

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

#### 1.1 Product identifiers

Product name	$(\pm)$ -Amphetamine solution
Product Number Brand	: A-007 : 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 Fax	-	+1 314 771-5765 +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. EC-No. Index-No. Registration number	67-56-1 200-659-6 603-001-00-X 01-2119433307-44- XXXX	Flam. Liq. 2; Acute Tox. 3; STOT SE 1; H225, H301, H331, H311, H370	>= 90 - <= 100 %
Amphetamine			
CAS-No. EC-No.	300-62-9 206-096-2	Flam. Liq. 3; Acute Tox. 2; H226, H300	>= 0.1 - < 1 %

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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 parameters	Basis
Methanol	67-56-1	TWA	200 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	or Indices (		
		STEL	250 ppm	USA. ACGIH Threshold Limit Values (TLV)
		Headache Nausea Dizziness Eye damage Substances for which there is a Biological Exposure Inde or Indices (see BEI® section) Danger of cutaneous absorption		

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

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

Component	CAS-No.	Parameters	Value	Biological specimen	Basis
Methanol	67-56-1	Methanol	15 mg/l	Urine	ACGIH - Biological Exposure Indices (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 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, gas)	No data available

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j)	Upper/lower flammability or explosive limits	Upper explosion limit: 36 %(V) 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: n-octanol/water	No data available
p)	Auto-ignition temperature	No data available
q)	Decomposition 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 The following components are subject to reporting levels established by SARA Title III, Section 302:			
Amphetamine	CAS-No. 300-62-9	Revision Date 2007-07-01	
SARA 313 Components The following components are subject to reporting leve Section 313:	ls established by S	SARA Title III,	
Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01	
SARA 311/312 Hazards Fire Hazard, Acute Health Hazard, Chronic Health Hazar	rd		
Massachusetts Right To Know Components			
Methanol	CAS-No. 67-56-1	Revision Date 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. 67-56-1	Revision Date 2007-07-01	
Amphetamine	300-62-9	2007-07-01	
Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01	
New Jersey Right To Know Components Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01	
<b>California Prop. 65 Components</b> WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.Methanol	CAS-No. 67-56-1	Revision Date 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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# 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. 3050 Spruce Street ST. LOUIS MO 63103 UNITED STATES
Telephone Fax	-	+1 314 771-5765 +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. 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 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. Index-No.	200-835-2 608-001-00-3	Eye Irrit. 2A; H225, H302, 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 Values (TLV)
	Remarks	Not classifi	piratory Tract irr able as a humar cutaneous absor	n carcinogen
		TWA	20 ppm 34 mg/m3	USA. NIOSH Recommended Exposure Limits
		Forms cyar	nide in the body.	
		TWA	40 ppm 70 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		The value i	in mg/m3 is app	roximate.
		PEL	40 ppm 70 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
		Skin		·
		STEL	60 ppm 105 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 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 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, gas)	No data available
j)	Upper/lower flammability or explosive limits	Upper explosion limit: 16 %(V) 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. 75-05-8	Revision Date 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. 3050 Spruce Street ST. LOUIS MO 63103 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 H370	Toxic if swallowed, in contact with skin or if inhaled. 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 P241	Ground/bond container and receiving equipment.
P241 P242	Use explosion-proof electrical/ ventilating/ lighting equipment. Use only non-sparking tools.
P242 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 P363	Remove/Take off immediately all contaminated clothing.
P303 P370 + P378	Wash contaminated clothing before reuse. 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. EC-No. Index-No. Registration number	67-56-1 200-659-6 603-001-00-X 01-2119433307-44- XXXX	Flam. Liq. 2; Acute Tox. 3; STOT SE 1; H225, H301, H331, H311, H370	>= 90 - <= 100 %
(±)-Amphetamine-	·D5		
CAS-No.	136765-27-0	Flam. Liq. 3; Acute Tox. 2; H226, H300	>= 0.1 - < 1 %

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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 parameters	Basis	
Methanol	67-56-1	TWA	200 ppm	USA. ACGIH Threshold Limit Values (TLV)	
	Remarks	Headache Nausea Dizziness Eye damage Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Danger of cutaneous absorption			
		STEL 250 ppm USA. ACGIH Threshold Limit Values (TLV)			
		Headache Nausea Dizziness Eye damage 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 Limits for Air Contaminants	
The value i	n mg/m3 is appi		
С	1,000 ppm	California permissible exposure limits for chemical contaminants (Title 8, Article 107)	
Skin			
PEL	200 ppm 260 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)	
Skin	I		
STEL	250 ppm 325 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 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 - Biological Exposure Indices (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 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, gas)	No data available
j)	Upper/lower flammability or explosive limits	Upper explosion limit: 36 %(V) 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-octanol/water	No data available
p)	Auto-ignition temperature	No data available
q)	Decomposition 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. 67-56-1	Revision Date 2007-07-01
Massachusetts Right To Know Components Methanol	CAS-No. 67-56-1	Revision Date 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. 67-56-1	Revision Date 2007-07-01
(±)-Amphetamine-D5	136765-27-0	2007-03-01
Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01
New Jersey Right To Know Components Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01
<b>California Prop. 65 Components</b> WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.Methanol	CAS-No. 67-56-1	Revision Date 2012-03-16

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

#### Further information

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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. 3050 Spruce Street ST. LOUIS MO 63103 UNITED STATES	
Telephone Fax	-	+1 314 771-5765 +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. 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
	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. Registration	608-001-00-3 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 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 point/freezing point</li> </ul>	No data available	
f)	) Initial boiling point 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, gas)	No data available	
j)	) Upper/lower flammability or explosive limits	Upper explosion limit: 16 %(V) 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	
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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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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: 6.4

Revision Date: 05/08/2020

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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 Brand Index-No.	:	A-903 Cerilliant 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. 3050 Spruce Street ST. LOUIS MO 63103 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 parameters	Basis
Methanol	67-56-1	TWA	200 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	or Indices (		•
		STEL	250 ppm	USA. ACGIH Threshold Limit Values (TLV)
		or Indices ( Danger of d	s for which there (see BEI® section cutaneous absor	is a Biological Exposure Index on) ption
		TWA	200 ppm 260 mg/m3	USA. NIOSH Recommended Exposure Limits
		Potential for	or dermal absorp	tion

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

# **Biological occupational exposure limits**

Component	CAS-No.	Parameters	Value	Biological specimen	Basis
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.

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 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, gas)	No data available
j)	Upper/lower flammability or explosive limits	Upper explosion limit: 36 %(V) 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> No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.					
	<b>SARA 313 Components</b> The following components are subject to reporting level Section 313:	following components are subject to reporting levels established by SARA Title III,				
	Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01			
	SARA 311/312 Hazards Fire Hazard, Acute Health Hazard, Chronic Health Hazar	ď				
	Massachusetts Right To Know Components					
	Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01			
	No components are subject to the Massachusetts Right	to Know Act.				
	<b>Pennsylvania Right To Know Components</b> Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01			
	Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01			
	New Jersey Right To Know Components Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01			
	Alprazolam	28981-97-7	1994-07-31			
	<b>California Prop. 65 Components</b> WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.Methanol Alprazolam	CAS-No. 67-56-1 28981-97-7	Revision Date 2012-03-16 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.

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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. 3050 Spruce Street ST. LOUIS MO 63103 UNITED STATES
Telephone Fax	-	+1 314 771-5765 +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. EC-No.	67-56-1 200-659-6	Flam. Liq. 2; Acute Tox. 3; STOT SE 1; H225, H301,	>= 90 - <= 100 %
Index-No.	603-001-00-X	H331, H311, H370	100 %
Registration number	01-2119433307-44- 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 parameters	Basis		
Remarks He Na Di Ey Su or Da		TWA	200 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 cutaneous absorption				
		STEL	250 ppm	USA. ACGIH Threshold Limit Values (TLV)		
			(see BEI® section cutaneous absor	is a Biological Exposure Index on) ption		
			USA. NIOSH Recommended Exposure Limits			
		Potential for	or dermal absorp	tion		

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

# **Biological occupational exposure limits**

Component	CAS-No.	Parameters	Value	Biological specimen	Basis	
Methanol 67-56-1		Methanol	15 mg/l	Urine	ACGIH - Biological Exposure Indices (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 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, gas)	No data available
j)	Upper/lower flammability or explosive limits	Upper explosion limit: 36 %(V) 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> No chemicals in this material are subject to the reportin Section 302.	g requirements of	SARA Title III,
	SARA 313 Components The following components are subject to reporting level Section 313:	s established by S	ARA Title III,
	Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01
	SARA 311/312 Hazards Fire Hazard, Acute Health Hazard, Chronic Health Hazar	ď	
	Massachusetts Right To Know Components		
	Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01
	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
	Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01
	New Jersey Right To Know Components Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01
	<b>California Prop. 65 Components</b> WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.Methanol	CAS-No. 67-56-1	Revision Date 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. 3050 Spruce Street ST. LOUIS MO 63103 UNITED STATES
Telephone Fax	-	+1 314 771-5765 +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. EC-No.	67-56-1 200-659-6	Flam. Liq. 2; Acute Tox. 3; STOT SE 1; H225, H301,	>= 90 - <= 100 %
Index-No. Registration number	603-001-00-X 01-2119433307-44- 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 parameters	Basis
Methanol	67-56-1	TWA	200 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Headache Nausea Dizziness Eye damage Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Danger of cutaneous absorption		
		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 cutaneous absorption		

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

# **Biological occupational exposure limits**

Component	CAS-No.	Parameters	Value	Biological specimen	Basis	
Methanol	67-56-1	Methanol	15 mg/l	Urine	ACGIH - Biological Exposure Indices (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 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, gas)	No data available

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j)	Upper/lower flammability or explosive limits	Upper explosion limit: 36 %(V) 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-octanol/water	No data available			
p)	Auto-ignition temperature	No data available			
q)	Decomposition 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> No chemicals in this material are subject to the reporting Section 302.	g requirements of	SARA Title III,	
<b>SARA 313 Components</b> The following components are subject to reporting levels Section 313:	he following components are subject to reporting levels established by SARA Title III,		
Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01	
Massachusetts Right To Know Components			
Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01	
	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	
Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01	
New Jersey Right To Know Components Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01	
<b>California Prop. 65 Components</b> WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.Methanol	CAS-No. 67-56-1	Revision Date 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: 04/20/2020

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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. 3050 Spruce Street ST. LOUIS MO 63103 UNITED STATES
Telephone Fax	-	+1 314 771-5765 +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 parameters	Basis
Methanol	67-56-1	TWA	200 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	or Indices (		
		STEL	250 ppm	USA. ACGIH Threshold Limit Values (TLV)
		or Indices (		

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

## **Biological occupational exposure limits**

Component	CAS-No.	Parameters	Value	Biological specimen	Basis
Methanol	67-56-1	Methanol	15 mg/l	Urine	ACGIH - Biological Exposure Indices (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 point/freezing point	No data available
f)	Initial boiling point and boiling range	64 - 65 °C 147 - 149 °F at 1.013 hPa 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, gas)	No data available

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j)	Upper/lower flammability or explosive limits	Upper explosion limit: 36 %(V) 36 %(V) 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: n-octanol/water	No data available
p)	Auto-ignition temperature	No data available
q)	Decomposition 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> 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> No chemicals in this material are subject to the reporting Section 302.	g requirements of	SARA Title III,
SARA 313 Components The following components are subject to reporting levels Section 313:	s established by S	ARA Title III,
Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01
Massachusetts Right To Know Components		
Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01
No components are subject to the Massachusetts Right t	to Know Act.	
Pennsylvania Right To Know Components Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01
Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01
New Jersey Right To Know Components Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01
<b>California Prop. 65 Components</b> WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.Methanol	CAS-No. 67-56-1	Revision Date 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**

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. 3050 Spruce Street ST. LOUIS MO 63103 UNITED STATES
Telephone Fax	-	+1 314 771-5765 +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	, 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. Registration number	608-001-00-3 01-2119471307-38- XXXX	H332, H312, H319	
Cocaine CAS-No.	50-36-2	Acute Tox. 2; Repr. 2;	>= 0.1 - < 1
EC-No.	200-032-7	STOT SE 3; H300, H330, 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 34 mg/m3	USA. NIOSH Recommended Exposure Limits
 Forms cyar	ide in the body.	
TWA	40 ppm 70 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
The value i	n mg/m3 is appi	roximate.
PEL	40 ppm 70 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
Skin		
STEL	60 ppm 105 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 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 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	2 °C (36 °F) - closed cup
h)	Evaporation rate	No data available
i)	Flammability (solid, gas)	No data available
j)	Upper/lower flammability or explosive limits	Upper explosion limit: 16 %(V) 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: n-octanol/water	No data available
p)	Auto-ignition temperature	No data available
q)	Decomposition 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
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#### 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. 75-05-8	Revision Date 2007-07-01
SARA 311/312 Hazards Fire Hazard, Acute Health Hazard		
Massachusetts Right To Know Components		
Acetonitrile	CAS-No. 75-05-8	Revision Date 2007-07-01
Pennsylvania Right To Know Components		
Acetonitrile	CAS-No. 75-05-8	Revision Date 2007-07-01
California Prop. 65 Components		
, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.Cocaine	CAS-No. 50-36-2	Revision Date 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. 3050 Spruce Street ST. LOUIS MO 63103 UNITED STATES
Telephone Fax	-	+1 314 771-5765 +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. EC-No.	75-05-8 200-835-2	Flam. Liq. 2; Acute Tox. 4; Eye Irrit. 2A; H225, H302,	>= 90 - <= 100 %
Index-No. Registration	608-001-00-3 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 parameters	Basis
Acetonitrile	75-05-8	TWA	20 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Not classifi	piratory Tract irri able as a human cutaneous absor	carcinogen
		TWA	20 ppm 34 mg/m3	USA. NIOSH Recommended Exposure Limits
		Forms cyar	ide in the body.	
		TWA	40 ppm 70 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		The value i	n mg/m3 is appi	roximate.
		PEL	40 ppm 70 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
		Skin		

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	STEL	60 ppm 105 mg/m3	California permissible exposure 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.

## **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 point/freezing point	No data available
f)	Initial boiling point 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, gas)	No data available
j)	Upper/lower flammability or explosive limits	Upper explosion limit: 16 %(V) 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: n-octanol/water	No data available
p)	Auto-ignition temperature	No data available
q)	Decomposition 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 Brand Index-No.	-	C-015 Cerilliant 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 3050 Spruce Street SAINT LOUIS MO 63103 USA
Telephone Fax	-	+1 800-325-5832 +1 800-325-5052

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

Emergency Phone #	:	+1-703-527-3887 (CHEMTREC)
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## 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) H225 H301 + H311 + H331 H370	Highly flammable liquid and vapour. Toxic if swallowed, in contact with skin or if inhaled Causes damage to organs.
Precautionary statement(s) P210 P233 P240 P241 P242	Keep away from heat/sparks/open flames/hot surfaces. No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ ventilating/ lighting/ equipment. 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 ppm	USA. ACGIH Threshold Limit Values (TLV)	
	Remarks	Headache Nausea Dizziness Eye damage Substances for which there is a Biological Exposure Index or Indices			

(see BEI® s	ection)	
	utaneous absorpt	ion
STEL	250.000000 ppm	USA. ACGIH Threshold Limit Values (TLV)
	for which there is	s a Biological Exposure Index or Indices
(see BEI® s Danger of c	ection) utaneous absorpt	ion
TWA	200.000000 ppm 260.000000 mg/m3	USA. NIOSH Recommended Exposure Limits
Potential for	dermal absorptio	on
ST	250.000000 ppm 325.000000 mg/m3	USA. NIOSH Recommended Exposure Limits
Potential for	dermal absorptio	<u>מ</u> וויד איז
TWA	200.000000 ppm 260.000000 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
The value in	mg/m3 is approx	ximate.
TWA	200 ppm	USA. ACGIH Threshold Limit Values (TLV)
(see BEI® s	for which there is	s a Biological Exposure Index or Indices
STEL	250 ppm	USA. ACGIH Threshold Limit Values (TLV)
(see BEI® s	for which there is	
TWA	200 ppm 260 mg/m3	USA. NIOSH Recommended Exposure Limits
Potential for	dermal absorption	
ST	250 ppm 325 mg/m3	USA. NIOSH Recommended Exposure Limits
Potential for	dermal absorptio	
TWA	200 ppm 260 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
1	malm? in annro	vimate
STEL	n mg/m3 is approx 250 ppm 325 mg/m3	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000

TWA	200 ppm 260 mg/m3	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000		
Skin nota	Skin notation			
С	1,000 ppm	California permissible exposure limits for chemical contaminants (Title 8, Article 107)		
Skin	Skin			
PEL	200 ppm 260 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)		
Skin	Skin			
STEL	250 ppm 325 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)		
Skin				

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

Component	CAS-No.	Parameters	Value	Biological specimen	Basis	
Methanol	67-56-1	Methanol	15.0000 mg/l	Urine	ACGIH - Biological Exposure Indices (BEI)	
	Remarks	End of shift (A	End of shift (As soon as possible after exposure ceases)			
		Methanol	15 mg/l	Urine	ACGIH - Biological Exposure Indices (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 flammability or explosive limits	Upper explosion limit: 36 %(V) 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- octanol/water	No data available		
p)	Auto-ignition temperature	No data available		
q)	Decomposition 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				

#### **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> UN number: 1230 Proper shipping nam Reportable Quantity		Packing group: II		
Poison Inhalation Ha	zard: No			
<b>IMDG</b> UN number: 1230 Proper shipping nam	Class: 3 (6.1) e: METHANOL, SOLUTIOI	Packing group: II N	EMS-No: F-E, S-D	
<b>IATA</b> UN number: 1230 Proper shipping nam	Class: 3 (6.1) 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> Fire Hazard, Acute Health Hazard, Chronic Health Hazard		
Massachusetts Right To Know Components		
Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01
Pennsylvania Right To Know Components		
Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01
New Jersey Right To Know Components		
Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01
California Prop. 65 Components		
WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm. Methanol	CAS-No. 67-56-1	Revision Date 2012-03-16

#### **16. OTHER INFORMATION**

#### Full text of H-Statements referred to under sections 2 and 3.

Acute Tox. Flam. Liq. H225 H301	Acute toxicity Flammable liquids Highly flammable liquid and vapour. Toxic if swallowed.		
H301 + H311 + H331	Toxic if swallowed, in contact with skin or if inhaled		
H311 H331 H370	Toxic in contact with skin. Toxic if inhaled. Causes damage to organs.		
STOT SE	Specific target organ toxicity - single exposure		
HMIS Rating Health hazard: Chronic Health Haz Flammability: Physical Hazard	ard: 2 3 0		
<b>NFPA Rating</b> Health hazard: Fire Hazard: Reactivity Hazard:	2 3 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. 3050 Spruce Street ST. LOUIS MO 63103 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. 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 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. EC-No. Index-No. Registration number	75-05-8 200-835-2 608-001-00-3 01-2119471307-38- XXXX	Flam. Liq. 2; Acute Tox. 4; Eye Irrit. 2A; H225, H302, H332, H312, H319	>= 90 - <= 100 %
Cocaethylene-D8			
CAS-No.	152521-09-0	Acute Tox. 3; H301	>= 0.1 - < 1 %

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 105 mg/m3	California permissible exposure 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.

#### 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.

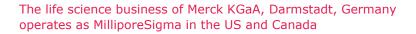
#### **SECTION 9: Physical and chemical properties**

#### 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 point/freezing point	No data available
f)	Initial boiling point 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 flammability or 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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Version: 1.0

Revision Date: 01/29/2020

Print Date: 02/07/2020

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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. 3050 Spruce Street ST. LOUIS MO 63103 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 parameters	Basis	
Methanol	ol 67-56-1 TWA 200 ppm		200 ppm	USA. ACGIH Threshold Limit Values (TLV)	
	Remarks	or Indices (			
		STEL 250 ppm USA. ACGIH Thresh Values (TLV)			
		Headache Nausea Dizziness Eye damage Substances for which there is a Biological Exposure II or Indices (see BEI® section) Danger of cutaneous absorption			
		TWA	200 ppm 260 mg/m3	USA. NIOSH Recommended Exposure Limits	
		Potential for dermal absorption			

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

### **Biological occupational exposure limits**

Component	CAS-No.	Parameters	Value	Biological specimen	Basis		
Methanol	67-56-1	Methanol	15 mg/l	Urine	ACGIH - Biological Exposure Indices (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 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, gas)	No data available
j)	Upper/lower flammability or explosive limits	Upper explosion limit: 36 %(V) 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 No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.					
	<b>SARA 313 Components</b> The following components are subject to reporting levels established by SARA Title III, Section 313:					
	Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01			
	SARA 311/312 Hazards Fire Hazard, Acute Health Hazard, Chronic Health Hazar	ď				
	Massachusetts Right To Know Components					
	Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01			
	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			
	Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01			
	New Jersey Right To Know Components Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01			
	<b>California Prop. 65 Components</b> WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.Methanol	CAS-No. 67-56-1	Revision Date 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: 04/04/2020

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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. 3050 Spruce Street ST. LOUIS MO 63103 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 Values (TLV)
	Remarks	or Indices (		is a Biological Exposure Index on)
		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 cutaneous absorption		
		TWA	200 ppm 260 mg/m3	USA. NIOSH Recommended Exposure Limits
		Potential for	or dermal absorp	tion

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ST	250 ppm 325 mg/m3	USA. NIOSH Recommended Exposure Limits
Potential for	or dermal absorp	tion
TWA	200 ppm 260 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
The value i	n mg/m3 is app	roximate.
С	1,000 ppm	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
Skin		
PEL	200 ppm 260 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
Skin		
STEL	250 ppm 325 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 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 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, gas)	No data available
j)	Upper/lower flammability or 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: n-octanol/water	No data available
p)	Auto-ignition temperature	No data available
q)	Decomposition 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**

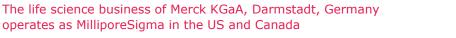
No data available

#### 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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Version: 1.0

Revision Date: 01/29/2020

Print Date: 02/07/2020

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

### **1.1 Product identifiers**

Product name	<sup>:</sup> 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. 3050 Spruce Street ST. LOUIS MO 63103 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. EC-No. Index-No. Registration number	67-56-1 200-659-6 603-001-00-X 01-2119433307-44- XXXX	Flam. Liq. 2; Acute Tox. 3; STOT SE 1; H225, H301, H331, H311, H370	>= 90 - <= 100 %
Diazepam			
CAS-No. EC-No.	439-14-5 207-122-5	Acute Tox. 3; H301, H311	>= 0.1 - < 1 %

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

# **Biological occupational exposure limits**

Component	CAS-No.	Parameters	Value	Biological specimen	Basis
Methanol	67-56-1	Methanol	15 mg/l	Urine	ACGIH - Biological Exposure Indices (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 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, gas)	No data available

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	j)	Upper/lower flammability or explosive limits	Upper explosion limit: 36 %(V) 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-octanol/water	No data available
	p)	Auto-ignition temperature	No data available
	q)	Decomposition 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> Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01
Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01
New Jersey Right To Know Components Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01
Diazepam	439-14-5	1993-04-24
<b>California Prop. 65 Components</b> WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.Methanol Diazepam	CAS-No. 67-56-1 439-14-5	Revision Date 2012-03-16 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

Revision Date: 01/24/2020

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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. 3050 Spruce Street ST. LOUIS MO 63103 UNITED STATES
Telephone Fax	-	+1 314 771-5765 +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 H351 H370	Toxic if swallowed, in contact with skin or if inhaled. Suspected of causing cancer. 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. EC-No.	67-56-1 200-659-6	Flam. Liq. 2; Acute Tox. 3; STOT SE 1; H225, H301,	>= 90 - <= 100 %
Index-No.	603-001-00-X	H331, H311, H370	100 /0
Registration number	01-2119433307-44- 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 parameters	Basis
Methanol	67-56-1	TWA	200 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	or Indices (		

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STEL	250 ppm	USA. ACGIH Threshold Limit Values (TLV)
	for which there	e is a Biological Exposure Index
	(see BEI® section cutaneous absor	
TWA	200 ppm 260 mg/m3	USA. NIOSH Recommended Exposure Limits
Potential for	or dermal absorp	tion
ST	250 ppm 325 mg/m3	USA. NIOSH Recommended Exposure Limits
	or dermal absorp	
TWA	200 ppm 260 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
The value i	n mg/m3 is app	
С	1,000 ppm	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
Skin		
PEL	200 ppm 260 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
Skin	1	
STEL	250 ppm 325 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 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 - 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.

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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 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, gas)	No data available
j)	Upper/lower flammability or explosive limits	Upper explosion limit: 36 %(V) 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: n-octanol/water	No data available
p)	Auto-ignition temperature	No data available
q)	Decomposition 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> No chemicals in this material are subject to the reportin Section 302.	g requirement	s of SARA Title III
<b>SARA 313 Components</b> The following components are subject to reporting level Section 313:	s established b	by SARA Title III,
Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01
SARA 311/312 Hazards Fire Hazard, Chronic Health Hazard		
Massachusetts Right To Know Components		
Methanol	CAS-No. 67-56-1	Revision Dat 2007-07-01
No components are subject to the Massachusetts Right	to Know Act.	
Pennsylvania Right To Know Components Methanol	CAS-No. 67-56-1	Revision Dat 2007-07-01
Methanol	CAS-No. 67-56-1	Revision Dat 2007-07-01
New Jersey Right To Know Components Methanol	CAS-No. 67-56-1	Revision Dat 2007-07-01
<b>California Prop. 65 Components</b> WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.Methanol	CAS-No. 67-56-1	Revision Dat 2012-03-16

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# **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: 07/02/2019

Print Date: 02/24/2020

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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.

Cerilliant - E-004

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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. EC-No. Index-No.	67-56-1 200-659-6 603-001-00-X	Flam. Liq. 2; Acute Tox. 3; STOT SE 1; H225, H301, H331, H311, H370	>= 90 - <= 100 %
Registration	01-2119433307-44- 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 parameters	Basis	
Methanol	67-56-1	TWA	200 ppm	USA. ACGIH Threshold Limit Values (TLV)	
	Remarks	or Indices (			
		STEL	250 ppm	USA. ACGIH Threshold Limit Values (TLV)	
		or Indices ( Danger of d	s for which there (see BEI® section cutaneous absor	is a Biological Exposure Index on) ption	
		TWA	200 ppm 260 mg/m3	USA. NIOSH Recommended Exposure Limits	
		Potential for dermal absorption			

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ST	250 ppm 325 mg/m3	USA. NIOSH Recommended Exposure Limits
Potential for	or dermal absorp	tion
TWA	200 ppm 260 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
The value i	n mg/m3 is app	roximate.
С	1,000 ppm	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
Skin		
PEL	200 ppm 260 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
Skin	·	
STEL	250 ppm 325 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 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 - Biological Exposure Indices (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 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, gas)	No data available
j)	Upper/lower flammability or explosive limits	Upper explosion limit: 36 %(V) 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> 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:					
Methanol		CAS-No. 67-56-1	Revision Date 2007-07-01			
SARA 311/312 Haza Fire Hazard, Acute He	<b>ards</b> alth Hazard, Chronic Health Hazar	rd				
Massachusetts Righ	t To Know Components					
Methanol		CAS-No. 67-56-1	Revision Date 2007-07-01			
No components are su	ubject to the Massachusetts Right	to Know Act.				
<b>Pennsylvania Right</b> Methanol	To Know Components	CAS-No. 67-56-1	Revision Date 2007-07-01			
Methanol		CAS-No. 67-56-1	Revision Date 2007-07-01			
<b>New Jersey Right T</b> e Methanol	o Know Components	CAS-No. 67-56-1	Revision Date 2007-07-01			
	uct contains a chemical known to a to cause birth defects or other	CAS-No. 67-56-1	Revision Date 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: 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. 3050 Spruce Street ST. LOUIS MO 63103 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).

E-010

Page 1 of 9



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 Values (TLV)	
	Remarks	or Indices (		-	
		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 cutaneous absorption			
		TWA	200 ppm 260 mg/m3	USA. NIOSH Recommended Exposure Limits	
		Potential for dermal absorption			

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ST	250 ppm 325 mg/m3	USA. NIOSH Recommended Exposure Limits
Potential for	or dermal absorp	tion
TWA	200 ppm 260 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
The value i	n mg/m3 is app	roximate.
С	1,000 ppm	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
Skin		
PEL	200 ppm 260 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
Skin		
STEL	250 ppm 325 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 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 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, gas)	No data available
j)	Upper/lower flammability or 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: n-octanol/water	No data available
p)	Auto-ignition temperature	No data available
q)	Decomposition 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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Print Date: 02/07/2020

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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. 3050 Spruce Street ST. LOUIS MO 63103 UNITED STATES
Telephone Fax	-	+1 314 771-5765 +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.
	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. EC-No. Index-No. Registration number	67-56-1 200-659-6 603-001-00-X 01-2119433307-44- XXXX	Flam. Liq. 2; Acute Tox. 3; STOT SE 1; H225, H301, H331, H311, H370	>= 90 - <= 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 parameters	Basis
Methanol	67-56-1	TWA	200 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	or Indices (		is a Biological Exposure Index on)
		STEL	250 ppm	USA. ACGIH Threshold Limit Values (TLV)
		Headache Nausea Dizziness Eye damage Substances for which there is a Biological E or Indices (see BEI® section) Danger of cutaneous absorption		on)

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

## **Biological occupational exposure limits**

Component	CAS-No.	Parameters	Value	Biological specimen	Basis
Methanol	67-56-1	Methanol	15 mg/l	Urine	ACGIH - Biological Exposure Indices (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 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, gas)	No data available

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j)	Upper/lower flammability or explosive limits	Upper explosion limit: 36 %(V) 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-octanol/water	No data available		
p)	Auto-ignition temperature	No data available		
q)	Decomposition 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 Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01	
Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01	
New Jersey 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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Version: 6.2

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## SAFETY DATA SHEET

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

### **1.1 Product identifiers**

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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. 3050 Spruce Street ST. LOUIS MO 63103 UNITED STATES
Telephone Fax		+1 314 771-5765 +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) H225 H302 + H312 + H332 H319	Highly flammable liquid and vapour. Harmful if swallowed, in contact with skin or if inhaled. Causes serious eye irritation.
Precautionary statement(s) P210	Keep away from heat/sparks/open flames/hot surfaces. No

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P233 P240	smoking. Keep container tightly closed. Ground/bond container and receiving equipment.
P241 P242	Use explosion-proof electrical/ ventilating/ lighting equipment. 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.
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. EC-No. Index-No. Registration number	75-05-8 200-835-2 608-001-00-3 01-2119471307-38- XXXX	Flam. Liq. 2; Acute Tox. 4; Eye Irrit. 2A; H225, H302, H332, H312, H319	>= 90 - <= 100 %
Heroin-D9			
		Acute Tox. 3; H301	>= 0.1 - < 1 %

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

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	STEL	60 ppm 105 mg/m3	California permissible exposure 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.

#### **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 point/freezing point	No data available
f)	Initial boiling point 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, gas)	No data available		
j)	Upper/lower flammability or explosive limits	Upper explosion limit: 16 %(V) 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: n-octanol/water	No data available		
p)	Auto-ignition temperature	No data available		
q)	Decomposition 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. 75-05-8	Revision Date 2007-07-01
SARA 311/312 Hazards Fire Hazard, Acute Health Hazard		
Massachusetts Right To Know Components		
Acetonitrile	CAS-No. 75-05-8	Revision Date 2007-07-01
Penneylyania Bight To Know Components		
Pennsylvania Right To Know Components Acetonitrile	CAS-No. 75-05-8	Revision Date 2007-07-01
New Jersey Right To Know Components Acetonitrile	CAS-No. 75-05-8	Revision Date 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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## 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. 3050 Spruce Street ST. LOUIS MO 63103 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. 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. EC-No. Index-No.	75-05-8 200-835-2 608-001-00-3	Flam. Liq. 2; Acute Tox. 4; Eye Irrit. 2A; H225, H302, H332, H312, H319	>= 90 - <= 100 %
Registration number <b>O,O'-DiacetyImorpl</b>	01-2119471307-38- XXXX		
CAS-No. EC-No.	561-27-3 209-217-7	Acute Tox. 2; H300, H330, H310	>= 0.1 - < 1 %

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 parameters	Basis
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		carcinogen
		TWA	20 ppm 34 mg/m3	USA. NIOSH Recommended Exposure Limits
		Forms cyanide in the body.		
		TWA	40 ppm 70 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		The value i	n mg/m3 is appi	roximate.
		PEL	40 ppm 70 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
		Skin	1	

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	STEL	60 ppm 105 mg/m3	California permissible exposure 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.

#### **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 point/freezing point	No data available
f)	Initial boiling point 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, gas)	No data available
j)	Upper/lower flammability or explosive limits	Upper explosion limit: 16 %(V) 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: n-octanol/water	No data available
p)	Auto-ignition temperature	No data available
q)	Decomposition 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. 75-05-8	Revision Date 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.	
Pennsylvania Right To Know Components 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 Acetonitrile	0.10 1101	

## **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 6.2 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) H225 H301 + H311 + H331 H317 H334	Highly flammable liquid and vapor. Toxic if swallowed, in contact with skin or if inhaled. May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H370 H412	Causes damage to organs (Eyes). Harmful to aquatic life with long lasting effects.
Precautionary statement(s) P210	Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.
P233 P240 P241 P242 P243 P260 P264 P270 P271 P272 P273 P280 P285 P301 + P310 + P330 P303 + P361 + P353 P304 + P340 + P311 P307 + P311 P307 + P311 P307 + P313 P362 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 P403 + P235 P405 P501	Store in a well-ventilated place. Keep container tightly closed. Store in a well-ventilated place. Keep cool. Store locked up. Dispose of contents/ container to an approved waste disposal 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. EC-No. Index-No. Registration number	67-56-1 200-659-6 603-001-00-X 01-2119433307-44- XXXX	Flam. Liq. 2; Acute Tox. 3; STOT SE 1; H225, H301, H331, H311, H370	>= 90 - <= 100 %
Hydrocodone-D6			
CAS-No.	1007844-38-3	Acute Tox. 4; Resp. Sens. 1; Skin Sens. 1; Aquatic Acute 1; Aquatic Chronic 1; H302, H334, H317, H400, H410 M-Factor - Aquatic Acute: 10	>= 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**

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 Eye damage Substances for which there is a Biological Exposure Index 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 260 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
Skin		
STEL	250 ppm 325 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 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 - Biological Exposure Indices (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 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, gas)	No data available		
j)	Upper/lower flammability or explosive limits	Upper explosion limit: 36 %(V) 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: n-octanol/water	No data available		
p)	Autoignition temperature	No data available		
q)	Decomposition 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

Cerilliant - L-025

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. EC-No. Index-No. Registration number	67-56-1 200-659-6 603-001-00-X 01-2119433307-44- XXXX	Flam. Liq. 2; Acute Tox. 3; STOT SE 1; H225, H301, H331, H311, H370	>= 90 - <= 100 %
Levamisole hydroc	hloride		
CAS-No. EC-No.	16595-80-5 240-654-6	Acute Tox. 3; H301	>= 0.1 - < 1 %

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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 parameters	Basis
Methanol	67-56-1	TWA	200 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Headache Nausea Dizziness Eye damage Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Danger of cutaneous absorption		
		STEL	250 ppm	USA. ACGIH Threshold Limit Values (TLV)
		or Indices (		

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

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

Component	CAS-No.	Parameters	Value	Biological specimen	Basis
Methanol	67-56-1	Methanol	15 mg/l	Urine	ACGIH - Biological Exposure Indices (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 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, gas)	No data available

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	j)	Upper/lower flammability or explosive limits	Upper explosion limit: 36 %(V) 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-octanol/water	No data available
	p)	Auto-ignition temperature	No data available
	q)	Decomposition 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> No chemicals in this material are subject to the reportin Section 302.	g requirements of	SARA Title III,
	<b>SARA 313 Components</b> The following components are subject to reporting level Section 313:		ARA Title III,
	Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01
	SARA 311/312 Hazards Fire Hazard, Acute Health Hazard, Chronic Health Hazar	ď	
	Massachusetts Right To Know Components		
	Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01
	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
	Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01
	New Jersey Right To Know Components Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01
	<b>California Prop. 65 Components</b> WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.Methanol	CAS-No. 67-56-1	Revision Date 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: 03/02/2020

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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 Brand		L-058 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 H370	Suspected of damaging fertility or the unborn child. 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. EC-No. Index-No. Registration number	67-56-1 200-659-6 603-001-00-X 01-2119433307-44- XXXX	Flam. Liq. 2; Acute Tox. 3; STOT SE 1; H225, H301, H331, H311, H370	>= 90 - <= 100 %
(6S)-6-(2,3,4,5,6-F b][1,3]thiazole hyd		.3,5,6-tetrahydroimidazo[2	,1-
CAS-No.	1246819-64-6	Acute Tox. 3; Repr. 2; STOT SE 3; H301, H361,	>= 0.1 - < 1 %

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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 Nausea					
		Dizziness 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 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. 3050 Spruce Street ST. LOUIS MO 63103 UNITED STATES
Telephone Fax	-	+1 314 771-5765 +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

Cerilliant - M-005

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. 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 parameters	Basis
Methanol	67-56-1	TWA	200 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	or Indices (		is a Biological Exposure Index on)
		STEL	250 ppm	USA. ACGIH Threshold Limit Values (TLV)
		Headache Nausea Dizziness Eye damage Substances for which there is a Biological E or Indices (see BEI® section) Danger of cutaneous absorption		on)

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

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

Component	CAS-No.	Parameters	Value	Biological specimen	Basis
Methanol	67-56-1	Methanol	15 mg/l	Urine	ACGIH - Biological Exposure Indices (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 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, gas)	No data available

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j)	Upper/lower flammability or explosive limits	Upper explosion limit: 36 %(V) 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-octanol/water	No data available	
p)	Auto-ignition temperature	No data available	
q)	Decomposition 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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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: 07/23/2019

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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 Brand Index-No.	:	M-007 Cerilliant 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. 3050 Spruce Street ST. LOUIS MO 63103 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 parameters	Basis
Methanol	67-56-1	TWA	200 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	or Indices (		•
		STEL	250 ppm	USA. ACGIH Threshold Limit Values (TLV)
		or Indices ( Danger of d	s for which there (see BEI® section cutaneous absor	is a Biological Exposure Index on) ption
		TWA	200 ppm 260 mg/m3	USA. NIOSH Recommended Exposure Limits
		Potential for	or dermal absorp	tion

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

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

Component	CAS-No.	Parameters	Value	Biological specimen	Basis
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.

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 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, gas)	No data available
j)	Upper/lower flammability or explosive limits	Upper explosion limit: 36 %(V) 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. 67-56-1	Revision Date 2007-07-01		
SARA 311/312 Hazards Fire Hazard, Acute Health Hazard, Chronic Health Hazar	rd			
Massachusetts Right To Know Components				
Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01		
No components are subject to the Massachusetts Right	to Know Act.			
<b>Pennsylvania Right To Know Components</b> Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01		
Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01		
New Jersey Right To Know Components Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01		
<b>California Prop. 65 Components</b> WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.Methanol	CAS-No. 67-56-1	Revision Date 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. 3050 Spruce Street ST. LOUIS MO 63103 UNITED STATES
Telephone Fax	-	+1 314 771-5765 +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. EC-No. Index-No. Registration number	67-56-1 200-659-6 603-001-00-X 01-2119433307-44- XXXX	Flam. Liq. 2; Acute Tox. 3; STOT SE 1; H225, H301, H331, H311, H370	>= 90 - <= 100 %
S(+)-Methampheta	mine		
CAS-No. EC-No.	537-46-2 208-668-7	Acute Tox. 2; STOT SE 3; H300, H336	>= 0.1 - < 1 %

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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 parameters	Basis	
Methanol	67-56-1	TWA	200 ppm	USA. ACGIH Threshold Limit Values (TLV)	
	Remarks	Headache Nausea Dizziness Eye damage Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Danger of cutaneous absorption			
		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 cutaneous absorption			

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

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

Component	CAS-No.	Parameters	Value	Biological specimen	Basis
Methanol	67-56-1	Methanol	15 mg/l	Urine	ACGIH - Biological Exposure Indices (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 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, gas)	No data available

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	j)	Upper/lower flammability or explosive limits	Upper explosion limit: 36 %(V) 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-octanol/water	No data available
	p)	Auto-ignition temperature	No data available
	q)	Decomposition 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> No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.			
SARA 313 Compone The following compone Section 313:	mponents components are subject to reporting levels established by SARA Title III,			
Methanol		CAS-No. 67-56-1	Revision Date 2007-07-01	
SARA 311/312 Haza Fire Hazard, Acute Hea	ards alth Hazard, Chronic Health Hazar	rd		
Massachusetts Righ	t To Know Components			
Methanol		CAS-No. 67-56-1	Revision Date 2007-07-01	
No components are su	bject to the Massachusetts Right	to Know Act.		
<b>Pennsylvania Right</b> Methanol	To Know Components	CAS-No. 67-56-1	Revision Date 2007-07-01	
Methanol		CAS-No. 67-56-1	Revision Date 2007-07-01	
<b>New Jersey Right To</b> Methanol	o Know Components	CAS-No. 67-56-1	Revision Date 2007-07-01	
	ict contains a chemical known to to cause birth defects or other	CAS-No. 67-56-1	Revision Date 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. 3050 Spruce Street ST. LOUIS MO 63103 UNITED STATES
Telephone Fax	-	+1 314 771-5765 +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 H361 H370	Toxic if swallowed, in contact with skin or if inhaled. Suspected of damaging fertility or the unborn child. 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. 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
	67-56-1 200-659-6 603-001-00-X 01-2119433307-44- XXXX	Classification 67-56-1 200-659-6 603-001-00-X 01-2119433307-44- XXXX hine-D5,

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STOT SE 3; H300, 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. 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 parameters	Basis
Methanol	67-56-1	TWA	200 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	or Indices (		,

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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 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 260 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1			
 		Limits for Air Contaminants			
 The value i					
С	1,000 ppm	California permissible exposure limits for chemical			
		contaminants (Title 8, Article 107)			
Skin		· · · ·			
PEL	200 ppm 260 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)			
Skin					
STEL	250 ppm 325 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)			
Skin					

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

Component	CAS-No.	Parameters	Value	Biological specimen	Basis		
Methanol	67-56-1	Methanol	15 mg/l	Urine	ACGIH - Biological Exposure Indices (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 Colour: colourless
b)	Odour	characteristic
c)	Odour Threshold	No data available
d)	рН	No data available
e)	Melting 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, gas)	No data available
j)	Upper/lower flammability or explosive limits	Upper explosion limit: 36 %(V) 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: n-octanol/water	log Pow: -0.77 at 25 °C (77 °F) - (Lit.), Bioaccumulation is not expected.
p)	Auto-ignition temperature	455.0 °C (851.0 °F) at 1,013 hPa - DIN 51794
q)	Decomposition 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 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

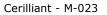
No data available

#### **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

Print Date: 05/19/2020

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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 Brand	: M-086 : 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. 3050 Spruce Street ST. LOUIS MO 63103 UNITED STATES
Telephone Fax	-	+1 314 771-5765 +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. EC-No.	67-56-1 200-659-6	Flam. Liq. 2; Acute Tox. 3; STOT SE 1; H225, H301,	>= 90 - <= 100 %
Index-No. Registration number	603-001-00-X 01-2119433307-44- 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 parameters	Basis
Methanol	67-56-1	TWA	200 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	or Indices (		
		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 cutaneous absorption		

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

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

Component	CAS-No.	Parameters	Value	Biological specimen	Basis
Methanol	67-56-1	Methanol	15 mg/l	Urine	ACGIH - Biological Exposure Indices (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 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, gas)	No data available

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	j)	Upper/lower flammability or explosive limits	Upper explosion limit: 36 %(V) 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-octanol/water	No data available
	p)	Auto-ignition temperature	No data available
	q)	Decomposition 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> No chemicals in this material are subject to the reportin Section 302.	g requirements of	SARA Title III,
SARA 313 Components The following components are subject to reporting levels Section 313:	s established by S	ARA Title III,
Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01
SARA 311/312 Hazards Fire Hazard, Chronic Health Hazard		
Massachusetts Right To Know Components		
Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01
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
Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01
New Jersey Right To Know Components Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01
<b>California Prop. 65 Components</b> WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.Methanol	CAS-No. 67-56-1	Revision Date 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: 6.2

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 3050 Spruce Street SAINT LOUIS MO 63103 USA
Telephone Fax	-	+1 800-325-5832 +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) H225 H301 + H311 + H331 H370	Highly flammable liquid and vapour. Toxic if swallowed, in contact with skin or if inhaled Causes damage to organs.
Precautionary statement(s) P210 P233 P240 P241 P242	Keep away from heat/sparks/open flames/hot surfaces. No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ ventilating/ lighting/ equipment. Use only non-sparking tools.

P243 P260 P264 P270 P271	Take precautionary measures against static discharge. Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. Wash skin thoroughly after handling. Do not eat, drink or smoke when using this product. 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 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Headache		
		Nausea		

	Dizziness		
	Eye damage	)	
	Substances	for which there is	a Biological Exposure Index or Indices
	(see BEI® s Danger of cu	ection) utaneous absorpti	on
	STEL	250.000000	USA. ACGIH Threshold Limit Values
		ppm	(TLV)
	Headache	•	
	Nausea 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 325.000000	Exposure Limits
		mg/m3	
<u> </u>	Potential for	dermal absorption	<u>ו</u> 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 (TLV)
	Headache	250 ppm	USA. ACGIH Threshold Limit Values
	Headache Nausea	250 ppm	USA. ACGIH Threshold Limit Values
	Headache Nausea Dizziness		USA. ACGIH Threshold Limit Values
	Headache Nausea Dizziness Eye damage		USA. ACGIH Threshold Limit Values (TLV)
	Headache Nausea Dizziness Eye damage Substances	for which there is	USA. ACGIH Threshold Limit Values
	Headache Nausea Dizziness Eye damage Substances (see BEI® s	for which there is ection)	USA. ACGIH Threshold Limit Values (TLV) a Biological Exposure Index or Indices
	Headache Nausea Dizziness Eye damage Substances (see BEI® s Danger of cu	o for which there is ection) utaneous absorptio	USA. ACGIH Threshold Limit Values (TLV) a Biological Exposure Index or Indices
	Headache Nausea Dizziness Eye damage Substances (see BEI® s	for which there is ection) utaneous absorption 200 ppm	USA. ACGIH Threshold Limit Values (TLV) a Biological Exposure Index or Indices on USA. NIOSH Recommended
	Headache Nausea Dizziness Eye damage Substances (see BEI® s Danger of cu TWA	o for which there is ection) utaneous absorptio	USA. ACGIH Threshold Limit Values (TLV) a Biological Exposure Index or Indices on USA. NIOSH Recommended Exposure Limits
	Headache Nausea Dizziness Eye damage Substances (see BEI® s Danger of cu TWA	for which there is ection) utaneous absorption 200 ppm 260 mg/m3	USA. ACGIH Threshold Limit Values (TLV) a Biological Exposure Index or Indices on USA. NIOSH Recommended Exposure Limits
	Headache Nausea Dizziness Eye damage Substances (see BEI® s Danger of cu TWA Potential for ST	for which there is ection) utaneous absorption 200 ppm 260 mg/m3 dermal absorption 250 ppm 325 mg/m3	USA. ACGIH Threshold Limit Values (TLV) a Biological Exposure Index or Indices on USA. NIOSH Recommended Exposure Limits 1 USA. NIOSH Recommended Exposure Limits
	Headache Nausea Dizziness Eye damage Substances (see BEI® s Danger of cu TWA Potential for ST	for which there is ection) utaneous absorption 200 ppm 260 mg/m3 dermal absorption 250 ppm	USA. ACGIH Threshold Limit Values (TLV) a Biological Exposure Index or Indices on USA. NIOSH Recommended Exposure Limits 1 USA. NIOSH Recommended Exposure Limits
	Headache Nausea Dizziness Eye damage Substances (see BEI® s Danger of cu TWA Potential for ST	for which there is ection) utaneous absorption 200 ppm 260 mg/m3 dermal absorption 250 ppm 325 mg/m3	USA. ACGIH Threshold Limit Values (TLV) a Biological Exposure Index or Indices on USA. NIOSH Recommended Exposure Limits 1 USA. NIOSH Recommended Exposure Limits
	Headache Nausea Dizziness Eye damage Substances (see BEI® s Danger of cu TWA Potential for ST Potential for	for which there is ection) taneous absorption 200 ppm 260 mg/m3 dermal absorption 250 ppm 325 mg/m3 dermal absorption	USA. ACGIH Threshold Limit Values (TLV) a Biological Exposure Index or Indices on USA. NIOSH Recommended Exposure Limits USA. NIOSH Recommended Exposure Limits USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air
	Headache Nausea Dizziness Eye damage Substances (see BEI® s Danger of cu TWA Potential for ST Potential for TWA	for which there is ection) taneous absorption 200 ppm 260 mg/m3 dermal absorption 325 mg/m3 dermal absorption 200 ppm	USA. ACGIH Threshold Limit Values (TLV) a Biological Exposure Index or Indices on USA. NIOSH Recommended Exposure Limits USA. NIOSH Recommended Exposure Limits USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants

STEL	250 ppm 325 mg/m3	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
Skin nota	tion	
TWA	200 ppm 260 mg/m3	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
Skin nota	tion	·
С	1,000 ppm	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
Skin		
PEL	200 ppm 260 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
Skin	·	
STEL	250 ppm 325 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
Skin		

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

Component	CAS-No.	Parameters	Value	Biological specimen	Basis
Methanol	67-56-1	Methanol	15.0000 mg/l	Urine	ACGIH - Biological Exposure Indices (BEI)
	Remarks	End of shift (A	s soon as po	ssible after exposure	e ceases)
		Methanol	15 mg/l	Urine	ACGIH - Biological Exposure Indices (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 flammability or explosive limits	Upper explosion limit: 36 %(V) 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- octanol/water	No data available
p)	Auto-ignition temperature	No data available
q)	Decomposition 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> 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 Proper shipping name Reportable Quantity (		Packing group: II	
Poison Inhalation Haz	zard: No		
IMDG UN number: 1230 Proper shipping name	Class: 3 (6.1) e: METHANOL, SOLUTION	Packing group: II N	EMS-No: F-E, S-D
<b>IATA</b> UN number: 1230	Class: 3 (6.1)	Packing group: II	

### **15. REGULATORY INFORMATION**

SARA 302 Components No chemicals in this material are subject to the reporting require	ements of SARA Title	III, Section 302.
SARA 313 Components The following components are subject to reporting levels establi	shed by SARA Title II CAS-No.	I, Section 313: 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		
Methanol	CAS-No. 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. 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. 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 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. 3050 Spruce Street ST. LOUIS MO 63103 UNITED STATES
Telephone Fax		+1 314 771-5765 +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. EC-No.	67-56-1 200-659-6	Flam. Liq. 2; Acute Tox. 3; STOT SE 1; H225, H301,	>= 90 - <= 100 %
Index-No. Registration number	603-001-00-X 01-2119433307-44- 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 parameters	Basis
Methanol	67-56-1	TWA	200 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	or Indices (		•
		STEL	250 ppm	USA. ACGIH Threshold Limit Values (TLV)
		or Indices ( Danger of d	s for which there (see BEI® section cutaneous absor	is a Biological Exposure Index on) ption
		TWA	200 ppm 260 mg/m3	USA. NIOSH Recommended Exposure Limits
		Potential for	or dermal absorp	tion

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

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

Component	CAS-No.	Parameters	Value	Biological specimen	Basis
Methanol	67-56-1	Methanol	15 mg/l	Urine	ACGIH - Biological Exposure Indices (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 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, gas)	No data available
j)	Upper/lower flammability or explosive limits	Upper explosion limit: 36 %(V) 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. 67-56-1	Revision Date 2007-07-01
SARA 311/312 Hazards Fire Hazard, Acute Health Hazard, Chronic Health Hazar	rd	
Massachusetts Right To Know Components		
Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01
No components are subject to the Massachusetts Right	to Know Act.	
<b>Pennsylvania Right To Know Components</b> Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01
Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01
New Jersey Right To Know Components Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01
<b>California Prop. 65 Components</b> WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.Methanol	CAS-No. 67-56-1	Revision Date 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 Brand	: N-115 : 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. 3050 Spruce Street ST. LOUIS MO 63103 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. 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. EC-No. Index-No. Registration number	67-56-1 200-659-6 603-001-00-X 01-2119433307-44- XXXX	Flam. Liq. 2; Acute Tox. 3; STOT SE 1; H225, H301, H331, H311, H370	<= 100 %
Naloxone-D5			
CAS-No.	1261079-38-2	Carc. 2; H351	>= 0.1 - < 1 %

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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 parameters	Basis	
Methanol	67-56-1	TWA	200 ppm	USA. ACGIH Threshold Limit Values (TLV)	
	Remarks	Headache Nausea Dizziness Eye damage Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Danger of cutaneous absorption			
		STEL	250 ppm	USA. ACGIH Threshold Limit Values (TLV)	
		Headache Nausea Dizziness Eye damag	le		

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Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Danger of cutaneous absorption			
TWA	200 ppm 260 mg/m3	USA. NIOSH Recommended Exposure Limits	
Potential for dermal absorption			
ST	250 ppm 325 mg/m3	USA. NIOSH Recommended Exposure Limits	
Potential for dermal absorption			
TWA	200 ppm 260 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants	
The value in mg/m3 is approximate.			
С	1,000 ppm	California permissible exposure limits for chemical contaminants (Title 8, Article 107)	
Skin			
PEL	200 ppm 260 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)	
Skin	•		
STEL	250 ppm 325 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)	
Skin	·	·	

Hazardous components without workplace control parameters

### **Biological occupational exposure limits**

Component	CAS-No.	Parameters	Value	Biological specimen	Basis
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).

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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 Colour: colourless
b)	Odour	pungent
c)	Odour Threshold	No data available
d)	рН	No data available
e)	Melting 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, gas)	No data available
j)	Upper/lower flammability or explosive limits	Upper explosion limit: 36 %(V) Lower explosion limit: 6 %(V)
k)	Vapour pressure	130.3 hPa at 20.0 °C (68.0 °F) 546.6 hPa at 50.0 °C(122.0 °F) 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: 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 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 mg/l - 96 h (US-EPA)
Toxicity to daphnia and other aquatic invertebrates	semi-static test EC50 - Daphnia magna (Water flea) - 18,260 mg/l - 96 h (OECD Test Guideline 202)
Toxicity to algae	static test ErC50 - Pseudokirchneriella subcapitata (green algae) - ca. 22,000.0 mg/l - 96 h (OECD Test Guideline 201)
Toxicity to bacteria	static test IC50 - activated sludge - > 1,000 mg/l - 3 h (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 % 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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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 Brand Index-No.	:	O-002 Cerilliant 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. 3050 Spruce Street ST. LOUIS MO 63103 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. EC-No. Index-No. Registration	67-56-1 200-659-6 603-001-00-X 01-2119433307-44-	Flam. Liq. 2; Acute Tox. 3; STOT SE 1; H225, H301, H331, H311, H370	>= 90 - <= 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 parameters	Basis
Methanol	67-56-1	TWA	200 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Headache Nausea Dizziness Eye damage Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Danger of cutaneous absorption		
		STEL	250 ppm	USA. ACGIH Threshold Limit Values (TLV)
		Headache Nausea Dizziness Eye damage Substances for which there is a Biological Exposure or Indices (see BEI® section) Danger of cutaneous absorption		is a Biological Exposure Index on) ption
		TWA	200 ppm 260 mg/m3	USA. NIOSH Recommended Exposure Limits
		Potential for dermal absorption		

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

# **Biological occupational exposure limits**

Component	CAS-No.	Parameters	Value	Biological specimen	Basis
Methanol	67-56-1	Methanol	15 mg/l	Urine	ACGIH - Biological Exposure Indices (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 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, gas)	No data available
j)	Upper/lower flammability or explosive limits	Upper explosion limit: 36 %(V) 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> No chemicals in this material are subject to the reportin Section 302.	g requirements of	SARA Title III,
	<b>SARA 313 Components</b> The following components are subject to reporting level Section 313:	s established by S	ARA Title III,
	Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01
	SARA 311/312 Hazards Fire Hazard, Acute Health Hazard, Chronic Health Hazar	ď	
	Massachusetts Right To Know Components		
	Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01
	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
	Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01
	New Jersey Right To Know Components Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01
	<b>California Prop. 65 Components</b> WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.Methanol	CAS-No. 67-56-1	Revision Date 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.

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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. 3050 Spruce Street ST. LOUIS MO 63103 UNITED STATES
Telephone Fax	-	+1 314 771-5765 +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. 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. EC-No. Index-No. Registration number	67-56-1 200-659-6 603-001-00-X 01-2119433307-44- XXXX	Flam. Liq. 2; Acute Tox. 3; STOT SE 1; H225, H301, H331, H311, H370	>= 90 - <= 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 parameters	Basis
Methanol	67-56-1	TWA	200 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	or Indices (		is a Biological Exposure Index n)
		STEL	250 ppm	USA. ACGIH Threshold Limit Values (TLV)
		or Indices (		
		TWA	200 ppm 260 mg/m3	USA. NIOSH Recommended Exposure Limits
		Potential for dermal absorption		tion
		ST	250 ppm 325 mg/m3	USA. NIOSH Recommended Exposure Limits
		Potential fo	r dermal absorp	tion

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TWA	200 ppm 260 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
The value i	n mg/m3 is app	roximate.
С	1,000 ppm	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
Skin	•	
PEL	200 ppm 260 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
Skin		
STEL	250 ppm 325 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 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 - 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.

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 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, gas)	No data available
j)	Upper/lower flammability or explosive limits	Upper explosion limit: 36 %(V) 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. 67-56-1	Revision Date 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 Brand Index-No.	:	O-008 Cerilliant 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. 3050 Spruce Street ST. LOUIS MO 63103 UNITED STATES
Telephone Fax		+1 314 771-5765 +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 parameters	Basis
Methanol	67-56-1	TWA	200 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	or Indices (		
		STEL	250 ppm	USA. ACGIH Threshold Limit Values (TLV)
		or Indices (		

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

# **Biological occupational exposure limits**

Component	CAS-No.	Parameters	Value	Biological specimen	Basis
Methanol	67-56-1	Methanol	15 mg/l	Urine	ACGIH - Biological Exposure Indices (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 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, gas)	No data available

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	j)	Upper/lower flammability or explosive limits	Upper explosion limit: 36 %(V) 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-octanol/water	No data available
	p)	Auto-ignition temperature	No data available
	q)	Decomposition 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> No chemicals in this material are subject to the reportin Section 302.	g requirements of	SARA Title III,
SARA 313 Components The following components are subject to reporting levels Section 313:	s established by S	ARA Title III,
Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01
SARA 311/312 Hazards Fire Hazard, Chronic Health Hazard		
Massachusetts Right To Know Components		
Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01
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
Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01
New Jersey Right To Know Components Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01
<b>California Prop. 65 Components</b> WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.Methanol	CAS-No. 67-56-1	Revision Date 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 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. 3050 Spruce Street ST. LOUIS MO 63103 UNITED STATES
Telephone Fax	-	+1 314 771-5765 +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

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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.	67-56-1	Flam. Liq. 2; Acute Tox. 3;	
EC-No. Index-No.	200-659-6 603-001-00-X	STOT SE 1; H225, H301, 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 parameters	Basis
Methanol	67-56-1	TWA	200 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	or Indices (		
		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 cutaneous absorption		n)

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

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

Component	CAS-No.	Parameters	Value	Biological specimen	Basis
Methanol	67-56-1	Methanol	15 mg/l	Urine	ACGIH - Biological Exposure Indices (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 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, gas)	No data available

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	j)	Upper/lower flammability or explosive limits	Upper explosion limit: 36 %(V) 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-octanol/water	No data available
	p)	Auto-ignition temperature	No data available
	q)	Decomposition 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> No chemicals in this material are subject to the reportin Section 302.	g requirements of	SARA Title III,
SARA 313 Components The following components are subject to reporting levels Section 313:	s established by S	ARA Title III,
Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01
SARA 311/312 Hazards Fire Hazard, Chronic Health Hazard		
Massachusetts Right To Know Components		
Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01
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
Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01
New Jersey Right To Know Components Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01
<b>California Prop. 65 Components</b> WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.Methanol	CAS-No. 67-56-1	Revision Date 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: 6.2

Revision Date: 07/02/2019

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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 Index-No.	: T-005 : 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. 3050 Spruce Street ST. LOUIS MO 63103 UNITED STATES
Telephone Fax		+1 314 771-5765 +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

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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; Aquatic Chronic 4; H302, H361, H413	>= 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

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 Values (TLV)
	Remarks	Headache Nausea Dizziness		
		Eye damag	е	
			s for which there (see BEI® section	e is a Biological Exposure Index
		Danger of o	utaneous abso	rption
		STEL	250 ppm	USA. ACGIH Threshold Limit Values (TLV)
		Headache Nausea Dizziness		
		Eye damag		e is a Biological Exposure Index
		or Indices	(see BEI® secti	on)
		-	cutaneous absor	
		TWA	200 ppm 260 mg/m3	USA. NIOSH Recommended Exposure Limits
		Potential for	or dermal absorp	otion
		ST	250 ppm 325 mg/m3	USA. NIOSH Recommended Exposure Limits
		Potential fo	or dermal absorp	
		TWA	200 ppm 260 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		The value i	n mg/m3 is app	proximate.
		C	1,000 ppm	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
		Skin		
		PEL	200 ppm 260 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
		Skin		
		STEL	250 ppm 325 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 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 - Biological Exposure Indices (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 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, gas)	No data available		
j)	Upper/lower flammability or explosive limits	Upper explosion limit: 36 %(V) 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: n-octanol/water	No data available		
p)	Autoignition temperature	No data available		
q)	Decomposition 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. 3050 Spruce Street ST. LOUIS MO 63103 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 H301 + H311 + H331 H361	Highly flammable liquid and vapour. Toxic if swallowed, in contact with skin or if inhaled. 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 P363	Remove/Take off immediately all contaminated clothing. 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. EC-No. Index-No. Registration	67-56-1 200-659-6 603-001-00-X 01-2119433307-44-	Flam. Liq. 2; Acute Tox. 3; STOT SE 1; H225, H301, H331, H311, H370	>= 90 - <= 100 %

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number	XXXX		
D9-TETRAHYDRO	CANNABINOL-D3		
CAS-No.	81586-39-2	Acute Tox. 4; Repr. 2; 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 parameters	Basis
Methanol	67-56-1	TWA	200 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	or Indices (		,

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STEL	250 ppm	USA. ACGIH Threshold Limit Values (TLV)
	for which there	e is a Biological Exposure Index
	(see BEI® section cutaneous absor	
TWA	200 ppm 260 mg/m3	USA. NIOSH Recommended Exposure Limits
Potential for	or dermal absorp	tion
ST	250 ppm 325 mg/m3	USA. NIOSH Recommended Exposure Limits
	or dermal absorp	
TWA	200 ppm 260 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
The value i	n mg/m3 is app	
С	1,000 ppm	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
Skin		
PEL	200 ppm 260 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
Skin	1	
STEL	250 ppm 325 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 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 - Biological Exposure Indices (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 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, gas)	No data available
j)	Upper/lower flammability or explosive limits	Upper explosion limit: 36 %(V) 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: n-octanol/water	No data available
p)	Auto-ignition temperature	No data available
q)	Decomposition 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> No chemicals in this material are subject to the reportin Section 302.	g requirement	s of SARA Title III
<b>SARA 313 Components</b> The following components are subject to reporting level Section 313:	s established l	by SARA Title III,
Methanol	CAS-No. 67-56-1	Revision Dat 2007-07-01
SARA 311/312 Hazards Fire Hazard, Chronic Health Hazard		
Massachusetts Right To Know Components		
Methanol	CAS-No. 67-56-1	Revision Dat 2007-07-01
No components are subject to the Massachusetts Right	to Know Act.	
Pennsylvania Right To Know Components Methanol	CAS-No. 67-56-1	Revision Dat 2007-07-01
Methanol	CAS-No. 67-56-1	Revision Dat 2007-07-01
New Jersey Right To Know Components Methanol	CAS-No. 67-56-1	Revision Dat 2007-07-01
<b>California Prop. 65 Components</b> WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.Methanol	CAS-No. 67-56-1	Revision Dat 2012-03-16

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

#### Further information

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