool.   |
| P405                                 | Store locked up.   |
| P501                                 | Dispose of contents/ container to an approved waste disposal plant.  |

#### 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

#### **3. COMPOSITION/INFORMATION ON INGREDIENTS**

#### 3.2 Mixtures

Molecular weight : 318.50 g/mol

#### Hazardous components

| Component           |                       | Classification              | Concentration  |
|---------------------|-----------------------|-----------------------------|----------------|
| Methanol            |                       |                             |                |
| CAS-No.             | 67-56-1               | Flam. Liq. 2; Acute Tox. 3; | >= 90 - <= 100 |
| EC-No.              | 200-659-6             | STOT SE 1; H225, H301 +     | %              |
| Index-No.           | 603-001-00-X          | H311 + H331, H370           |                |
| Registration number | 01-2119433307-44-XXXX |                             |                |

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### **4. FIRST AID MEASURES**

#### 4.1 Description of first aid measures

#### **General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

#### In case of eye contact

Flush eyes with water as a precaution.

#### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

#### 4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

#### 4.3 Indication of any immediate medical attention and special treatment needed No data available

#### 5. FIREFIGHTING MEASURES

#### 5.1 Extinguishing media

#### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture No data available

#### 5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

#### 5.4 **Further information**

Use water spray to cool unopened containers.

#### 6. ACCIDENTAL RELEASE MEASURES

#### 6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. For personal protection see section 8.

#### 6.2 **Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

#### 6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

#### **Reference to other sections** 6.4

For disposal see section 13.

#### 7. HANDLING AND STORAGE

#### 7.1 Precautions for safe handling

Avoid contact with skin and eves. Avoid inhalation of vapour or mist. Use explosion-proof equipment.Keep away from sources of ignition - No smoking.Take measures to prevent the build up of electrostatic charge.

For precautions see section 2.2.

#### 7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store under inert gas. hygroscopic

Recommended storage temperature -20 °C

#### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

#### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### 8.1 **Control parameters**

#### Components with workplace control parameters

| Component | CAS-No. | Value    | Control parameters | Basis                                      |
|-----------|---------|----------|--------------------|--|
| Methanol  | 67-56-1 | TWA      | 200.000000<br>ppm  | USA. ACGIH Threshold Limit Values<br>(TLV) |
|           | Remarks | Headache |                    |  |
|           |         | Nausea   |                    |  |

|          | Dizziness  |   |  |
|----------|--|---|--|
|          | Eye damage   | )   |  |
|          | Substances   | for which there is  | a Biological Exposure Index or Indices   |
|          | (see BEI® s<br>Danger of cu  | ection)<br>utaneous absorpti  | on   |
|          | STEL   | 250.000000  | USA. ACGIH Threshold Limit Values  |
|          |  | ppm   | (TLV)  |
|          | Headache   | •   |  |
|          | Nausea<br>Dizziness  |   |  |
|          | Eye damage   | 2   |  |
|          |  |   | a Biological Exposure Index or Indices   |
|          | (see BEI® s  |   |  |
|          | Danger of cu   | utaneous absorpti   | on   |
|          | TWA  | 200.000000  | USA. NIOSH Recommended   |
|          |  | ppm   | Exposure Limits  |
|          |  | 260.000000  |  |
|          |  | mg/m3   |  |
|          |  | dermal absorption   |  |
|          | ST   | 250.000000  | USA. NIOSH Recommended   |
|          |  | ppm<br>325.000000   | Exposure Limits  |
|          |  | mg/m3   |  |
| <u> </u> | Potential for  | dermal absorption   | <u>ו</u><br>ר  |
|          | TWA  | 200.000000  | USA. Occupational Exposure Limits  |
|          |  | ppm   | (OSHA) - Table Z-1 Limits for Air  |
|          |  | 260.000000  | Contaminants   |
|          |  | mg/m3   |  |
|          | The value in   | mg/m3 is approxi  | mate.  |
|          | TWA  | 200 ppm   | USA. ACGIH Threshold Limit Values (TLV)  |
|          | Headache   |   |  |
|          | Nausea   |   |  |
|          | Dizziness  |   |  |
|          | Eye damage   |   | e Dielegieel Eveneeure Index er Indiage  |
|          | (see BEI® s  |   | a Biological Exposure Index or Indices   |
|          |  | utaneous absorpti   | an   |
|          | Danger of Cl   |   |  |
|          | STEL   | 250 ppm   |  |
|          | STEL   | 250 ppm   | USA. ACGIH Threshold Limit Values<br>(TLV)   |
|          | Headache   | 250 ppm   | USA. ACGIH Threshold Limit Values  |
|          | Headache<br>Nausea   | 250 ppm   | USA. ACGIH Threshold Limit Values  |
|          | Headache<br>Nausea<br>Dizziness  |   | USA. ACGIH Threshold Limit Values  |
|          | Headache<br>Nausea<br>Dizziness<br>Eye damage  |   | USA. ACGIH Threshold Limit Values<br>(TLV)   |
|          | Headache<br>Nausea<br>Dizziness<br>Eye damage<br>Substances  | for which there is  | USA. ACGIH Threshold Limit Values  |
|          | Headache<br>Nausea<br>Dizziness<br>Eye damage<br>Substances<br>(see BEI® s   | for which there is ection)  | USA. ACGIH Threshold Limit Values<br>(TLV)<br>a Biological Exposure Index or Indices   |
|          | Headache<br>Nausea<br>Dizziness<br>Eye damage<br>Substances<br>(see BEI® s<br>Danger of cu   | o<br>for which there is<br>ection)<br>utaneous absorptio  | USA. ACGIH Threshold Limit Values<br>(TLV)<br>a Biological Exposure Index or Indices   |
|          | Headache<br>Nausea<br>Dizziness<br>Eye damage<br>Substances<br>(see BEI® s   | for which there is<br>ection)<br>utaneous absorption<br>200 ppm   | USA. ACGIH Threshold Limit Values<br>(TLV)<br>a Biological Exposure Index or Indices<br>on<br>USA. NIOSH Recommended   |
|          | Headache<br>Nausea<br>Dizziness<br>Eye damage<br>Substances<br>(see BEI® s<br>Danger of cu<br>TWA  | o<br>for which there is<br>ection)<br>utaneous absorptio  | USA. ACGIH Threshold Limit Values<br>(TLV)<br>a Biological Exposure Index or Indices<br>on<br>USA. NIOSH Recommended<br>Exposure Limits  |
|          | Headache<br>Nausea<br>Dizziness<br>Eye damage<br>Substances<br>(see BEI® s<br>Danger of cu<br>TWA  | for which there is<br>ection)<br>utaneous absorption<br>200 ppm<br>260 mg/m3  | USA. ACGIH Threshold Limit Values<br>(TLV)<br>a Biological Exposure Index or Indices<br>on<br>USA. NIOSH Recommended<br>Exposure Limits  |
|          | Headache<br>Nausea<br>Dizziness<br>Eye damage<br>Substances<br>(see BEI® s<br>Danger of cu<br>TWA<br>Potential for<br>ST                         | for which there is<br>ection)<br>utaneous absorption<br>200 ppm<br>260 mg/m3<br>dermal absorption<br>250 ppm<br>325 mg/m3                     | USA. ACGIH Threshold Limit Values<br>(TLV)<br>a Biological Exposure Index or Indices<br>on<br>USA. NIOSH Recommended<br>Exposure Limits<br>1<br>USA. NIOSH Recommended<br>Exposure Limits  |
|          | Headache<br>Nausea<br>Dizziness<br>Eye damage<br>Substances<br>(see BEI® s<br>Danger of cu<br>TWA<br>Potential for<br>ST                         | for which there is<br>ection)<br>utaneous absorption<br>200 ppm<br>260 mg/m3<br>dermal absorption<br>250 ppm                                  | USA. ACGIH Threshold Limit Values<br>(TLV)<br>a Biological Exposure Index or Indices<br>on<br>USA. NIOSH Recommended<br>Exposure Limits<br>1<br>USA. NIOSH Recommended<br>Exposure Limits  |
|          | Headache<br>Nausea<br>Dizziness<br>Eye damage<br>Substances<br>(see BEI® s<br>Danger of cu<br>TWA<br>Potential for<br>ST                         | for which there is<br>ection)<br>utaneous absorption<br>200 ppm<br>260 mg/m3<br>dermal absorption<br>250 ppm<br>325 mg/m3                     | USA. ACGIH Threshold Limit Values<br>(TLV)<br>a Biological Exposure Index or Indices<br>on<br>USA. NIOSH Recommended<br>Exposure Limits<br>1<br>USA. NIOSH Recommended<br>Exposure Limits  |
|          | Headache<br>Nausea<br>Dizziness<br>Eye damage<br>Substances<br>(see BEI® s<br>Danger of cu<br>TWA<br>Potential for<br>ST<br>Potential for        | for which there is<br>ection)<br>taneous absorption<br>200 ppm<br>260 mg/m3<br>dermal absorption<br>250 ppm<br>325 mg/m3<br>dermal absorption | USA. ACGIH Threshold Limit Values<br>(TLV)<br>a Biological Exposure Index or Indices<br>on<br>USA. NIOSH Recommended<br>Exposure Limits<br>USA. NIOSH Recommended<br>Exposure Limits<br>USA. Occupational Exposure Limits<br>(OSHA) - Table Z-1 Limits for Air                 |
|          | Headache<br>Nausea<br>Dizziness<br>Eye damage<br>Substances<br>(see BEI® s<br>Danger of cu<br>TWA<br>Potential for<br>ST<br>Potential for<br>TWA | for which there is<br>ection)<br>taneous absorption<br>200 ppm<br>260 mg/m3<br>dermal absorption<br>325 mg/m3<br>dermal absorption<br>200 ppm | USA. ACGIH Threshold Limit Values<br>(TLV)<br>a Biological Exposure Index or Indices<br>on<br>USA. NIOSH Recommended<br>Exposure Limits<br>USA. NIOSH Recommended<br>Exposure Limits<br>USA. Occupational Exposure Limits<br>(OSHA) - Table Z-1 Limits for Air<br>Contaminants |

| STEL      | 250 ppm<br>325 mg/m3 | USA. OSHA - TABLE Z-1 Limits for<br>Air Contaminants - 1910.1000                              |
|-----------|----------------------|---|
| Skin nota | tion                 |   |
| TWA       | 200 ppm<br>260 mg/m3 | USA. OSHA - TABLE Z-1 Limits for<br>Air Contaminants - 1910.1000                              |
| Skin nota | tion                 | ·   |
| С         | 1,000 ppm            | California permissible exposure<br>limits for chemical contaminants<br>(Title 8, Article 107) |
| Skin      |                      |   |
| PEL       | 200 ppm<br>260 mg/m3 | California permissible exposure<br>limits for chemical contaminants<br>(Title 8, Article 107) |
| Skin      | ·                    |   |
| STEL      | 250 ppm<br>325 mg/m3 | California permissible exposure<br>limits for chemical contaminants<br>(Title 8, Article 107) |
| Skin      |                      |   |

#### **Biological occupational exposure limits**

| Component | CAS-No. | Parameters   | Value           | Biological specimen   | Basis   |
|-----------|---------|--|-----------------|-----------------------|---|
| Methanol  | 67-56-1 | Methanol   | 15.0000<br>mg/l | Urine                 | ACGIH - Biological<br>Exposure Indices<br>(BEI) |
|           | Remarks | End of shift (A  | s soon as po    | ssible after exposure | e ceases)                                       |
|           |         | Methanol   | 15 mg/l         | Urine                 | ACGIH - Biological<br>Exposure Indices<br>(BEI) |
|           |         | End of shift (As soon as possible after exposure ceases) |                 |                       |   |

#### 8.2 Exposure controls

#### Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

#### Personal protective equipment

#### **Eye/face protection**

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact Material: butyl-rubber Minimum layer thickness: 0.3 mm Break through time: 480 min Material tested:Butoject® (KCL 897 / Aldrich Z677647, Size M)

Splash contact Material: Nitrile rubber Minimum layer thickness: 0.4 mm Break through time: 30 min Material tested:Camatril® (KCL 730 / Aldrich Z677442, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an

industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

#### **Body Protection**

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### **Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### **Control of environmental exposure**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

#### 9. PHYSICAL AND CHEMICAL PROPERTIES

#### 9.1 Information on basic physical and chemical properties

| a) | Appearance   | Form: liquid  |
|----|--|---|
| b) | Odour  | No data available   |
| c) | Odour Threshold                                    | No data available   |
| d) | рН   | No data available   |
| e) | Melting point/freezing<br>point                    | No data available   |
| f) | Initial boiling point and boiling range            | 64 - 65 °C (147 - 149 °F) at 1.013 hPa (0.760 mmHg)             |
| g) | Flash point  | 9.7 °C (49.5 °F) - closed cup                                   |
| h) | Evaporation rate                                   | No data available   |
| i) | Flammability (solid, gas)                          | No data available   |
| j) | Upper/lower<br>flammability or<br>explosive limits | Upper explosion limit: 36 %(V)<br>Lower explosion limit: 6 %(V) |
| k) | Vapour pressure                                    | No data available   |
| I) | Vapour density                                     | No data available   |
| m) | Relative density                                   | 0.791 g/cm3 at 20 °C (68 °F)                                    |
| n) | Water solubility                                   | No data available   |
| o) | Partition coefficient: n-<br>octanol/water         | No data available   |
| p) | Auto-ignition<br>temperature                       | No data available   |
| q) | Decomposition<br>temperature                       | No data available   |
| r) | Viscosity  | No data available   |
| s) | Explosive properties                               | No data available   |
| t) | Oxidizing properties                               | No data available   |
|    | <b>her safety information</b><br>data available    |   |

9.2

#### **10. STABILITY AND REACTIVITY**

10.1 Reactivity

10.4

No data available

#### 10.2 Chemical stability Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions Vapours may form explosive mixture with air.

> Conditions to avoid Heat, flames and sparks. Extremes of temperature and direct sunlight.

#### 10.5 Incompatible materials

Acids, Oxidizing agents, Alkali metals, Strong oxidizing agents, Strong acids, Acid chlorides, Acid anhydrides, Reducing agents, Strong reducing agents, Phosphorus halides

#### Hazardous decomposition products 10.6

Other decomposition products - No data available Hazardous decomposition products formed under fire conditions. - Carbon oxides In the event of fire: see section 5

#### **11. TOXICOLOGICAL INFORMATION**

#### 11.1 Information on toxicological effects

#### Acute toxicity No data available

Inhalation: No data available

Dermal: No data available

No data available

# Skin corrosion/irritation

No data available

# Serious eye damage/eye irritation

No data available

#### Respiratory or skin sensitisation No data available

#### Germ cell mutagenicity No data available

#### Carcinogenicity

- IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
- OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

#### **Reproductive toxicity**

No data available No data available

Specific target organ toxicity - single exposure No data available

#### Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard No data available

#### **Additional Information**

**RTECS:** Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Methyl alcohol may be fatal or cause blindness if swallowed., Cannot be made non-poisonous., Effects due to ingestion may include:, Nausea, Headache, Vomiting, Gastrointestinal disturbance, Dizziness, Weakness, Confusion.

Central nervous system - Breathing difficulties - Based on Human Evidence Stomach - Irregularities - Based on Human Evidence

#### 12. ECOLOGICAL INFORMATION

12.1 Toxicity

No data available

- 12.2 Persistence and degradability No data available
- **12.3 Bioaccumulative potential** No data available
- 12.4 Mobility in soil No data available
- 12.5 Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
- **12.6 Other adverse effects** No data available

### **13. DISPOSAL CONSIDERATIONS**

#### 13.1 Waste treatment methods

#### Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

#### Contaminated packaging

Dispose of as unused product.

Proper shipping name: Methanol, solution

#### **14. TRANSPORT INFORMATION**

#### DOT (US)

| UN number: 1230<br>Proper shipping name<br>Reportable Quantity ( |   | Packing group: II      |                  |
|--|---|------------------------|------------------|
| Poison Inhalation Haz  | zard: No                                |                        |                  |
| IMDG<br>UN number: 1230<br>Proper shipping name                  | Class: 3 (6.1)<br>e: METHANOL, SOLUTION | Packing group: II<br>N | EMS-No: F-E, S-D |
| <b>IATA</b><br>UN number: 1230                                   | Class: 3 (6.1)                          | Packing group: II      |                  |

### **15. REGULATORY INFORMATION**

| SARA 302 Components<br>No chemicals in this material are subject to the reporting require | ements of SARA Title             | III, Section 302.                |
|---|----------------------------------|----------------------------------|
| SARA 313 Components<br>The following components are subject to reporting levels establi   | shed by SARA Title II<br>CAS-No. | I, Section 313:<br>Revision Date |
| Methanol  | 67-56-1                          | 2007-07-01                       |
| SARA 311/312 Hazards<br>Fire Hazard, Acute Health Hazard, Chronic Health Hazard           |                                  |                                  |
| Massachusetts Right To Know Components  |                                  |                                  |
| Methanol  | CAS-No.<br>67-56-1               | Revision Date 2007-07-01         |
| Pennsylvania Right To Know Components   |                                  |                                  |
| Mathemal  | CAS-No.                          | Revision Date                    |
| Methanol  | 67-56-1                          | 2007-07-01                       |
| New Jersey Right To Know Components   |                                  | Devision Data                    |
| Methanol  | CAS-No.<br>67-56-1               | Revision Date 2007-07-01         |
| California Prop. 65 Components  |                                  |                                  |
| WARNING: This product contains a chemical known to the                                    | CAS-No.                          | Revision Date                    |
| State of California to cause birth defects or other reproductive harm.<br>Methanol        | 67-56-1                          | 2012-03-16                       |

#### **16. OTHER INFORMATION**

#### Full text of H-Statements referred to under sections 2 and 3.

| Acute Tox.    | Acute toxicity   |
|---------------|--|
| Flam. Liq.    | Flammable liquids                                      |
| H225          | Highly flammable liquid and vapour.                    |
| H301          | Toxic if swallowed.                                    |
| H301 + H311 + | Toxic if swallowed, in contact with skin or if inhaled |
| H331<br>H311  | Toxic in contact with skin.                            |
| H331          | Toxic if inhaled.                                      |
| H370          | Causes damage to organs.                               |
| STOT SE       | Specific target organ toxicity - single exposure       |

#### **HMIS Rating**

| Health hazard:         | 2 |
|------------------------|---|
| Chronic Health Hazard: | * |
| Flammability:          | 3 |
| Physical Hazard        | 0 |
| NEDA Pating            |   |

#### NFPA Rating

| Health hazard:     | 2 |  |
|--------------------|---|--|
| Fire Hazard:       | 3 |  |
| Reactivity Hazard: | 0 |  |

#### **Further information**

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product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

#### **Preparation Information**

Sigma-Aldrich Corporation Product Safety – Americas Region 1-800-521-8956

Version: 5.6

Revision Date: 09/23/2016

Print Date: 09/21/2018



# **SAFETY DATA SHEET**

Version 6.1 Revision Date 07/02/2019 Print Date 03/31/2020

#### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### **1.1 Product identifiers**

| Product name   | <sup>:</sup> Naloxone |
|----------------|-----------------------|
| Product Number | : N-004               |
| Brand          | : Cerilliant          |

|           |   | 10 004       |
|-----------|---|--------------|
| Brand     | : | Cerilliant   |
| Index-No. | : | 603-001-00-X |

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Synthesis of substances

### **1.3** Details of the supplier of the safety data sheet

| Company          | : | Sigma-Aldrich Inc.<br>3050 Spruce Street<br>ST. LOUIS MO 63103<br>UNITED STATES |
|------------------|---|---|
| Telephone<br>Fax |   | +1 314 771-5765<br>+1 800 325-5052  |

#### **1.4 Emergency telephone number**

Emergency Phone # : +1-703-527-3887

### **SECTION 2: Hazards identification**

### 2.1 Classification of the substance or mixture

#### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 2), H225 Acute toxicity, Oral (Category 3), H301 Acute toxicity, Inhalation (Category 3), H331 Acute toxicity, Dermal (Category 3), H311 Specific target organ toxicity - single exposure (Category 1), H370

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### 2.2 GHS Label elements, including precautionary statements

Pictogram



Danger

Signal word Hazard statement(s) H225 H301 + H311 + H331

Highly flammable liquid and vapour. Toxic if swallowed, in contact with skin or if inhaled.

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| H370                       | Causes damage to organs.   |
|----------------------------|--|
| Precautionary statement(s) |  |
| P210 , ()                  | Keep away from heat/sparks/open flames/hot surfaces. No smoking.   |
| P233                       | Keep container tightly closed.   |
| P240                       | Ground/bond container and receiving equipment.   |
| P241                       | Use explosion-proof electrical/ ventilating/ lighting equipment.   |
| P242                       | Use only non-sparking tools.   |
| P243                       | Take precautionary measures against static discharge.  |
| P260                       | Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  |
| P264                       | Wash skin thoroughly after handling.   |
| P270                       | Do not eat, drink or smoke when using this product.  |
| P271                       | Use only outdoors or in a well-ventilated area.  |
| P280                       | Wear protective gloves/ protective clothing/ eye protection/ face protection.                                |
| P301 + P310                | IF SWALLOWED: Immediately call a POISON CENTER/doctor.   |
| P303 + P361 + P353         | IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. |
| P304 + P340                | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.             |
| P307 + P311                | IF exposed: Call a POISON CENTER or doctor/ physician.   |
| P322                       | Specific measures (see supplemental first aid instructions on this label).                                   |
| P330                       | Rinse mouth.   |
| P361                       | Remove/Take off immediately all contaminated clothing.   |
| P363                       | Wash contaminated clothing before reuse.   |
| P370 + P378                | In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.                        |
| P403 + P233                | Store in a well-ventilated place. Keep container tightly closed.   |
| P403 + P235                | Store in a well-ventilated place. Keep cool.   |
| P405                       | Store locked up.   |
| P501                       | Dispose of contents/ container to an approved waste disposal plant.  |

# 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

# **SECTION 3:** Composition/information on ingredients

#### 3.2 Mixtures

| Component                           |   | Classification  | Concentration       |
|-------------------------------------|---|---|---------------------|
| Methanol                            |   |   |                     |
| CAS-No.<br>EC-No.                   | 67-56-1<br>200-659-6                      | Flam. Liq. 2; Acute Tox. 3;<br>STOT SE 1; H225, H301, | >= 90 - <=<br>100 % |
| Index-No.<br>Registration<br>number | 603-001-00-X<br>01-2119433307-44-<br>XXXX | H331, H311, H370                                      |                     |

For the full text of the H-Statements mentioned in this Section, see Section 16.

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#### **SECTION 4: First aid measures**

#### 4.1 Description of first aid measures

#### **General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

#### In case of eye contact

Flush eyes with water as a precaution.

#### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

- **4.2 Most important symptoms and effects, both acute and delayed** The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
- **4.3 Indication of any immediate medical attention and special treatment needed** No data available

#### **SECTION 5: Firefighting measures**

#### 5.1 Extinguishing media

#### **Suitable extinguishing media** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

- **5.2 Special hazards arising from the substance or mixture** Carbon oxides
- **5.3** Advice for firefighters Wear self-contained breathing apparatus for firefighting if necessary.

#### 5.4 Further information

Use water spray to cool unopened containers.

#### **SECTION 6: Accidental release measures**

#### 6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

For personal protection see section 8.

# 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

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### 6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wetbrushing and place in container for disposal according to local regulations (see section 13).

#### 6.4 Reference to other sections

For disposal see section 13.

#### SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use explosion-proof equipment.Keep away from sources of ignition - No smoking.Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2.

#### 7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage temperature -20 °C Storage class (TRGS 510): 3: Flammable liquids

#### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

#### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

#### **Components with workplace control parameters**

| Component | CAS-No. | Value                       | Control<br>parameters                                     | Basis  |
|-----------|---------|-----------------------------|---|--|
| Methanol  | 67-56-1 | TWA                         | 200 ppm   | USA. ACGIH Threshold Limit<br>Values (TLV)     |
|           | Remarks | or Indices (                |   | •  |
|           |         | STEL                        | 250 ppm   | USA. ACGIH Threshold Limit<br>Values (TLV)     |
|           |         | or Indices (<br>Danger of d | s for which there<br>(see BEI® section<br>cutaneous absor | is a Biological Exposure Index<br>on)<br>ption |
|           |         | TWA                         | 200 ppm<br>260 mg/m3                                      | USA. NIOSH Recommended<br>Exposure Limits      |
|           |         | Potential for               | or dermal absorp  | tion   |

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| ST            | 250 ppm<br>325 mg/m3 | USA. NIOSH Recommended<br>Exposure Limits  |
|---------------|----------------------|--|
| Potential for | or dermal absorp     | tion   |
| TWA           | 200 ppm<br>260 mg/m3 | USA. Occupational Exposure<br>Limits (OSHA) - Table Z-1<br>Limits for Air Contaminants           |
| The value i   | n mg/m3 is app       | roximate.  |
| С             | 1,000 ppm            | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
| Skin          |                      |  |
| PEL           | 200 ppm<br>260 mg/m3 | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
| Skin          | ·                    |  |
| STEL          | 250 ppm<br>325 mg/m3 | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
| Skin          |                      |  |

#### **Biological occupational exposure limits**

| Component | CAS-No. | Parameters     | Value       | Biological specimen | Basis  |
|-----------|---------|----------------|-------------|---------------------|--|
| Methanol  | 67-56-1 | Methanol       | 15 mg/l     | Urine               | ACGIH -<br>Biological<br>Exposure Indices<br>(BEI) |
|           | Remarks | End of shift ( | (As soon as | s possible after ex | posure ceases)                                     |

#### 8.2 Exposure controls

#### Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

#### Personal protective equipment

#### Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### **Skin protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact Material: butyl-rubber Minimum layer thickness: 0.3 mm

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Break through time: 480 min Material tested:Butoject® (KCL 897 / Aldrich Z677647, Size M)

Splash contact Material: Nitrile rubber Minimum layer thickness: 0.4 mm Break through time: 30 min Material tested:Camatril® (KCL 730 / Aldrich Z677442, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

#### **Body Protection**

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### **Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### **Control of environmental exposure**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

#### **SECTION 9: Physical and chemical properties**

#### 9.1 Information on basic physical and chemical properties

| a) | Appearance   | Form: liquid  |
|----|--|---|
| b) | Odour  | No data available   |
| c) | Odour Threshold                                    | No data available   |
| d) | рН   | No data available   |
| e) | Melting<br>point/freezing point                    | No data available   |
| f) | Initial boiling point<br>and boiling range         | 64 - 65 °C 147 - 149 °F at 1.013 hPa                            |
| g) | Flash point  | 9.7 °C (49.5 °F) - closed cup                                   |
| h) | Evaporation rate                                   | No data available   |
| i) | Flammability (solid,<br>gas)                       | No data available   |
| j) | Upper/lower<br>flammability or<br>explosive limits | Upper explosion limit: 36 %(V)<br>Lower explosion limit: 6 %(V) |

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- k) Vapour pressure No data available
- I) Vapour density No data available
- m) Relative density 0.791 g/cm3 at 20 °C (68 °F)
- n) Water solubility No data available
- o) Partition coefficient: No data available n-octanol/water
- p) Auto-ignition No data available temperature
- q) Decomposition No data available temperature
- r) Viscosity No data available
- s) Explosive properties No data available
- t) Oxidizing properties No data available

#### **9.2 Other safety information** No data available

### **SECTION 10: Stability and reactivity**

# 10.1 Reactivity

No data available

# **10.2** Chemical stability

Stable under recommended storage conditions.

# **10.3** Possibility of hazardous reactions

Vapours may form explosive mixture with air.

### 10.4 Conditions to avoid

Heat, flames and sparks. Extremes of temperature and direct sunlight.

#### **10.5** Incompatible materials

Acids, Oxidizing agents, Alkali metals, Strong oxidizing agents, Strong acids, Acid chlorides, Acid anhydrides, Reducing agents, Strong reducing agents, Phosphorus halides

#### **10.6 Hazardous decomposition products** Other decomposition products - No data available Hazardous decomposition products formed under fire conditions. - Carbon oxides In the event of fire: see section 5

### **SECTION 11: Toxicological information**

### 11.1 Information on toxicological effects

### Acute toxicity

No data available

Inhalation: No data available

Dermal: No data available

No data available

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#### Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

### Respiratory or skin sensitisation

No data available

#### Germ cell mutagenicity

No data available

#### Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

- ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

#### **Reproductive toxicity**

No data available

Specific target organ toxicity - single exposure No data available

#### **Specific target organ toxicity - repeated exposure** No data available

Aspiration hazard No data available

#### **Additional Information**

RTECS: Not available

Methyl alcohol may be fatal or cause blindness if swallowed., Cannot be made nonpoisonous., Effects due to ingestion may include:, Nausea, Headache, Vomiting, Gastrointestinal disturbance, Dizziness, Weakness, Confusion.

Central nervous system - Breathing difficulties - Based on Human Evidence

#### **SECTION 12: Ecological information**

#### **12.1 Toxicity**

No data available

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#### 12.2 Persistence and degradability No data available

**12.3 Bioaccumulative potential** No data available

#### **12.4 Mobility in soil** No data available

#### 12.5 Results of PBT and vPvB assessment

 $\mathsf{PBT}/\mathsf{vPvB}$  assessment not available as chemical safety assessment not required/not conducted

# **12.6 Other adverse effects**

No data available

#### SECTION 13: Disposal considerations

#### 13.1 Waste treatment methods

#### Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

#### **Contaminated packaging**

Dispose of as unused product.

### **SECTION 14:** Transport information

#### DOT (US)

UN number: 1230 Class: 3 Packing group: II Proper shipping name: MethanolSOLUTION

Reportable Quantity (RQ): Poison Inhalation Hazard: No

#### IMDG

UN number: 1230 Class: 3 (6.1) Packing group: II EMS-No: F-E, S-D Proper shipping name: METHANOLSOLUTION

#### ΙΑΤΑ

UN number: 1230 Class: 3 (6.1) Packing group: II Proper shipping name: MethanolSOLUTION

#### **SECTION 15: Regulatory information**

#### SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

### SARA 313 Components

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| The following components are subject to reporting leve Section 313:  | Is established by S | SARA Title III,             |
|--|---------------------|-----------------------------|
| Methanol   | CAS-No.<br>67-56-1  | Revision Date<br>2007-07-01 |
| SARA 311/312 Hazards<br>Fire Hazard, Acute Health Hazard, Chronic Health Hazar   | rd                  |                             |
| Massachusetts Right To Know Components   |                     |                             |
| Methanol   | CAS-No.<br>67-56-1  | Revision Date<br>2007-07-01 |
| No components are subject to the Massachusetts Right   | to Know Act.        |                             |
| <b>Pennsylvania Right To Know Components</b><br>Methanol   | CAS-No.<br>67-56-1  | Revision Date<br>2007-07-01 |
| Methanol   | CAS-No.<br>67-56-1  | Revision Date<br>2007-07-01 |
| New Jersey Right To Know Components<br>Methanol  | CAS-No.<br>67-56-1  | Revision Date<br>2007-07-01 |
| <b>California Prop. 65 Components</b><br>WARNING: This product contains a chemical known to<br>the State of California to cause birth defects or other<br>reproductive harm.Methanol | CAS-No.<br>67-56-1  | Revision Date<br>2012-03-16 |

#### **SECTION 16: Other information**

#### **Further information**

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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# SAFETY DATA SHEET

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### **1.1 Product identifiers**

\_ . .

| Product name            | <sup>:</sup> Naloxone-D5 |
|-------------------------|--------------------------|
| Product Number<br>Brand | : N-115<br>: Cerilliant  |
| CAS-No.                 | : 1261079-38-2           |

### **1.2** Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Synthesis of substances

### **1.3** Details of the supplier of the safety data sheet

| Company   | : Sigma-Aldrich Inc.<br>3050 Spruce Street<br>ST. LOUIS MO 63103<br>UNITED STATES |
|-----------|---|
| Telephone | : +1 314 771-5765   |
| Fax       | : +1 800 325-5052   |

#### **1.4 Emergency telephone number**

Emergency Phone # : +1-703-527-3887

### **SECTION 2: Hazards identification**

### 2.1 Classification of the substance or mixture

### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 2), H225 Acute toxicity, Oral (Category 3), H301 Acute toxicity, Inhalation (Category 3), H331 Acute toxicity, Dermal (Category 3), H311 Carcinogenicity (Category 2), H351 Specific target organ toxicity - single exposure (Category 1), H370

For the full text of the H-Statements mentioned in this Section, see Section 16.

### 2.2 GHS Label elements, including precautionary statements

Danger

Pictogram

Signal word

Hazard statement(s) H225 H301 + H311 + H331 H351

Highly flammable liquid and vapour. Toxic if swallowed, in contact with skin or if inhaled. Suspected of causing cancer.

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| H370                       | Causes damage to organs.  |
|----------------------------|---|
| Precautionary statement(s) |   |
| P201                       | Obtain special instructions before use.   |
| P202                       | Do not handle until all safety precautions have been read and understood.                               |
| P210                       | Keep away from heat/sparks/open flames/hot surfaces. No smoking.  |
| P233                       | Keep container tightly closed.  |
| P240                       | Ground/bond container and receiving equipment.  |
| P241                       | Use explosion-proof electrical/ ventilating/ lighting equipment.  |
| P242                       | Use only non-sparking tools.  |
| P243                       | Take precautionary measures against static discharge.   |
| P260                       | Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.   |
| P264                       | Wash skin thoroughly after handling.  |
| P270                       | Do not eat, drink or smoke when using this product.   |
| P271                       | Use only outdoors or in a well-ventilated area.   |
| P280                       | Wear protective gloves/ protective clothing/ eye protection/ face protection.                           |
| P301 + P310 + P330         | IF SWALLOWED: Immediately call a POISON CENTER/doctor.<br>Rinse mouth.                                  |
| P303 + P361 + P353         | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.     |
| P304 + P340 + P311         | IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor. |
| P307 + P311                | IF exposed: Call a POISON CENTER or doctor/ physician.  |
| P362                       | Take off contaminated clothing and wash before reuse.   |
| P370 + P378                | In case of fire: Use dry sand, dry chemical or alcohol-resistant  |
|                            | foam to extinguish.   |
| P403 + P233                | Store in a well-ventilated place. Keep container tightly closed.  |
| P403 + P235                | Store in a well-ventilated place. Keep cool.  |
| P405                       | Store locked up.  |
| P501                       | Dispose of contents/ container to an approved waste disposal plant.                                     |

# 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

# **SECTION 3: Composition/information on ingredients**

#### 3.2 Mixtures

Molecular weight : (No data available)

| Component  |   | Classification  | Concentration     |
|--|---|---|-------------------|
| Methanol   |   |   |                   |
| CAS-No.<br>EC-No.<br>Index-No.<br>Registration<br>number | 67-56-1<br>200-659-6<br>603-001-00-X<br>01-2119433307-44-<br>XXXX | Flam. Liq. 2; Acute Tox. 3;<br>STOT SE 1; H225, H301,<br>H331, H311, H370 | <= 100 %          |
| Naloxone-D5  |   |   |                   |
| CAS-No.  | 1261079-38-2  | Carc. 2; H351   | >= 0.1 - < 1<br>% |

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For the full text of the H-Statements mentioned in this Section, see Section 16.

#### **SECTION 4: First aid measures**

#### 4.1 Description of first aid measures

#### **General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

#### In case of eye contact

Flush eyes with water as a precaution.

#### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

#### 4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

**4.3 Indication of any immediate medical attention and special treatment needed** No data available

#### **SECTION 5: Firefighting measures**

#### 5.1 Extinguishing media

### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

- **5.2** Special hazards arising from the substance or mixture Carbon oxides
- **5.3** Advice for firefighters Wear self-contained breathing apparatus for firefighting if necessary.
- **5.4 Further information** Use water spray to cool unopened containers.

### SECTION 6: Accidental release measures

**6.1 Personal precautions, protective equipment and emergency procedures** Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of

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vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

For personal protection see section 8.

**6.2 Environmental precautions** Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

### 6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wetbrushing and place in container for disposal according to local regulations (see section 13).

**6.4 Reference to other sections** For disposal see section 13.

#### SECTION 7: Handling and storage

7.1 Precautions for safe handling
 Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.
 Use explosion-proof equipment.Keep away from sources of ignition - No smoking.Take
 measures to prevent the build up of electrostatic charge.
 For precautions see section 2.2.

#### **7.2** Conditions for safe storage, including any incompatibilities Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage temperature -20 °C Storage class (TRGS 510): 3: Flammable liquids

#### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

#### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

#### Components with workplace control parameters

| Component | CAS-No. | Value   | Control<br>parameters | Basis                                      |  |
|-----------|---------|---|-----------------------|--|--|
| Methanol  | 67-56-1 | TWA   | 200 ppm               | USA. ACGIH Threshold Limit<br>Values (TLV) |  |
|           | Remarks | Headache<br>Nausea<br>Dizziness<br>Eye damage<br>Substances for which there is a Biological Exposure Index<br>or Indices (see BEI® section)<br>Danger of cutaneous absorption |                       |  |  |
|           |         | STEL  | 250 ppm               | USA. ACGIH Threshold Limit<br>Values (TLV) |  |
|           |         | Headache<br>Nausea<br>Dizziness<br>Eye damag  | le                    |  |  |

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| Substances for which there is a Biological Exposure Index<br>or Indices (see BEI® section)<br>Danger of cutaneous absorption |                      |  |  |
|--|----------------------|--|--|
| TWA  | 200 ppm<br>260 mg/m3 | USA. NIOSH Recommended<br>Exposure Limits  |  |
| Potential for dermal absorption  |                      |  |  |
| ST   | 250 ppm<br>325 mg/m3 | USA. NIOSH Recommended<br>Exposure Limits  |  |
| Potential for dermal absorption  |                      |  |  |
| TWA  | 200 ppm<br>260 mg/m3 | USA. Occupational Exposure<br>Limits (OSHA) - Table Z-1<br>Limits for Air Contaminants           |  |
| The value in mg/m3 is approximate.   |                      |  |  |
| С  | 1,000 ppm            | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |  |
| Skin   |                      |  |  |
| PEL  | 200 ppm<br>260 mg/m3 | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |  |
| Skin   | •                    |  |  |
| STEL   | 250 ppm<br>325 mg/m3 | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |  |
| Skin   | ·                    | ·  |  |

Hazardous components without workplace control parameters

### **Biological occupational exposure limits**

| Component | CAS-No. | Parameters     | Value      | Biological<br>specimen | Basis  |
|-----------|---------|----------------|------------|------------------------|--|
| Methanol  | 67-56-1 | Methanol       | 15 mg/l    | Urine                  | ACGIH -<br>Biological<br>Exposure Indices<br>(BEI) |
|           | Remarks | End of shift ( | As soon as | possible after exp     | oosure ceases)                                     |

### 8.2 Exposure controls

#### Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

#### Personal protective equipment

#### Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

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# **Skin protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

# **Body Protection**

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

# **Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

# **Control of environmental exposure**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

# SECTION 9: Physical and chemical properties

# 9.1 Information on basic physical and chemical properties

| a) | Appearance   | Form: liquid<br>Colour: colourless   |
|----|--|--|
| b) | Odour  | pungent  |
| c) | Odour Threshold                                    | No data available  |
| d) | рН   | No data available  |
| e) | Melting<br>point/freezing point                    | Melting point/range: -98.0 °C (-144.4 °F)  |
| f) | Initial boiling point and boiling range            | 64.0 - 65.0 °C 147.2 - 149.0 °F at 1013 hPa  |
| g) | Flash point  | 9.7 °C (49.5 °F) - closed cup  |
| h) | Evaporation rate                                   | No data available  |
| i) | Flammability (solid,<br>gas)                       | No data available  |
| j) | Upper/lower<br>flammability or<br>explosive limits | Upper explosion limit: 36 %(V)<br>Lower explosion limit: 6 %(V)                                    |
| k) | Vapour pressure                                    | 130.3 hPa at 20.0 °C (68.0 °F)<br>546.6 hPa at 50.0 °C(122.0 °F)<br>169.27 hPa at 25.0 °C(77.0 °F) |
| I) | Vapour density                                     | 1.11   |
| m) | Relative density                                   | 0.79 g/cm3 at 20 °C (68 °F)  |
| n) | Water solubility                                   | completely miscible  |
| o) | Partition coefficient:<br>n-octanol/water          | log Pow: -0.77   |

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| p) | Auto-ignition | 455.0 °C (851.0 °F) at 1,013 hPa |
|----|---------------|----------------------------------|
|    | temperature   |                                  |

- q) Decomposition No data available temperature
- r) Viscosity No data available
- s) Explosive properties Not explosive
- t) Oxidizing properties The substance or mixture is not classified as oxidizing.

# 9.2 Other safety information

| Minimum ignition           | 0.14 mJ   |
|----------------------------|-----------|
| energy                     |           |
| Conductivity               | < 1 µS/cm |
| Relative vapour<br>density | 1.11      |

# SECTION 10: Stability and reactivity

# **10.1 Reactivity**

No data available

# **10.2 Chemical stability**

Stable under recommended storage conditions. Stable under recommended storage conditions.

# **10.3** Possibility of hazardous reactions

Vapours may form explosive mixture with air. Vapours may form explosive mixture with air.

# **10.4** Conditions to avoid

Heat, flames and sparks. Heat, flames and sparks.

**10.5 Incompatible materials** Strong oxidizing agents

#### **10.6 Hazardous decomposition products** Hazardous decomposition products formed under fire conditions. - Carbon oxides Other decomposition products - No data available In the event of fire: see section 5

# **SECTION 11: Toxicological information**

# **11.1 Information on toxicological effects**

# Acute toxicity

LDLo Oral - Human - 143 mg/kg Remarks: (RTECS) LC50 Inhalation - Rat - male and female - 4 h - 131.25 mg/l Remarks: (ECHA) LD50 Dermal - Rabbit - 17,100 mg/kg Remarks: (External MSDS) No data available No data available

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# Skin corrosion/irritation

No data available

Skin - Rabbit Result: No skin irritation Remarks: (ECHA) Drying-out effect resulting in rough and chapped skin.

# Serious eye damage/eye irritation

No data available Eyes - Rabbit Result: No eye irritation Remarks: (ECHA) Possible damages: Irritations of mucous membranes

# Respiratory or skin sensitisation

No data available Sensitisation test: - Guinea pig Result: negative (OECD Test Guideline 406)

# Germ cell mutagenicity

No data available Based on available data the classification criteria are not met. In vitro mammalian cell gene mutation test Chinese hamster lung cells Result: negative Ames test Salmonella typhimurium Result: negative OECD Test Guideline 474 Mouse - male and female - Bone marrow Result: negative

# Carcinogenicity

Did not show carcinogenic effects in animal experiments.

- IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
- OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

# **Reproductive toxicity**

No data available Based on available data the classification criteria are not met.

# Specific target organ toxicity - single exposure

No data available Acute oral toxicity - Nausea, Vomiting Acute inhalation toxicity - Irritation symptoms in the respiratory tract.

# Specific target organ toxicity - repeated exposure

No data available

# Aspiration hazard

No data available

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# **Additional Information**

RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Systemic effects: acidosis, drop in blood pressure, agitation, spasms, inebriation, Dizziness, Drowsiness, Headache, Impairment of vision, Blindness, narcosis, Coma Symptoms may be delayed. Damage to: Liver, Kidney, Cardiac, Irreversible damage of the optical nerve. Other dangerous properties can not be excluded. This substance should be handled with particular care.

Stomach - Irregularities - Based on Human Evidence Stomach - Irregularities - Based on Human Evidence

# **SECTION 12: Ecological information**

# **12.1 Toxicity**

No data available

| Toxicity to fish  | flow-through test LC50 - Lepomis macrochirus (Bluegill) - 15,400.0<br>mg/l - 96 h<br>(US-EPA)                                |
|---|--|
| Toxicity to daphnia<br>and other aquatic<br>invertebrates | semi-static test EC50 - Daphnia magna (Water flea) - 18,260 mg/l -<br>96 h<br>(OECD Test Guideline 202)                      |
| Toxicity to algae   | static test ErC50 - Pseudokirchneriella subcapitata (green algae) - ca.<br>22,000.0 mg/l - 96 h<br>(OECD Test Guideline 201) |
| Toxicity to bacteria                                      | static test IC50 - activated sludge - > 1,000 mg/l - 3 h<br>(OECD Test Guideline 209)  |

# 12.2 Persistence and degradability

No data available

| Biochemical Oxygen | 600 - 1,120 mg/g                            |
|--------------------|---|
| Demand (BOD)       | Remarks: (IUCLID)                           |
| Chemical Oxygen    | 1,420 mg/g                                  |
| Demand (COD)       | Remarks: (IUCLID)                           |
| Theoretical oxygen | 1,500 mg/g                                  |
| demand             | Remarks: (Lit.)                             |
| Ratio BOD/ThBOD    | 76 %<br>Remarks: Closed Bottle test(IUCLID) |

# 12.3 Bioaccumulative potential

No data available

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# 12.4 Mobility in soil

No data available

# 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

# **12.6 Other adverse effects**

No data available

Additional ecological<br/>informationAvoid release to the environment.Stability in waterat 19 °C83 - 91 % - 72 h<br/>Remarks: Hydrolyses on contact with water.Hydrolyses readily.

# SECTION 13: Disposal considerations

#### 13.1 Waste treatment methods

#### Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

#### **Contaminated packaging**

Dispose of as unused product.

# **SECTION 14: Transport information**

#### DOT (US)

UN number: 1230 Class: 3 Packing group: II Proper shipping name: MethanolSOLUTION

Reportable Quantity (RQ): Poison Inhalation Hazard: No

#### IMDG

UN number: 1230 Class: 3 (6.1) Packing group: II EMS-No: F-E, S-D Proper shipping name: METHANOLSOLUTION

# ΙΑΤΑ

UN number: 1230 Class: 3 (6.1) Packing group: II Proper shipping name: MethanolSOLUTION

# **SECTION 15: Regulatory information**

# SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

# SARA 313 Components

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The following components are subject to reporting levels established by SARA Title III, Section 313:

|          | CAS-No. | Revision Date |
|----------|---------|---------------|
| Methanol | 67-56-1 | 2007-07-01    |

# SARA 311/312 Hazards

Fire Hazard, Acute Health Hazard, Chronic Health Hazard

# **Massachusetts Right To Know Components**

No components are subject to the Massachusetts Right to Know Act.

| Pennsylvania Right To Know Components |         |               |
|---------------------------------------|---------|---------------|
| Methanol                              | CAS-No. | Revision Date |
|                                       | 67-56-1 | 2007-07-01    |

# **SECTION 16: Other information**

#### **Further information**

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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Version: 6.1

Revision Date: 07/02/2019

Print Date: 05/02/2020

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# **SAFETY DATA SHEET**

Version 6.1 Revision Date 07/02/2019 Print Date 03/09/2020

# SECTION 1: Identification of the substance/mixture and of the company/undertaking

# **1.1 Product identifiers**

| Product name                         | : | Oxycodone solution                  |
|--------------------------------------|---|-------------------------------------|
| Product Number<br>Brand<br>Index-No. | : | O-002<br>Cerilliant<br>603-001-00-X |

# 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Synthesis of substances

# **1.3** Details of the supplier of the safety data sheet

| Company   | : Sigma-Aldrich Inc.<br>3050 Spruce Street<br>ST. LOUIS MO 63103<br>UNITED STATES |
|-----------|---|
| Telephone | : +1 314 771-5765   |
| Fax       | : +1 800 325-5052   |

# **1.4 Emergency telephone number**

Emergency Phone # : +1-703-527-3887

# **SECTION 2: Hazards identification**

# 2.1 Classification of the substance or mixture

# GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 2), H225 Acute toxicity, Oral (Category 3), H301 Acute toxicity, Inhalation (Category 3), H331 Acute toxicity, Dermal (Category 3), H311 Specific target organ toxicity - single exposure (Category 1), H370

For the full text of the H-Statements mentioned in this Section, see Section 16.

# 2.2 GHS Label elements, including precautionary statements

Pictogram



Danger

Signal word Hazard statement(s) H225 H301 + H311 + H331

Highly flammable liquid and vapour. Toxic if swallowed, in contact with skin or if inhaled.

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| H370                       | Causes damage to organs.   |
|----------------------------|--|
| Precautionary statement(s) |  |
| P210 , ()                  | Keep away from heat/sparks/open flames/hot surfaces. No smoking.   |
| P233                       | Keep container tightly closed.   |
| P240                       | Ground/bond container and receiving equipment.   |
| P241                       | Use explosion-proof electrical/ ventilating/ lighting equipment.   |
| P242                       | Use only non-sparking tools.   |
| P243                       | Take precautionary measures against static discharge.  |
| P260                       | Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  |
| P264                       | Wash skin thoroughly after handling.   |
| P270                       | Do not eat, drink or smoke when using this product.  |
| P271                       | Use only outdoors or in a well-ventilated area.  |
| P280                       | Wear protective gloves/ protective clothing/ eye protection/ face protection.                                |
| P301 + P310                | IF SWALLOWED: Immediately call a POISON CENTER/doctor.   |
| P303 + P361 + P353         | IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. |
| P304 + P340                | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.             |
| P307 + P311                | IF exposed: Call a POISON CENTER or doctor/ physician.   |
| P322                       | Specific measures (see supplemental first aid instructions on this label).                                   |
| P330                       | Rinse mouth.   |
| P361                       | Remove/Take off immediately all contaminated clothing.   |
| P363                       | Wash contaminated clothing before reuse.   |
| P370 + P378                | In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.                        |
| P403 + P233                | Store in a well-ventilated place. Keep container tightly closed.   |
| P403 + P235                | Store in a well-ventilated place. Keep cool.   |
| P405                       | Store locked up.   |
| P501                       | Dispose of contents/ container to an approved waste disposal plant.  |

# 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

# SECTION 3: Composition/information on ingredients

#### 3.2 Mixtures

Molecular weight : 315.36 g/mol

| Component                                      |   | Classification  | Concentration       |
|--|---|---|---------------------|
| Methanol                                       |   |   |                     |
| CAS-No.<br>EC-No.<br>Index-No.<br>Registration | 67-56-1<br>200-659-6<br>603-001-00-X<br>01-2119433307-44- | Flam. Liq. 2; Acute Tox. 3;<br>STOT SE 1; H225, H301,<br>H331, H311, H370 | >= 90 - <=<br>100 % |
| number   | XXXX  |   |                     |

For the full text of the H-Statements mentioned in this Section, see Section 16.

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# **SECTION 4: First aid measures**

#### 4.1 Description of first aid measures

#### **General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

# In case of eye contact

Flush eyes with water as a precaution.

#### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

- **4.2 Most important symptoms and effects, both acute and delayed** The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
- **4.3 Indication of any immediate medical attention and special treatment needed** No data available

#### **SECTION 5: Firefighting measures**

#### 5.1 Extinguishing media

#### **Suitable extinguishing media** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

- **5.2 Special hazards arising from the substance or mixture** Carbon oxides
- **5.3** Advice for firefighters Wear self-contained breathing apparatus for firefighting if necessary.
- 5.4 Further information

Use water spray to cool unopened containers.

# **SECTION 6: Accidental release measures**

# 6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

For personal protection see section 8.

#### **6.2 Environmental precautions** Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

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# 6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wetbrushing and place in container for disposal according to local regulations (see section 13).

# 6.4 Reference to other sections

For disposal see section 13.

# SECTION 7: Handling and storage

# 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use explosion-proof equipment.Keep away from sources of ignition - No smoking.Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2.

# 7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage temperature -20 °C Storage class (TRGS 510): 3: Flammable liquids

# 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

# SECTION 8: Exposure controls/personal protection

# 8.1 Control parameters

# **Components with workplace control parameters**

| Component | CAS-No. | Value   | Control<br>parameters | Basis  |
|-----------|---------|---|-----------------------|--|
| Methanol  | 67-56-1 | TWA   | 200 ppm               | USA. ACGIH Threshold Limit<br>Values (TLV)     |
|           | Remarks | Headache<br>Nausea<br>Dizziness<br>Eye damage<br>Substances for which there is a Biological Exposure Index<br>or Indices (see BEI® section)<br>Danger of cutaneous absorption |                       |  |
|           |         | STEL  | 250 ppm               | USA. ACGIH Threshold Limit<br>Values (TLV)     |
|           |         | Headache<br>Nausea<br>Dizziness<br>Eye damage<br>Substances for which there is a Biological Exposure<br>or Indices (see BEI® section)<br>Danger of cutaneous absorption       |                       | is a Biological Exposure Index<br>on)<br>ption |
|           |         | TWA   | 200 ppm<br>260 mg/m3  | USA. NIOSH Recommended<br>Exposure Limits      |
|           |         | Potential for dermal absorption   |                       |  |

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| ST                              | 250 ppm<br>325 mg/m3 | USA. NIOSH Recommended<br>Exposure Limits  |
|---------------------------------|----------------------|--|
| Potential for dermal absorption |                      | tion   |
| TWA                             | 200 ppm<br>260 mg/m3 | USA. Occupational Exposure<br>Limits (OSHA) - Table Z-1<br>Limits for Air Contaminants           |
| The value i                     | n mg/m3 is app       | roximate.  |
| С                               | 1,000 ppm            | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
| Skin                            |                      |  |
| PEL                             | 200 ppm<br>260 mg/m3 | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
| Skin                            | ·                    |  |
| STEL                            | 250 ppm<br>325 mg/m3 | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
| Skin                            |                      |  |

# **Biological occupational exposure limits**

| Component | CAS-No. | Parameters     | Value       | Biological specimen | Basis  |
|-----------|---------|----------------|-------------|---------------------|--|
| Methanol  | 67-56-1 | Methanol       | 15 mg/l     | Urine               | ACGIH -<br>Biological<br>Exposure Indices<br>(BEI) |
|           | Remarks | End of shift ( | (As soon as | s possible after ex | posure ceases)                                     |

# 8.2 Exposure controls

# Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

#### Personal protective equipment

# Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### **Skin protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact Material: butyl-rubber Minimum layer thickness: 0.3 mm

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Break through time: 480 min Material tested:Butoject® (KCL 897 / Aldrich Z677647, Size M)

Splash contact Material: Nitrile rubber Minimum layer thickness: 0.4 mm Break through time: 30 min Material tested:Camatril® (KCL 730 / Aldrich Z677442, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

#### **Body Protection**

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### **Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### **Control of environmental exposure**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

# **SECTION 9: Physical and chemical properties**

#### 9.1 Information on basic physical and chemical properties

| a) | Appearance   | Form: liquid  |
|----|--|---|
| b) | Odour  | No data available   |
| c) | Odour Threshold                                    | No data available   |
| d) | рН   | No data available   |
| e) | Melting<br>point/freezing point                    | No data available   |
| f) | Initial boiling point<br>and boiling range         | 64 - 65 °C 147 - 149 °F at 1.013 hPa                            |
| g) | Flash point  | 9.7 °C (49.5 °F) - closed cup                                   |
| h) | Evaporation rate                                   | No data available   |
| i) | Flammability (solid,<br>gas)                       | No data available   |
| j) | Upper/lower<br>flammability or<br>explosive limits | Upper explosion limit: 36 %(V)<br>Lower explosion limit: 6 %(V) |

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- k) Vapour pressure No data available
- I) Vapour density No data available
- m) Relative density 0.791 g/cm3 at 20 °C (68 °F)
- n) Water solubility No data available
- o) Partition coefficient: No data available n-octanol/water
- p) Auto-ignition No data available temperature
- q) Decomposition No data available temperature
- r) Viscosity No data available
- s) Explosive properties No data available
- t) Oxidizing properties No data available

#### **9.2 Other safety information** No data available

# **SECTION 10: Stability and reactivity**

# 10.1 Reactivity

No data available

# **10.2** Chemical stability

Stable under recommended storage conditions.

# **10.3** Possibility of hazardous reactions

Vapours may form explosive mixture with air.

# 10.4 Conditions to avoid

Heat, flames and sparks. Extremes of temperature and direct sunlight.

# **10.5** Incompatible materials

Acids, Oxidizing agents, Alkali metals, Strong oxidizing agents, Strong acids, Acid chlorides, Acid anhydrides, Reducing agents, Strong reducing agents, Phosphorus halides

#### **10.6 Hazardous decomposition products** Other decomposition products - No data available Hazardous decomposition products formed under fire conditions. - Carbon oxides In the event of fire: see section 5

# **SECTION 11: Toxicological information**

# 11.1 Information on toxicological effects

# Acute toxicity

No data available

Inhalation: No data available

Dermal: No data available

No data available

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# Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

# Respiratory or skin sensitisation

No data available

# Germ cell mutagenicity

No data available

#### Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

- ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

#### **Reproductive toxicity**

No data available

**Specific target organ toxicity - single exposure** No data available

#### **Specific target organ toxicity - repeated exposure** No data available

**Aspiration hazard** No data available

# **Additional Information**

RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Methyl alcohol may be fatal or cause blindness if swallowed., Cannot be made nonpoisonous., Effects due to ingestion may include:, Nausea, Headache, Vomiting, Gastrointestinal disturbance, Dizziness, Weakness, Confusion.

Central nervous system - Breathing difficulties - Based on Human Evidence

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# SECTION 12: Ecological information

12.1 Toxicity

No data available

- **12.2 Persistence and degradability** No data available
- **12.3 Bioaccumulative potential** No data available
- **12.4 Mobility in soil** No data available
- 12.5 Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
- **12.6 Other adverse effects** No data available

# **SECTION 13: Disposal considerations**

#### **13.1 Waste treatment methods**

#### Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

#### Contaminated packaging

Dispose of as unused product.

# **SECTION 14: Transport information**

#### DOT (US)

UN number: 1230 Class: 3 Packing group: II Proper shipping name: MethanolSOLUTION

Reportable Quantity (RQ): Poison Inhalation Hazard: No

# IMDG

UN number: 1230 Class: 3 (6.1) Packing group: II Proper shipping name: METHANOLSOLUTION

EMS-No: F-E, S-D

# ΙΑΤΑ

UN number: 1230 Class: 3 (6.1) Packing group: II Proper shipping name: MethanolSOLUTION

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| SEC | FION 15: Regulatory information  |                    |                             |
|-----|--|--------------------|-----------------------------|
|     | <b>SARA 302 Components</b><br>No chemicals in this material are subject to the reportin<br>Section 302.  | g requirements of  | SARA Title III,             |
|     | <b>SARA 313 Components</b><br>The following components are subject to reporting level<br>Section 313:  | s established by S | ARA Title III,              |
|     | Methanol   | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |
|     | SARA 311/312 Hazards<br>Fire Hazard, Acute Health Hazard, Chronic Health Hazar   | ď                  |                             |
|     | Massachusetts Right To Know Components   |                    |                             |
|     | Methanol   | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |
|     | No components are subject to the Massachusetts Right   | to Know Act.       |                             |
|     | Pennsylvania Right To Know Components<br>Methanol  | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |
|     | Methanol   | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |
|     | New Jersey Right To Know Components<br>Methanol  | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |
|     | <b>California Prop. 65 Components</b><br>WARNING: This product contains a chemical known to<br>the State of California to cause birth defects or other<br>reproductive harm.Methanol | CAS-No.<br>67-56-1 | Revision Date<br>2012-03-16 |

# **SECTION 16: Other information**

#### **Further information**

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See

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Version: 6.1

Revision Date: 07/02/2019

Print Date: 03/09/2020

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# **SAFETY DATA SHEET**

Version 6.2 Revision Date 11/11/2019 Print Date 02/20/2020

# SECTION 1: Identification of the substance/mixture and of the company/undertaking

# **1.1 Product identifiers**

| Product name   | : Oxymorphone solution |
|----------------|------------------------|
| Product Number | : O-004                |
| Brand          | : Cerilliant           |

# 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Synthesis of substances

# **1.3** Details of the supplier of the safety data sheet

| Company          | : | Sigma-Aldrich Inc.<br>3050 Spruce Street<br>ST. LOUIS MO 63103<br>UNITED STATES |
|------------------|---|---|
| Telephone<br>Fax | - | +1 314 771-5765<br>+1 800 325-5052  |

# **1.4 Emergency telephone number**

Emergency Phone # : +1-703-527-3887

# **SECTION 2: Hazards identification**

# 2.1 Classification of the substance or mixture

# GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 2), H225 Acute toxicity, Oral (Category 3), H301 Acute toxicity, Inhalation (Category 3), H331 Acute toxicity, Dermal (Category 3), H311 Specific target organ toxicity - single exposure (Category 1), Eyes, H370

For the full text of the H-Statements mentioned in this Section, see Section 16.

# 2.2 GHS Label elements, including precautionary statements

Pictogram

Signal word

Danger

Hazard statement(s) H225 H301 + H311 + H331 H370

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Highly flammable liquid and vapour. Toxic if swallowed, in contact with skin or if inhaled. Causes damage to organs (Eyes).

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| Precautionary statement(s) |   |
|----------------------------|---|
| P210                       | Keep away from heat/sparks/open flames/hot surfaces. No smoking.  |
| P233                       | Keep container tightly closed.  |
| P240                       | Ground/bond container and receiving equipment.  |
| P241                       | Use explosion-proof electrical/ ventilating/ lighting equipment.  |
| P242                       | Use only non-sparking tools.  |
| P243                       | Take precautionary measures against static discharge.   |
| P260                       | Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.   |
| P264                       | Wash skin thoroughly after handling.  |
| P270                       | Do not eat, drink or smoke when using this product.   |
| P271                       | Use only outdoors or in a well-ventilated area.   |
| P280                       | Wear protective gloves/ eye protection/ face protection.  |
| P301 + P310 + P330         | IF SWALLOWED: Immediately call a POISON CENTER/doctor.<br>Rinse mouth.                                  |
| P303 + P361 + P353         | IF ON SKIN (or hair): Take off immediately all contaminated   |
|                            | clothing. Rinse skin with water/shower.   |
| P304 + P340 + P311         | IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor. |
| P307 + P311                | IF exposed: Call a POISON CENTER or doctor/ physician.  |
| P362                       | Take off contaminated clothing and wash before reuse.   |
| P370 + P378                | In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.                    |
| P403 + P233                | Store in a well-ventilated place. Keep container tightly closed.  |
| P403 + P235                | Store in a well-ventilated place. Keep cool.  |
| P405                       | Store locked up.  |
| P501                       | Dispose of contents/ container to an approved waste disposal plant.                                     |

# 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

# **SECTION 3: Composition/information on ingredients**

# 3.2 Mixtures

| Component  |   | Classification  | Concentration       |
|--|---|---|---------------------|
| Methanol   |   |   |                     |
| CAS-No.<br>EC-No.<br>Index-No.<br>Registration<br>number | 67-56-1<br>200-659-6<br>603-001-00-X<br>01-2119433307-44-<br>XXXX | Flam. Liq. 2; Acute Tox. 3;<br>STOT SE 1; H225, H301,<br>H331, H311, H370 | >= 90 - <=<br>100 % |

For the full text of the H-Statements mentioned in this Section, see Section 16.

# SECTION 4: First aid measures

# 4.1 Description of first aid measures

#### **General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

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# If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

# In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

# In case of eye contact

Flush eyes with water as a precaution.

# If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

- **4.2 Most important symptoms and effects, both acute and delayed** The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
- **4.3 Indication of any immediate medical attention and special treatment needed** No data available

# **SECTION 5: Firefighting measures**

# 5.1 Extinguishing media

Suitable extinguishing media Dry powder Dry sand

**Unsuitable extinguishing media** Do NOT use water jet.

- **5.2** Special hazards arising from the substance or mixture Carbon oxides
- **5.3** Advice for firefighters Wear self-contained breathing apparatus for firefighting if necessary.
- **5.4 Further information** Use water spray to cool unopened containers.

# **SECTION 6:** Accidental release measures

**6.1 Personal precautions, protective equipment and emergency procedures** Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

For personal protection see section 8.

- **6.2** Environmental precautions Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
- **6.3 Methods and materials for containment and cleaning up** Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

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# SECTION 7: Handling and storage

# 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use explosion-proof equipment.Keep away from sources of ignition - No smoking.Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2.

# 7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage temperature -20 °C Storage class (TRGS 510): 3: Flammable liquids

# 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

# SECTION 8: Exposure controls/personal protection

# 8.1 Control parameters

# Components with workplace control parameters

| Component | CAS-No. | Value                           | Control<br>parameters | Basis                                      |
|-----------|---------|---------------------------------|-----------------------|--|
| Methanol  | 67-56-1 | TWA                             | 200 ppm               | USA. ACGIH Threshold Limit<br>Values (TLV) |
|           | Remarks | or Indices (                    |                       | is a Biological Exposure Index<br>n)       |
|           |         | STEL                            | 250 ppm               | USA. ACGIH Threshold Limit<br>Values (TLV) |
|           |         | or Indices (                    |                       |  |
|           |         | TWA                             | 200 ppm<br>260 mg/m3  | USA. NIOSH Recommended<br>Exposure Limits  |
|           |         | Potential for dermal absorption |                       | tion                                       |
|           |         | ST                              | 250 ppm<br>325 mg/m3  | USA. NIOSH Recommended<br>Exposure Limits  |
|           |         | Potential fo                    | r dermal absorp       | tion                                       |

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| TWA         | 200 ppm<br>260 mg/m3 | USA. Occupational Exposure<br>Limits (OSHA) - Table Z-1<br>Limits for Air Contaminants           |
|-------------|----------------------|--|
| The value i | n mg/m3 is app       | roximate.  |
| С           | 1,000 ppm            | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
| Skin        | •                    |  |
| PEL         | 200 ppm<br>260 mg/m3 | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
| Skin        |                      |  |
| STEL        | 250 ppm<br>325 mg/m3 | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
| Skin        |                      |  |

# **Biological occupational exposure limits**

| Biological occupational exposal e minto |         |                |            |                     |  |
|---|---------|----------------|------------|---------------------|--|
| Component                               | CAS-No. | Parameters     | Value      | Biological specimen | Basis  |
| Methanol                                | 67-56-1 | Methanol       | 15 mg/l    | Urine               | ACGIH -<br>Biological<br>Exposure Indices<br>(BEI) |
|   | Remarks | End of shift ( | As soon as | possible after exp  | oosure ceases)                                     |

# 8.2 Exposure controls

# Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

# Personal protective equipment

#### **Eye/face protection**

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### **Skin protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact Material: butyl-rubber Minimum layer thickness: 0.3 mm Break through time: 480 min Material tested:Butoject® (KCL 897 / Aldrich Z677647, Size M)

Splash contact

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Material: Nitrile rubber Minimum layer thickness: 0.4 mm Break through time: 30 min Material tested:Camatril® (KCL 730 / Aldrich Z677442, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

#### **Body Protection**

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

# **Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

# **Control of environmental exposure**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

# **SECTION 9: Physical and chemical properties**

# 9.1 Information on basic physical and chemical properties

| a) | Appearance   | Form: liquid  |
|----|--|---|
| b) | Odour  | No data available   |
| c) | Odour Threshold                                    | No data available   |
| d) | рН   | No data available   |
| e) | Melting<br>point/freezing point                    | No data available   |
| f) | Initial boiling point<br>and boiling range         | 64 - 65 °C 147 - 149 °F at 1.013 hPa                            |
| g) | Flash point  | 9.7 °C (49.5 °F) - closed cup                                   |
| h) | Evaporation rate                                   | No data available   |
| i) | Flammability (solid,<br>gas)                       | No data available   |
| j) | Upper/lower<br>flammability or<br>explosive limits | Upper explosion limit: 36 %(V)<br>Lower explosion limit: 6 %(V) |
| k) | Vapour pressure                                    | No data available   |
| I) | Vapour density                                     | No data available   |
|    |  |   |

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- m) Relative density 0.791 g/cm3 at 20 °C (68 °F)
- n) Water solubility No data available
- o) Partition coefficient: No data available n-octanol/water
- p) Auto-ignition No data available temperature
- q) Decomposition No data available temperature
- r) Viscosity No data available
- s) Explosive properties No data available
- t) Oxidizing properties No data available
- 9.2 Other safety information No data available

# **SECTION 10: Stability and reactivity**

#### **10.1 Reactivity** No data available

- **10.2 Chemical stability** Stable under recommended storage conditions.
- **10.3 Possibility of hazardous reactions** Vapours may form explosive mixture with air.
- **10.4 Conditions to avoid** Heat, flames and sparks.

# 10.5 Incompatible materials

Acids, Oxidizing agents, Alkali metals, Strong oxidizing agents, Strong acids, Acid chlorides, Acid anhydrides, Reducing agents, Strong reducing agents, Phosphorus halides

#### **10.6 Hazardous decomposition products** Other decomposition products - No data available Hazardous decomposition products formed under fire conditions. - Carbon oxides In the event of fire: see section 5

# SECTION 11: Toxicological information

# 11.1 Information on toxicological effects

# Acute toxicity

No data available

Inhalation: No data available

Dermal: No data available

No data available

#### Skin corrosion/irritation No data available

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# Serious eye damage/eye irritation

No data available

# Respiratory or skin sensitisation

No data available

#### Germ cell mutagenicity No data available

# Carcinogenicity

- IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
- OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

# **Reproductive toxicity**

No data available

**Specific target organ toxicity - single exposure** No data available

Specific target organ toxicity - repeated exposure No data available

#### **Aspiration hazard** No data available

# **Additional Information**

RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Methyl alcohol may be fatal or cause blindness if swallowed., Cannot be made nonpoisonous., Effects due to ingestion may include:, Nausea, Headache, Vomiting, Gastrointestinal disturbance, Dizziness, Weakness, Confusion.

Central nervous system - Breathing difficulties - Based on Human Evidence

# SECTION 12: Ecological information

12.1 Toxicity

No data available

- 12.2 Persistence and degradability No data available
- **12.3 Bioaccumulative potential** No data available
- **12.4 Mobility in soil** No data available

# 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

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#### **SECTION 13: Disposal considerations**

# **13.1 Waste treatment methods**

#### Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Contact a licensed professional waste disposal service to dispose of this material.

#### **Contaminated packaging**

Dispose of as unused product.

# **SECTION 14: Transport information**

# DOT (US)

UN number: 1230 Class: 3 Packing group: II Proper shipping name: MethanolSOLUTION

Reportable Quantity (RQ): Poison Inhalation Hazard: No

#### IMDG

UN number: 1230 Class: 3 (6.1) Packing group: II EMS-N Proper shipping name: METHANOLSOLUTION

EMS-No: F-E, S-D

#### ΙΑΤΑ

UN number: 1230 Class: 3 (6.1) Packing group: II Proper shipping name: MethanolSOLUTION

# **SECTION 15: Regulatory information**

# SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

#### SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

|          | CAS-No. | Revision Date |
|----------|---------|---------------|
| Methanol | 67-56-1 | 2007-07-01    |

# SARA 311/312 Hazards

Fire Hazard, Acute Health Hazard, Chronic Health Hazard

# Massachusetts Right To Know Components

CAS-No.

Revision Date

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No components are subject to the Massachusetts Right to Know Act.

| Pennsylvania Right To Know Components | CAS-No.            | Revision Date               |
|---------------------------------------|--------------------|-----------------------------|
| Methanol                              | 67-56-1            | 2007-07-01                  |
| Methanol                              | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |
| New Jersey Right To Know Components   | CAS-No.            | Revision Date               |
| Methanol                              | 67-56-1            | 2007-07-01                  |

# **SECTION 16: Other information**

# **Further information**

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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Version: 6.2

Revision Date: 11/11/2019

Print Date: 02/20/2020

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# SAFETY DATA SHEET

# SECTION 1: Identification of the substance/mixture and of the company/undertaking

# **1.1 Product identifiers**

| Product name                         | : | Oxycodone-D <sub>6</sub> solution   |
|--------------------------------------|---|-------------------------------------|
| Product Number<br>Brand<br>Index-No. | : | O-008<br>Cerilliant<br>603-001-00-X |
|                                      |   |                                     |

# **1.2** Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Synthesis of substances

# **1.3** Details of the supplier of the safety data sheet

| Company          | : | Sigma-Aldrich Inc.<br>3050 Spruce Street<br>ST. LOUIS MO 63103<br>UNITED STATES |
|------------------|---|---|
| Telephone<br>Fax |   | +1 314 771-5765<br>+1 800 325-5052  |

# **1.4 Emergency telephone number**

Emergency Phone # : +1-703-527-3887

# **SECTION 2: Hazards identification**

# 2.1 Classification of the substance or mixture

# GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 2), H225 Acute toxicity, Oral (Category 3), H301 Acute toxicity, Inhalation (Category 3), H331 Acute toxicity, Dermal (Category 3), H311 Specific target organ toxicity - single exposure (Category 1), H370

For the full text of the H-Statements mentioned in this Section, see Section 16.

# 2.2 GHS Label elements, including precautionary statements

Pictogram

Signal word



Danger

Hazard statement(s) H225 H301 + H311 + H331 H370

Highly flammable liquid and vapour. Toxic if swallowed, in contact with skin or if inhaled. Causes damage to organs.

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| Precautionary statement(s) |  |
|----------------------------|--|
| P210                       | Keep away from heat/sparks/open flames/hot surfaces. No smoking.   |
| P233                       | Keep container tightly closed.   |
| P240                       | Ground/bond container and receiving equipment.   |
| P241                       | Use explosion-proof electrical/ ventilating/ lighting equipment.   |
| P242                       | Use only non-sparking tools.   |
| P243                       | Take precautionary measures against static discharge.  |
| P260                       | Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  |
| P264                       | Wash skin thoroughly after handling.   |
| P270                       | Do not eat, drink or smoke when using this product.  |
| P271                       | Use only outdoors or in a well-ventilated area.  |
| P280                       | Wear protective gloves/ protective clothing/ eye protection/ face protection.                                |
| P301 + P310                | IF SWALLOWED: Immediately call a POISON CENTER/doctor.   |
| P303 + P361 + P353         | IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. |
| P304 + P340                | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.             |
| P307 + P311                | IF exposed: Call a POISON CENTER or doctor/ physician.   |
| P322                       | Specific measures (see supplemental first aid instructions on this label).                                   |
| P330                       | Rinse mouth.   |
| P361                       | Remove/Take off immediately all contaminated clothing.   |
| P363                       | Wash contaminated clothing before reuse.   |
| P370 + P378                | In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.                        |
| P403 + P233                | Store in a well-ventilated place. Keep container tightly closed.   |
| P403 + P235                | Store in a well-ventilated place. Keep cool.   |
| P405                       | Store locked up.   |
| P501                       | Dispose of contents/ container to an approved waste disposal plant.  |

# 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

# **SECTION 3: Composition/information on ingredients**

# 3.2 Mixtures

| Component    |                   | Classification              | Concentration |
|--------------|-------------------|-----------------------------|---------------|
| Methanol     |                   |                             |               |
| CAS-No.      | 67-56-1           | Flam. Liq. 2; Acute Tox. 3; | >= 90 - <=    |
| EC-No.       | 200-659-6         | STOT SE 1; H225, H301,      | 100 %         |
| Index-No.    | 603-001-00-X      | H331, H311, H370            |               |
| Registration | 01-2119433307-44- |                             |               |
| number       | XXXX              |                             |               |

For the full text of the H-Statements mentioned in this Section, see Section 16.

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# **SECTION 4: First aid measures**

#### 4.1 Description of first aid measures

#### **General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

# In case of eye contact

Flush eyes with water as a precaution.

#### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

- **4.2 Most important symptoms and effects, both acute and delayed** The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
- **4.3 Indication of any immediate medical attention and special treatment needed** No data available

# **SECTION 5: Firefighting measures**

#### 5.1 Extinguishing media

#### **Suitable extinguishing media** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

- **5.2** Special hazards arising from the substance or mixture Carbon oxides
- **5.3** Advice for firefighters Wear self-contained breathing apparatus for firefighting if necessary.

# 5.4 Further information

Use water spray to cool unopened containers.

#### **SECTION 6: Accidental release measures**

# 6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

For personal protection see section 8.

#### **6.2 Environmental precautions** Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

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# 6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wetbrushing and place in container for disposal according to local regulations (see section 13).

# 6.4 Reference to other sections

For disposal see section 13.

# SECTION 7: Handling and storage

# 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use explosion-proof equipment.Keep away from sources of ignition - No smoking.Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2.

# 7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store under inert gas. hygroscopic

Recommended storage temperature -20 °C Storage class (TRGS 510): 3: Flammable liquids

# 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

# **SECTION 8: Exposure controls/personal protection**

# 8.1 Control parameters

# Components with workplace control parameters

| Component | CAS-No. | Value        | Control<br>parameters | Basis                                      |
|-----------|---------|--------------|-----------------------|--|
| Methanol  | 67-56-1 | TWA          | 200 ppm               | USA. ACGIH Threshold Limit<br>Values (TLV) |
|           | Remarks | or Indices ( |                       |  |
|           |         | STEL         | 250 ppm               | USA. ACGIH Threshold Limit<br>Values (TLV) |
|           |         | or Indices ( |                       |  |

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| TWA         | 200 ppm<br>260 mg/m3            | USA. NIOSH Recommended<br>Exposure Limits  |  |
|-------------|---------------------------------|--|--|
| Potential f | Potential for dermal absorption |  |  |
| ST          | 250 ppm<br>325 mg/m3            | USA. NIOSH Recommended<br>Exposure Limits  |  |
| Potential f | or dermal absor                 |  |  |
| TWA         | 200 ppm<br>260 mg/m3            | USA. Occupational Exposure<br>Limits (OSHA) - Table Z-1<br>Limits for Air Contaminants           |  |
| The value   | in mg/m3 is app                 | proximate.   |  |
| С           | 1,000 ppm                       | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |  |
| Skin        | •                               |  |  |
| PEL         | 200 ppm<br>260 mg/m3            | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |  |
| Skin        | 1                               |  |  |
| STEL        | 250 ppm<br>325 mg/m3            | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |  |
| Skin        |                                 |  |  |

# **Biological occupational exposure limits**

| Component | CAS-No. | Parameters     | Value      | Biological specimen | Basis  |
|-----------|---------|----------------|------------|---------------------|--|
| Methanol  | 67-56-1 | Methanol       | 15 mg/l    | Urine               | ACGIH -<br>Biological<br>Exposure Indices<br>(BEI) |
|           | Remarks | End of shift ( | As soon as | possible after exp  | osure ceases)                                      |

# 8.2 Exposure controls

# Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

# Personal protective equipment

# Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

# Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

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Full contact Material: butyl-rubber Minimum layer thickness: 0.3 mm Break through time: 480 min Material tested:Butoject® (KCL 897 / Aldrich Z677647, Size M)

Splash contact Material: Nitrile rubber Minimum layer thickness: 0.4 mm Break through time: 30 min Material tested:Camatril® (KCL 730 / Aldrich Z677442, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

#### **Body Protection**

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### **Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### **Control of environmental exposure**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

# **SECTION 9: Physical and chemical properties**

# 9.1 Information on basic physical and chemical properties

| a) | Appearance                              | Form: liquid                         |
|----|---|--------------------------------------|
| b) | Odour                                   | No data available                    |
| c) | Odour Threshold                         | No data available                    |
| d) | рН                                      | No data available                    |
| e) | Melting<br>point/freezing point         | No data available                    |
| f) | Initial boiling point and boiling range | 64 - 65 °C 147 - 149 °F at 1.013 hPa |
| g) | Flash point                             | 9.7 °C (49.5 °F) - closed cup        |
| h) | Evaporation rate                        | No data available                    |
| i) | Flammability (solid,<br>gas)            | No data available                    |

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|     | j)  | Upper/lower<br>flammability or<br>explosive limits | Upper explosion limit: 36 %(V)<br>Lower explosion limit: 6 %(V) |
|-----|-----|--|---|
|     | k)  | Vapour pressure                                    | No data available   |
|     | I)  | Vapour density                                     | No data available   |
|     | m)  | Relative density                                   | 0.791 g/cm3 at 20 °C (68 °F)                                    |
|     | n)  | Water solubility                                   | No data available   |
|     | o)  | Partition coefficient:<br>n-octanol/water          | No data available   |
|     | p)  | Auto-ignition<br>temperature                       | No data available   |
|     | q)  | Decomposition<br>temperature                       | No data available   |
|     | r)  | Viscosity  | No data available   |
|     | s)  | Explosive properties                               | No data available   |
|     | t)  | Oxidizing properties                               | No data available   |
| 9.2 | Oth | ner safety informatio                              | n   |

No data available

#### **SECTION 10: Stability and reactivity**

#### **10.1 Reactivity**

No data available

#### **10.2** Chemical stability

Stable under recommended storage conditions.

# 10.3 Possibility of hazardous reactions

# Vapours may form explosive mixture with air.

#### **10.4 Conditions to avoid** Heat, flames and sparks. Extremes of temperature and direct sunlight.

# 10.5 Incompatible materials

Acids, Öxidizing agents, Alkali metals, Strong oxidizing agents, Strong acids, Acid chlorides, Acid anhydrides, Reducing agents, Strong reducing agents, Phosphorus halides

# 10.6 Hazardous decomposition products Other decomposition products - No data available Hazardous decomposition products formed under fire conditions. - Carbon oxides In the event of fire: see section 5

# **SECTION 11: Toxicological information**

#### **11.1 Information on toxicological effects**

#### Acute toxicity No data available

Inhalation: No data available

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Dermal: No data available

No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation No data available

**Respiratory or skin sensitisation** No data available

#### **Germ cell mutagenicity** No data available

#### Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

- ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

# **Reproductive toxicity**

No data available

Specific target organ toxicity - single exposure No data available

**Specific target organ toxicity - repeated exposure** No data available

Aspiration hazard

No data available

# **Additional Information**

RTECS: Not available

Methyl alcohol may be fatal or cause blindness if swallowed., Cannot be made nonpoisonous., Effects due to ingestion may include:, Nausea, Headache, Vomiting, Gastrointestinal disturbance, Dizziness, Weakness, Confusion.

Stomach - Irregularities - Based on Human Evidence

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# **SECTION 12: Ecological information**

12.1 Toxicity

No data available

- **12.2 Persistence and degradability** No data available
- **12.3 Bioaccumulative potential** No data available
- **12.4 Mobility in soil** No data available
- **12.5 Results of PBT and vPvB assessment** PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
- **12.6 Other adverse effects** No data available

# **SECTION 13: Disposal considerations**

#### **13.1 Waste treatment methods**

#### Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

#### Contaminated packaging

Dispose of as unused product.

# **SECTION 14: Transport information**

#### DOT (US)

UN number: 1230 Class: 3 Packing group: II Proper shipping name: MethanolSOLUTION

Reportable Quantity (RQ): Poison Inhalation Hazard: No

# IMDG

UN number: 1230 Class: 3 (6.1) Packing group: II Proper shipping name: METHANOLSOLUTION

EMS-No: F-E, S-D

# ΙΑΤΑ

UN number: 1230 Class: 3 (6.1) Packing group: II Proper shipping name: MethanolSOLUTION

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| SECTION 15: Regulatory information   |                    |                             |
|--|--------------------|-----------------------------|
| <b>SARA 302 Components</b><br>No chemicals in this material are subject to the reportin<br>Section 302.  | g requirements of  | SARA Title III,             |
| SARA 313 Components<br>The following components are subject to reporting levels<br>Section 313:  | s established by S | ARA Title III,              |
| Methanol   | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |
| SARA 311/312 Hazards<br>Fire Hazard, Chronic Health Hazard   |                    |                             |
| Massachusetts Right To Know Components   |                    |                             |
| Methanol   | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |
| No components are subject to the Massachusetts Right   | to Know Act.       |                             |
| Pennsylvania Right To Know Components<br>Methanol  | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |
| Methanol   | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |
| New Jersey Right To Know Components<br>Methanol  | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |
| <b>California Prop. 65 Components</b><br>WARNING: This product contains a chemical known to<br>the State of California to cause birth defects or other<br>reproductive harm.Methanol | CAS-No.<br>67-56-1 | Revision Date<br>2012-03-16 |

#### **SECTION 16: Other information**

#### **Further information**

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See

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The branding on the header and/or footer of this document may temporarily not visually match the product purchased as we transition our branding. However, all of the information in the document regarding the product remains unchanged and matches the product ordered. For further information please contact mlsbranding@sial.com.

Version: 6.2

Revision Date: 07/02/2019

Print Date: 04/10/2020

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# SAFETY DATA SHEET

Version 6.2 Revision Date 07/02/2019 Print Date 02/18/2020

#### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### **1.1 Product identifiers**

Product name: Oxymorphone-D3 solutionProduct Number: O-019Brand: Cerilliant

# **1.2** Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Synthesis of substances

#### 1.3 Details of the supplier of the safety data sheet

| Company          | : | Sigma-Aldrich Inc.<br>3050 Spruce Street<br>ST. LOUIS MO 63103<br>UNITED STATES |
|------------------|---|---|
| Telephone<br>Fax | - | +1 314 771-5765<br>+1 800 325-5052  |

#### **1.4 Emergency telephone number**

Emergency Phone # : +1-703-527-3887

#### **SECTION 2: Hazards identification**

#### 2.1 Classification of the substance or mixture

#### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 2), H225 Acute toxicity, Oral (Category 3), H301 Acute toxicity, Inhalation (Category 3), H331 Acute toxicity, Dermal (Category 3), H311 Specific target organ toxicity - single exposure (Category 1), H370

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### 2.2 GHS Label elements, including precautionary statements

Danger

Pictogram

Signal word

Hazard statement(s) H225 H301 + H311 + H331 H370

Cerilliant - O-019

Highly flammable liquid and vapour. Toxic if swallowed, in contact with skin or if inhaled. Causes damage to organs.

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| Precautionary statement(s) |  |
|----------------------------|--|
| P210                       | Keep away from heat/sparks/open flames/hot surfaces. No smoking.   |
| P233                       | Keep container tightly closed.   |
| P240                       | Ground/bond container and receiving equipment.   |
| P241                       | Use explosion-proof electrical/ ventilating/ lighting equipment.   |
| P242                       | Use only non-sparking tools.   |
| P243                       | Take precautionary measures against static discharge.  |
| P260                       | Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  |
| P264                       | Wash skin thoroughly after handling.   |
| P270                       | Do not eat, drink or smoke when using this product.  |
| P271                       | Use only outdoors or in a well-ventilated area.  |
| P280                       | Wear protective gloves/ protective clothing/ eye protection/ face protection.                                |
| P301 + P310                | IF SWALLOWED: Immediately call a POISON CENTER/doctor.   |
| P303 + P361 + P353         | IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. |
| P304 + P340                | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.             |
| P307 + P311                | IF exposed: Call a POISON CENTER or doctor/ physician.   |
| P322                       | Specific measures (see supplemental first aid instructions on this label).                                   |
| P330                       | Rinse mouth.   |
| P361                       | Remove/Take off immediately all contaminated clothing.   |
| P363                       | Wash contaminated clothing before reuse.   |
| P370 + P378                | In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.                        |
| P403 + P233                | Store in a well-ventilated place. Keep container tightly closed.   |
| P403 + P235                | Store in a well-ventilated place. Keep cool.   |
| P405                       | Store locked up.   |
| P501                       | Dispose of contents/ container to an approved waste disposal plant.  |

#### 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

#### SECTION 3: Composition/information on ingredients

#### 3.2 Mixtures

| Component           |                           | Classification                             | Concentration |
|---------------------|---------------------------|--|---------------|
| Methanol            |                           |  |               |
| CAS-No.             | 67-56-1                   | Flam. Liq. 2; Acute Tox. 3;                |               |
| EC-No.<br>Index-No. | 200-659-6<br>603-001-00-X | STOT SE 1; H225, H301,<br>H331, H311, H370 | 100 %         |
| Registration        | 01-2119433307-44-         |  |               |
| number              | XXXX                      |  |               |

For the full text of the H-Statements mentioned in this Section, see Section 16.

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#### **SECTION 4: First aid measures**

#### 4.1 Description of first aid measures

#### **General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

#### In case of eye contact

Flush eyes with water as a precaution.

#### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

- **4.2 Most important symptoms and effects, both acute and delayed** The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
- **4.3 Indication of any immediate medical attention and special treatment needed** No data available

#### **SECTION 5: Firefighting measures**

#### 5.1 Extinguishing media

#### **Suitable extinguishing media** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

- **5.2 Special hazards arising from the substance or mixture** Carbon oxides
- **5.3** Advice for firefighters Wear self-contained breathing apparatus for firefighting if necessary.

#### 5.4 Further information

Use water spray to cool unopened containers.

#### **SECTION 6:** Accidental release measures

#### 6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

For personal protection see section 8.

#### **6.2 Environmental precautions** Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

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#### 6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wetbrushing and place in container for disposal according to local regulations (see section 13).

#### 6.4 Reference to other sections

For disposal see section 13.

#### SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use explosion-proof equipment.Keep away from sources of ignition - No smoking.Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2.

#### 7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store under inert gas. hygroscopic

Recommended storage temperature -20 °C Storage class (TRGS 510): 3: Flammable liquids

#### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

#### **SECTION 8: Exposure controls/personal protection**

#### 8.1 Control parameters

#### Components with workplace control parameters

| Component | CAS-No. | Value   | Control<br>parameters | Basis                                      |
|-----------|---------|---|-----------------------|--|
| Methanol  | 67-56-1 | TWA   | 200 ppm               | USA. ACGIH Threshold Limit<br>Values (TLV) |
|           | Remarks | or Indices (  |                       |  |
|           |         | STEL  | 250 ppm               | USA. ACGIH Threshold Limit<br>Values (TLV) |
|           |         | Headache<br>Nausea<br>Dizziness<br>Eye damage<br>Substances for which there is a Biological Exposure Index<br>or Indices (see BEI® section)<br>Danger of cutaneous absorption |                       | n)   |

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| TWA         | 200 ppm<br>260 mg/m3 | USA. NIOSH Recommended<br>Exposure Limits  |
|-------------|----------------------|--|
| Potential f | or dermal absor      | ption  |
| ST          | 250 ppm<br>325 mg/m3 | USA. NIOSH Recommended<br>Exposure Limits  |
| Potential f | or dermal absor      |  |
| TWA         | 200 ppm<br>260 mg/m3 | USA. Occupational Exposure<br>Limits (OSHA) - Table Z-1<br>Limits for Air Contaminants           |
| The value   | in mg/m3 is app      | proximate.   |
| С           | 1,000 ppm            | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
| Skin        | •                    |  |
| PEL         | 200 ppm<br>260 mg/m3 | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
| Skin        | 1                    |  |
| STEL        | 250 ppm<br>325 mg/m3 | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
| Skin        |                      |  |

#### **Biological occupational exposure limits**

| Component | CAS-No. | Parameters     | Value      | Biological specimen | Basis  |
|-----------|---------|----------------|------------|---------------------|--|
| Methanol  | 67-56-1 | Methanol       | 15 mg/l    | Urine               | ACGIH -<br>Biological<br>Exposure Indices<br>(BEI) |
|           | Remarks | End of shift ( | As soon as | possible after exp  | osure ceases)                                      |

#### 8.2 Exposure controls

#### Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

#### Personal protective equipment

#### Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

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Full contact Material: butyl-rubber Minimum layer thickness: 0.3 mm Break through time: 480 min Material tested:Butoject® (KCL 897 / Aldrich Z677647, Size M)

Splash contact Material: Nitrile rubber Minimum layer thickness: 0.4 mm Break through time: 30 min Material tested:Camatril® (KCL 730 / Aldrich Z677442, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

#### **Body Protection**

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### **Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### **Control of environmental exposure**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

#### **SECTION 9: Physical and chemical properties**

#### 9.1 Information on basic physical and chemical properties

| a) | Appearance                              | Form: liquid                         |
|----|---|--------------------------------------|
| b) | Odour                                   | No data available                    |
| c) | Odour Threshold                         | No data available                    |
| d) | рН                                      | No data available                    |
| e) | Melting<br>point/freezing point         | No data available                    |
| f) | Initial boiling point and boiling range | 64 - 65 °C 147 - 149 °F at 1.013 hPa |
| g) | Flash point                             | 9.7 °C (49.5 °F) - closed cup        |
| h) | Evaporation rate                        | No data available                    |
| i) | Flammability (solid,<br>gas)            | No data available                    |

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|     | j)  | Upper/lower<br>flammability or<br>explosive limits | Upper explosion limit: 36 %(V)<br>Lower explosion limit: 6 %(V) |
|-----|-----|--|---|
|     | k)  | Vapour pressure                                    | No data available   |
|     | I)  | Vapour density                                     | No data available   |
|     | m)  | Relative density                                   | 0.791 g/cm3 at 20 °C (68 °F)                                    |
|     | n)  | Water solubility                                   | No data available   |
|     | o)  | Partition coefficient:<br>n-octanol/water          | No data available   |
|     | p)  | Auto-ignition<br>temperature                       | No data available   |
|     | q)  | Decomposition<br>temperature                       | No data available   |
|     | r)  | Viscosity  | No data available   |
|     | s)  | Explosive properties                               | No data available   |
|     | t)  | Oxidizing properties                               | No data available   |
| 9.2 | Oth | ner safety informatio                              | n   |

No data available

#### **SECTION 10: Stability and reactivity**

#### **10.1 Reactivity**

No data available

#### **10.2 Chemical stability**

Stable under recommended storage conditions.

## 10.3 Possibility of hazardous reactions

Vapours may form explosive mixture with air.

#### 10.4 Conditions to avoid

Heat, flames and sparks. Extremes of temperature and direct sunlight.

#### **10.5** Incompatible materials

Acids, Oxidizing agents, Alkali metals, Strong oxidizing agents, Strong acids, Acid chlorides, Acid anhydrides, Reducing agents, Strong reducing agents, Phosphorus halides

# 10.6 Hazardous decomposition products Other decomposition products - No data available Hazardous decomposition products formed under fire conditions. - Carbon oxides In the event of fire: see section 5

#### **SECTION 11: Toxicological information**

#### **11.1 Information on toxicological effects**

#### Acute toxicity No data available

Inhalation: No data available

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Dermal: No data available

No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation No data available

**Respiratory or skin sensitisation** No data available

#### **Germ cell mutagenicity** No data available

#### Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

- ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

#### **Reproductive toxicity**

No data available

Specific target organ toxicity - single exposure No data available

**Specific target organ toxicity - repeated exposure** No data available

Aspiration hazard

No data available

#### **Additional Information**

RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Methyl alcohol may be fatal or cause blindness if swallowed., Cannot be made nonpoisonous., Effects due to ingestion may include:, Nausea, Headache, Vomiting, Gastrointestinal disturbance, Dizziness, Weakness, Confusion.

Stomach - Irregularities - Based on Human Evidence

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#### SECTION 12: Ecological information

12.1 Toxicity

No data available

- **12.2 Persistence and degradability** No data available
- **12.3 Bioaccumulative potential** No data available
- **12.4 Mobility in soil** No data available
- 12.5 Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
- **12.6 Other adverse effects** No data available

#### **SECTION 13: Disposal considerations**

#### **13.1 Waste treatment methods**

#### Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

#### Contaminated packaging

Dispose of as unused product.

#### **SECTION 14: Transport information**

#### DOT (US)

UN number: 1230 Class: 3 Packing group: II Proper shipping name: MethanolSOLUTION

Reportable Quantity (RQ): Poison Inhalation Hazard: No

#### IMDG

UN number: 1230 Class: 3 (6.1) Packing group: II Proper shipping name: METHANOLSOLUTION

EMS-No: F-E, S-D

#### ΙΑΤΑ

UN number: 1230 Class: 3 (6.1) Packing group: II Proper shipping name: MethanolSOLUTION

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| SECTION 15: Regulatory information   |                    |                             |
|--|--------------------|-----------------------------|
| <b>SARA 302 Components</b><br>No chemicals in this material are subject to the reportin<br>Section 302.  | g requirements of  | SARA Title III,             |
| SARA 313 Components<br>The following components are subject to reporting levels<br>Section 313:  | s established by S | ARA Title III,              |
| Methanol   | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |
| SARA 311/312 Hazards<br>Fire Hazard, Chronic Health Hazard   |                    |                             |
| Massachusetts Right To Know Components   |                    |                             |
| Methanol   | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |
| No components are subject to the Massachusetts Right   | to Know Act.       |                             |
| Pennsylvania Right To Know Components<br>Methanol  | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |
| Methanol   | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |
| New Jersey Right To Know Components<br>Methanol  | CAS-No.<br>67-56-1 | Revision Date<br>2007-07-01 |
| <b>California Prop. 65 Components</b><br>WARNING: This product contains a chemical known to<br>the State of California to cause birth defects or other<br>reproductive harm.Methanol | CAS-No.<br>67-56-1 | Revision Date<br>2012-03-16 |

#### **SECTION 16: Other information**

#### **Further information**

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See

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# **SAFETY DATA SHEET**

Version 6.2 Revision Date 06/30/2020 Print Date 06/30/2020

#### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifiers

| Product name                | <sup>:</sup> (-)-delta9-THC |
|-----------------------------|-----------------------------|
| Product Number<br>Index-No. | : T-005<br>: 603-001-00-X   |
| Index nor                   | 1 005 001 00 //             |

# **1.2** Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Synthesis of substances

#### 1.3 Details of the supplier of the safety data sheet

| Company          | : | Sigma-Aldrich Inc.<br>3050 Spruce Street<br>ST. LOUIS MO 63103<br>UNITED STATES |
|------------------|---|---|
| Telephone<br>Fax |   | +1 314 771-5765<br>+1 800 325-5052  |

#### 1.4 Emergency telephone

Emergency Phone # : 800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week

#### **SECTION 2: Hazards identification**

#### 2.1 Classification of the substance or mixture

#### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 2), H225 Acute toxicity, Oral (Category 3), H301 Acute toxicity, Inhalation (Category 3), H331 Acute toxicity, Dermal (Category 3), H311 Reproductive toxicity (Category 2), H361 Specific target organ toxicity - single exposure (Category 1), Eyes, H370

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### 2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

T-005

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| Hazard statement(s)        |  |
|----------------------------|--|
| H225                       | Highly flammable liquid and vapor.   |
| H301 + H311 + H331         | Toxic if swallowed, in contact with skin or if inhaled.  |
| H361                       | Suspected of damaging fertility or the unborn child.   |
| H370                       | Causes damage to organs (Eyes).  |
| Precautionary statement(s) |  |
| P201                       | Obtain special instructions before use.  |
| P202                       | Do not handle until all safety precautions have been read and understood.                                |
| P210                       | Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.                                      |
| P233                       | Keep container tightly closed.   |
| P240                       | Ground/bond container and receiving equipment.   |
| P241                       | Use explosion-proof electrical/ventilating/lighting/equipment.   |
| P242                       | Use only non-sparking tools.   |
| P243                       | Take precautionary measures against static discharge.  |
| P260                       | Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.   |
| P264                       | Wash skin thoroughly after handling.   |
| P270                       | Do not eat, drink or smoke when using this product.  |
| P271                       | Use only outdoors or in a well-ventilated area.  |
| P280                       | Wear protective gloves/ protective clothing/ eye protection/ face protection.                            |
| P301 + P310 + P330         | IF SWALLOWED: Immediately call a POISON CENTER/ doctor. Rinse mouth.                                     |
| P303 + P361 + P353         | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.     |
| P304 + P340 + P311         | IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor. |
| P307 + P311                | IF exposed: Call a POISON CENTER or doctor/ physician.   |
| P362                       | Take off contaminated clothing and wash before reuse.  |
| P370 + P378                | In case of fire: Use dry sand, dry chemical or alcohol-resistant   |
|                            | foam to extinguish.  |
| P403 + P233                | Store in a well-ventilated place. Keep container tightly closed.   |
| P403 + P235                | Store in a well-ventilated place. Keep cool.   |
| P405                       | Store locked up.   |
| P501                       | Dispose of contents/ container to an approved waste disposal   |
|                            | plant.   |

# 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

#### **SECTION 3:** Composition/information on ingredients

#### 3.2 Mixtures

| Component    |                   | Classification              | Concentration |
|--------------|-------------------|-----------------------------|---------------|
| Methanol     |                   |                             |               |
| CAS-No.      | 67-56-1           | Flam. Liq. 2; Acute Tox. 3; | >= 90 - <=    |
| EC-No.       | 200-659-6         | STOT SE 1; H225, H301,      | 100 %         |
| Index-No.    | 603-001-00-X      | H331, H311, H370            |               |
| Registration | 01-2119433307-44- |                             |               |
| number       | XXXX              |                             |               |

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| 1-Trans-delta9-tetrahydrocannabinol |           |  |                   |  |
|-------------------------------------|-----------|--|-------------------|--|
| CAS-No.                             | 1972-08-3 | Acute Tox. 4; Repr. 2;<br>Aquatic Chronic 4; H302,<br>H361, H413 | >= 0.1 - < 1<br>% |  |

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### **SECTION 4: First aid measures**

#### 4.1 Description of first-aid measures

#### General advice

First aider needs to protect himself. Show this material safety data sheet to the doctor in attendance.

#### If inhaled

After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

#### In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.

#### In case of eye contact

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

#### If swallowed

After swallowing: fresh air. Make victim drink ethanol (e.g. 1 drinking glass of a 40% alcoholic beverage). Call a doctor immediately (mention methanol ingestion). Only in exceptional cases, if no medical care is available within one hour, induce vomiting (only in fully conscious persons) and make victim drink ethanol again (approx. 0.3 ml of a 40% alcoholic beverage/kg body weight/hour).

- **4.2 Most important symptoms and effects, both acute and delayed** The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
- 4.3 Indication of any immediate medical attention and special treatment needed No data available

#### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

**Suitable extinguishing media** Foam Carbon dioxide (CO2) Dry powder

**Unsuitable extinguishing media** For this substance/mixture no limitations of extinguishing agents are given.

**5.2 Special hazards arising from the substance or mixture** Nature of decomposition products not known. Mixture with combustible ingredients. Pay attention to flashback.

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Vapors are heavier than air and may spread along floors. Development of hazardous combustion gases or vapours possible in the event of fire. Forms explosive mixtures with air at ambient temperatures.

#### 5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

#### 5.4 Further information

Remove container from danger zone and cool with water. Prevent fire extinguishing water from contaminating surface water or the ground water system.

#### **SECTION 6: Accidental release measures**

# 6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.

#### **6.2 Environmental precautions** Do not let product enter drains. Risk of explosion.

#### 6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

**6.4** Reference to other sections For disposal see section 13.

#### SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge. For precautions see section 2.2.

#### 7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition. Keep locked up or in an area accessible only to qualified or authorized persons.

Recommended storage temperature -20 °C Storage class (TRGS 510): 3: Flammable liquids

#### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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#### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

#### Ingredients with workplace control parameters

| Component | CAS-No. | Value                           | Control                                | Basis  |
|-----------|---------|---------------------------------|--|--|
|           |         |                                 | parameters                             |  |
| Methanol  | 67-56-1 | TWA                             | 200 ppm                                | USA. ACGIH Threshold Limit<br>Values (TLV)   |
|           | Remarks | Headache<br>Nausea<br>Dizziness |  |  |
|           |         | Eye damag                       | е                                      |  |
|           |         |                                 | s for which there<br>(see BEI® section | e is a Biological Exposure Index   |
|           |         | Danger of o                     | utaneous abso                          | rption   |
|           |         | STEL                            | 250 ppm                                | USA. ACGIH Threshold Limit<br>Values (TLV)   |
|           |         | Headache<br>Nausea<br>Dizziness |  |  |
|           |         | Eye damag                       |  | e is a Biological Exposure Index   |
|           |         | or Indices                      | (see BEI® secti                        | on)  |
|           |         | -                               | cutaneous absor                        |  |
|           |         | TWA                             | 200 ppm<br>260 mg/m3                   | USA. NIOSH Recommended<br>Exposure Limits  |
|           |         | Potential for                   | or dermal absorp                       | otion  |
|           |         | ST                              | 250 ppm<br>325 mg/m3                   | USA. NIOSH Recommended<br>Exposure Limits  |
|           |         | Potential fo                    | or dermal absorp                       |  |
|           |         | TWA                             | 200 ppm<br>260 mg/m3                   | USA. Occupational Exposure<br>Limits (OSHA) - Table Z-1<br>Limits for Air Contaminants           |
|           |         | The value i                     | n mg/m3 is app                         | proximate.   |
|           |         | C                               | 1,000 ppm                              | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
|           |         | Skin                            |  |  |
|           |         | PEL                             | 200 ppm<br>260 mg/m3                   | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
|           |         | Skin                            |  |  |
|           |         | STEL                            | 250 ppm<br>325 mg/m3                   | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
|           |         | Skin                            | •                                      |  |

#### **Biological occupational exposure limits**

| Component | CAS-No. | Parameters | Value | Biological | Basis |
|-----------|---------|------------|-------|------------|-------|
|           |         |            |       | specimen   |       |

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| Methanol | 67-56-1 | Methanol       | 15 mg/l    |                    | ACGIH -<br>Biological<br>Exposure Indices<br>(BEI) |
|----------|---------|----------------|------------|--------------------|--|
|          | Remarks | End of shift ( | As soon as | possible after exp | osure ceases)                                      |

#### 8.2 Exposure controls

#### Appropriate engineering controls

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

#### **Personal protective equipment**

#### Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

#### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact Material: butyl-rubber Minimum layer thickness: 0.3 mm Break through time: 480 min Material tested:Butoject® (KCL 897 / Aldrich Z677647, Size M)

Splash contact Material: Nitrile rubber Minimum layer thickness: 0.4 mm Break through time: 30 min Material tested:Camatril® (KCL 730 / Aldrich Z677442, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the EC approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

#### **Body Protection**

Flame retardant antistatic protective clothing.

#### **Respiratory protection**

required when vapours/aerosols are generated. Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

#### **Control of environmental exposure**

Do not let product enter drains. Risk of explosion.

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#### SECTION 9: Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties

|                          | Annon-1000   |   |  |  |
|--------------------------|--|---|--|--|
| a)                       | Appearance   | Form: liquid  |  |  |
| b)                       | Odor   | No data available   |  |  |
| c)                       | Odor Threshold                                     | No data available   |  |  |
| d)                       | pН   | No data available   |  |  |
| e)                       | Melting<br>point/freezing point                    | No data available   |  |  |
| f)                       | Initial boiling point and boiling range            | 64 - 65 °C 147 - 149 °F at 1.013 hPa                            |  |  |
| g)                       | Flash point  | 11.0 °C (51.8 °F) - closed cup                                  |  |  |
| h)                       | Evaporation rate                                   | No data available   |  |  |
| i)                       | Flammability (solid,<br>gas)                       | No data available   |  |  |
| j)                       | Upper/lower<br>flammability or<br>explosive limits | Upper explosion limit: 36 %(V)<br>Lower explosion limit: 6 %(V) |  |  |
| k)                       | Vapor pressure                                     | No data available   |  |  |
| I)                       | Vapor density                                      | No data available   |  |  |
| m)                       | Relative density                                   | 0.791 g/cm3 at 20 °C (68 °F)                                    |  |  |
| n)                       | Water solubility                                   | No data available   |  |  |
| o)                       | Partition coefficient:<br>n-octanol/water          | No data available   |  |  |
| p)                       | Autoignition<br>temperature                        | No data available   |  |  |
| q)                       | Decomposition<br>temperature                       | No data available   |  |  |
| r)                       | Viscosity  | No data available   |  |  |
| s)                       | Explosive properties                               | No data available   |  |  |
| t)                       | Oxidizing properties                               | No data available   |  |  |
| Other safety information |  |   |  |  |

#### **9.2 Other safety information** No data available

#### **SECTION 10: Stability and reactivity**

#### **10.1 Reactivity**

Vapors may form explosive mixture with air.

#### **10.2** Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

#### **10.3 Possibility of hazardous reactions** No data available

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# **10.4 Conditions to avoid**

Warming.

#### **10.5** Incompatible materials

Acid chlorides, Acid anhydrides, Oxidizing agents, Alkali metals, Reducing agents, Acids

#### **10.6 Hazardous decomposition products**

Other decomposition products - No data available Hazardous decomposition products formed under fire conditions. - Nature of decomposition products not known. In the event of fire: see section 5

#### **SECTION 11: Toxicological information**

#### **11.1 Information on toxicological effects**

#### Acute toxicity

No data available

Inhalation: No data available

Dermal: No data available

No data available

#### Skin corrosion/irritation No data available

#### Serious eye damage/eye irritation No data available

**Respiratory or skin sensitization** No data available

#### Germ cell mutagenicity

#### Carcinogenicity

- IARC: No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- NTP: No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
- OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

#### **Reproductive toxicity**

Suspected of damaging the unborn child. Suspected of damaging fertility.

**Specific target organ toxicity - single exposure** Mixture causes damage to organs. - Eyes

Specific target organ toxicity - repeated exposure No data available

#### Aspiration hazard

No data available

#### **Additional Information** RTECS: Not available

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Methyl alcohol may be fatal or cause blindness if swallowed. Effects due to ingestion may include:, Headache, Dizziness, Drowsiness, metabolic acidosis, Coma, Seizures. Symptoms may be delayed., Damage of the:, Liver, Kidney

Hazardous properties cannot be excluded but are unlikely when the product is handled appropriately.

Central nervous system - Breathing difficulties - Based on Human Evidence

#### SECTION 12: Ecological information

#### 12.1 Toxicity

No data available

- **12.2 Persistence and degradability** No data available
- **12.3 Bioaccumulative potential** No data available
- **12.4 Mobility in soil** No data available

#### 12.5 Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

**12.6 Other adverse effects** No data available

#### SECTION 13: Disposal considerations

#### **13.1 Waste treatment methods**

#### Product

Waste material must be disposed of in accordance with the national and loc No mixing with other waste. Handle uncleaned containers like the product See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

#### **SECTION 14: Transport information**

#### DOT (US)

UN number: 1230 Class: 3 Packing group: II Proper shipping name: MethanolSOLUTION

Reportable Quantity (RQ): Poison Inhalation Hazard: No

IMDG

UN number: 1230 E, S-D

Class: 3 (6.1)

Packing group: II EMS-No: F-

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#### IATA UN number: 1230 Class: 3 (6.1) Packing group: II Proper shipping name: MethanolSOLUTION

#### **SECTION 15: Regulatory information**

#### SARA 302 Components

This material does not contain any components with a section 302 EHS TPQ.

#### SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

|          | CAS-No. | Revision Date |
|----------|---------|---------------|
| Methanol | 67-56-1 | 2007-07-01    |

#### SARA 311/312 Hazards

Fire Hazard, Acute Health Hazard, Chronic Health Hazard

| Massachusetts Right To Know Components |         |               |
|--|---------|---------------|
|  | CAS-No. | Revision Date |
| Methanol                               | 67-56-1 | 2007-07-01    |

No components are subject to the Massachusetts Right to Know Act.

| Pennsylvania Right To Know Components | CAS-No. | Revision Date |
|---------------------------------------|---------|---------------|
| Methanol                              | 67-56-1 | 2007-07-01    |
| New Jersey Right To Know Components   | CAS-No. | Revision Date |
| Methanol                              | 67-56-1 | 2007-07-01    |

#### **SECTION 16: Other information**

#### **Further information**

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See

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# **SAFETY DATA SHEET**

Version 6.2 Revision Date 07/02/2019 Print Date 05/28/2020

#### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### **1.1** Product identifiers

- .

| Product name   | : | $(-)-\Delta^9$ -THC-D <sub>3</sub> solution |
|----------------|---|---|
| Product Number | : | T-011                                       |
| Brand          | : | Cerilliant                                  |
| Index-No.      | : | 603-001-00-X                                |

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Synthesis of substances

#### **1.3** Details of the supplier of the safety data sheet

| Company   | : | Sigma-Aldrich Inc.<br>3050 Spruce Street<br>ST. LOUIS MO 63103<br>UNITED STATES |
|-----------|---|---|
| Telephone | : | +1 314 771-5765   |
| Fax       | : | +1 800 325-5052   |

#### **1.4 Emergency telephone number**

Emergency Phone # : +1-703-527-3887

#### **SECTION 2: Hazards identification**

#### 2.1 Classification of the substance or mixture

#### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 2), H225 Acute toxicity, Oral (Category 3), H301 Acute toxicity, Inhalation (Category 3), H331 Acute toxicity, Dermal (Category 3), H311 Reproductive toxicity (Category 2), H361 Specific target organ toxicity - single exposure (Category 1), H370

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### 2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

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| Hazard statement(s)                |  |
|------------------------------------|--|
| H225<br>H301 + H311 + H331<br>H361 | Highly flammable liquid and vapour.<br>Toxic if swallowed, in contact with skin or if inhaled.<br>Suspected of damaging fertility or the unborn child. |
| H370                               | Causes damage to organs.   |
| Precautionary statement(s)         |  |
| P201                               | Obtain special instructions before use.  |
| P202                               | Do not handle until all safety precautions have been read and understood.  |
| P210                               | Keep away from heat/sparks/open flames/hot surfaces. No smoking.   |
| P233                               | Keep container tightly closed.   |
| P240                               | Ground/bond container and receiving equipment.   |
| P241                               | Use explosion-proof electrical/ ventilating/ lighting equipment.   |
| P242                               | Use only non-sparking tools.   |
| P243                               | Take precautionary measures against static discharge.  |
| P260                               | Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  |
| P264                               | Wash skin thoroughly after handling.   |
| P270                               | Do not eat, drink or smoke when using this product.  |
| P271                               | Use only outdoors or in a well-ventilated area.  |
| P280                               | Wear protective gloves/ protective clothing/ eye protection/ face protection.  |
| P301 + P310                        | IF SWALLOWED: Immediately call a POISON CENTER/doctor.   |
| P303 + P361 + P353                 | IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.   |
| P304 + P340                        | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.   |
| P307 + P311                        | IF exposed: Call a POISON CENTER or doctor/ physician.   |
| P322                               | Specific measures (see supplemental first aid instructions on  |
| 6220                               | this label).   |
| P330                               | Rinse mouth.   |
| P361<br>P363                       | Remove/Take off immediately all contaminated clothing.<br>Wash contaminated clothing before reuse.   |
| P370 + P378                        | In case of fire: Use dry sand, dry chemical or alcohol-resistant   |
|                                    | foam for extinction.   |
| P403 + P233                        | Store in a well-ventilated place. Keep container tightly closed.   |
| P403 + P235                        | Store in a well-ventilated place. Keep cool.   |
| P405                               | Store locked up.   |
| P501                               | Dispose of contents/ container to an approved waste disposal plant.  |

#### 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

### **SECTION 3:** Composition/information on ingredients

#### 3.2 Mixtures

| Component                                      |   | Classification  | Concentration       |
|--|---|---|---------------------|
| Methanol                                       |   |   |                     |
| CAS-No.<br>EC-No.<br>Index-No.<br>Registration | 67-56-1<br>200-659-6<br>603-001-00-X<br>01-2119433307-44- | Flam. Liq. 2; Acute Tox. 3;<br>STOT SE 1; H225, H301,<br>H331, H311, H370 | >= 90 - <=<br>100 % |

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| number        | XXXX          |                                      |              |
|---------------|---------------|--------------------------------------|--------------|
| D9-TETRAHYDRO | CANNABINOL-D3 |                                      |              |
| CAS-No.       | 81586-39-2    | Acute Tox. 4; Repr. 2;<br>H302, H361 | >= 0.1 - < 1 |

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### **SECTION 4: First aid measures**

#### 4.1 Description of first aid measures

#### **General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

#### In case of eye contact

Flush eyes with water as a precaution.

#### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

- **4.2 Most important symptoms and effects, both acute and delayed** The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
- **4.3 Indication of any immediate medical attention and special treatment needed** No data available

#### **SECTION 5: Firefighting measures**

#### 5.1 Extinguishing media

**Suitable extinguishing media** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

- **5.2 Special hazards arising from the substance or mixture** Carbon oxides
- **5.3** Advice for firefighters Wear self-contained breathing apparatus for firefighting if necessary.

### 5.4 Further information

Use water spray to cool unopened containers.

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#### SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

For personal protection see section 8.

#### **6.2 Environmental precautions** Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

**6.3 Methods and materials for containment and cleaning up** Contain spillage, and then collect with an electrically protected vacuum cleaner or by wetbrushing and place in container for disposal according to local regulations (see section 13).

#### 6.4 Reference to other sections

For disposal see section 13.

#### SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use explosion-proof equipment.Keep away from sources of ignition - No smoking.Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2.

#### 7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store under inert gas. hygroscopic

Recommended storage temperature -20 °C Storage class (TRGS 510): 3: Flammable liquids

#### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

#### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

#### **Components with workplace control parameters**

| Component | CAS-No. | Value        | Control<br>parameters | Basis                                      |
|-----------|---------|--------------|-----------------------|--|
| Methanol  | 67-56-1 | TWA          | 200 ppm               | USA. ACGIH Threshold Limit<br>Values (TLV) |
|           | Remarks | or Indices ( |                       | ,  |

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| STEL          | 250 ppm                              | USA. ACGIH Threshold Limit<br>Values (TLV)   |
|---------------|--------------------------------------|--|
|               | for which there                      | e is a Biological Exposure Index   |
|               | (see BEI® section<br>cutaneous absor |  |
| TWA           | 200 ppm<br>260 mg/m3                 | USA. NIOSH Recommended<br>Exposure Limits  |
| Potential for | or dermal absorp                     | tion   |
| ST            | 250 ppm<br>325 mg/m3                 | USA. NIOSH Recommended<br>Exposure Limits  |
|               | or dermal absorp                     |  |
| TWA           | 200 ppm<br>260 mg/m3                 | USA. Occupational Exposure<br>Limits (OSHA) - Table Z-1<br>Limits for Air Contaminants           |
| The value i   | n mg/m3 is app                       |  |
| С             | 1,000 ppm                            | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
| Skin          |                                      |  |
| PEL           | 200 ppm<br>260 mg/m3                 | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
| Skin          | 1                                    |  |
| STEL          | 250 ppm<br>325 mg/m3                 | California permissible exposure<br>limits for chemical<br>contaminants (Title 8, Article<br>107) |
| Skin          |                                      |  |

#### Biological occupational exposure limits

| Diviogical occa |         |  |         |                     |  |
|-----------------|---------|--|---------|---------------------|--|
| Component       | CAS-No. | Parameters   | Value   | Biological specimen | Basis  |
| Methanol        | 67-56-1 | Methanol   | 15 mg/l | Urine               | ACGIH -<br>Biological<br>Exposure Indices<br>(BEI) |
|                 | Remarks | End of shift (As soon as possible after exposure ceases) |         |                     | oosure ceases)                                     |

#### 8.2 Exposure controls

#### Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

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#### **Personal protective equipment**

#### Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### **Skin protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact Material: butyl-rubber Minimum layer thickness: 0.3 mm Break through time: 480 min Material tested:Butoject® (KCL 897 / Aldrich Z677647, Size M)

Splash contact Material: Nitrile rubber Minimum layer thickness: 0.4 mm Break through time: 30 min Material tested:Camatril® (KCL 730 / Aldrich Z677442, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

#### **Body Protection**

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### **Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### **Control of environmental exposure**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

#### **SECTION 9: Physical and chemical properties**

#### 9.1 Information on basic physical and chemical properties

- a) Appearance Form: liquid
- b) Odour No data available
- c) Odour Threshold No data available
- d) pH No data available

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| e) | Melting<br>point/freezing point                    | No data available   |
|----|--|---|
| f) | Initial boiling point<br>and boiling range         | 64 - 65 °C 147 - 149 °F at 1.013 hPa                            |
| g) | Flash point  | 9.7 °C (49.5 °F) - closed cup                                   |
| h) | Evaporation rate                                   | No data available   |
| i) | Flammability (solid,<br>gas)                       | No data available   |
| j) | Upper/lower<br>flammability or<br>explosive limits | Upper explosion limit: 36 %(V)<br>Lower explosion limit: 6 %(V) |
| k) | Vapour pressure                                    | No data available   |
| I) | Vapour density                                     | No data available   |
| m) | Relative density                                   | 0.791 g/cm3 at 20 °C (68 °F)                                    |
| n) | Water solubility                                   | No data available   |
| 0) | Partition coefficient:<br>n-octanol/water          | No data available   |
| p) | Auto-ignition<br>temperature                       | No data available   |
| q) | Decomposition<br>temperature                       | No data available   |
| r) | Viscosity  | No data available   |
| s) | Explosive properties                               | No data available   |
| t) | Oxidizing properties                               | No data available   |
|    |  |   |

9.2 Other safety information No data available

#### SECTION 10: Stability and reactivity

#### **10.1 Reactivity**

No data available

#### **10.2** Chemical stability

Stable under recommended storage conditions.

#### **10.3** Possibility of hazardous reactions

Vapours may form explosive mixture with air.

### 10.4 Conditions to avoid

Heat, flames and sparks. Extremes of temperature and direct sunlight.

#### **10.5** Incompatible materials

Acids, Oxidizing agents, Alkali metals, Strong oxidizing agents, Strong acids, Acid chlorides, Acid anhydrides, Reducing agents, Strong reducing agents, Phosphorus halides

#### **10.6 Hazardous decomposition products** Other decomposition products - No data available Hazardous decomposition products formed under fire conditions. - Carbon oxides

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#### **SECTION 11: Toxicological information**

#### **11.1** Information on toxicological effects

#### Acute toxicity

No data available

Inhalation: No data available

Dermal: No data available

No data available

#### Skin corrosion/irritation No data available

Serious eye damage/eye irritation No data available

#### **Respiratory or skin sensitisation** No data available

Germ cell mutagenicity

No data available

#### Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

- ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

#### **Reproductive toxicity**

No data available

**Specific target organ toxicity - single exposure** No data available

**Specific target organ toxicity - repeated exposure** No data available

Aspiration hazard

No data available

# Additional Information

RTECS: Not available

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To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Methyl alcohol may be fatal or cause blindness if swallowed., Cannot be made nonpoisonous., Effects due to ingestion may include:, Nausea, Headache, Vomiting, Gastrointestinal disturbance, Dizziness, Weakness, Confusion.

Stomach - Irregularities - Based on Human Evidence

#### **SECTION 12: Ecological information**

#### **12.1 Toxicity**

No data available

- **12.2 Persistence and degradability** No data available
- **12.3 Bioaccumulative potential** No data available
- **12.4 Mobility in soil** No data available
- 12.5 Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
- **12.6 Other adverse effects** No data available

#### **SECTION 13: Disposal considerations**

#### 13.1 Waste treatment methods

#### Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

#### **Contaminated packaging**

Dispose of as unused product.

#### **SECTION 14: Transport information**

#### DOT (US)

UN number: 1230 Class: 3 Packing group: II Proper shipping name: MethanolSOLUTION

Reportable Quantity (RQ): Poison Inhalation Hazard: No

#### IMDG

UN number: 1230 Class: 3 (6.1)

Packing group: II

EMS-No: F-E, S-D

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#### IATA UN number: 1230 Class: 3 (6.1) Packing group: II Proper shipping name: MethanolSOLUTION

| <b>SARA 302 Components</b><br>No chemicals in this material are subject to the reportin<br>Section 302.  | g requirement      | s of SARA Title III        |
|--|--------------------|----------------------------|
| <b>SARA 313 Components</b><br>The following components are subject to reporting level<br>Section 313:  | s established l    | by SARA Title III,         |
| Methanol   | CAS-No.<br>67-56-1 | Revision Dat<br>2007-07-01 |
| SARA 311/312 Hazards<br>Fire Hazard, Chronic Health Hazard   |                    |                            |
| Massachusetts Right To Know Components   |                    |                            |
| Methanol   | CAS-No.<br>67-56-1 | Revision Dat<br>2007-07-01 |
| No components are subject to the Massachusetts Right   | to Know Act.       |                            |
| Pennsylvania Right To Know Components<br>Methanol  | CAS-No.<br>67-56-1 | Revision Dat<br>2007-07-01 |
| Methanol   | CAS-No.<br>67-56-1 | Revision Dat<br>2007-07-01 |
| New Jersey Right To Know Components<br>Methanol  | CAS-No.<br>67-56-1 | Revision Dat<br>2007-07-01 |
| <b>California Prop. 65 Components</b><br>WARNING: This product contains a chemical known to<br>the State of California to cause birth defects or other<br>reproductive harm.Methanol | CAS-No.<br>67-56-1 | Revision Dat<br>2012-03-16 |

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#### **SECTION 16: Other information**

#### Further information

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