# SAFETY DATA SHEET

Version 8.4
Revision Date 03/12/2025
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## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifiers

Product name : Angiotensin I

Product Number : A-213
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 : 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 3), H226
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 Warning

Hazard Statements
H226 Flammable liquid and vapor.
H319 Causes serious eye irritation.



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Precautionary Statements

| | |
|---|---|
| P210 | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. |
| P233 | Keep container tightly closed. |
| P240 | Ground and bond container and receiving equipment. |
| P241 | Use explosion-proof electrical/ ventilating/ lighting/ equipment. |
| P242 | Use non-sparking tools. |
| P243 | Take action to prevent static discharges. |
| P264 | Wash skin thoroughly after handling. |
| P280 | Wear protective gloves/ protective clothing/ eye protection/ face protection. |
| P303 + P361 + P353 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower. |
| 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.<br>EC-No.<br>Index-No.<br>Registration number | 75-05-8<br>200-835-2<br>608-001-00-3<br>01-2119471307-38-XXXX | Flam. Liq. 2; Acute Tox. 4; Eye Irrit. 2A; H225, H302, H332, H312, H319 | >= 5 - <= 10 % |
| **Formic acid** | | | |
| CAS-No.<br>EC-No.<br>Index-No.<br>Registration number | 64-18-6<br>200-579-1<br>607-001-00-0<br>01-2119491174-37-XXXX | Flam. Liq. 3; Acute Tox. 4; Acute Tox. 3; Skin Corr. 1A; Eye Dam. 1; H226, H302, H331, H314, H318<br>Concentration limits:<br>> 78.5 %: Acute Tox. 3, H331; 75 - 78.5 %: Acute Tox. 4, H332; > 75 %: , EUH071; >= 90 %: Skin Corr. 1A, H314; 10 - < 90 %: Skin Corr. 1B, H314; 2 - < 10 %: Skin Irrit. 2, H315; 2 - < 10 %: Eye | >= 0.1 - <= 1 % |



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| | | |
|---|---|---|
| | Irrit. 2, H319; | |

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**
No data available

**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**
No data available

**5.2 Special hazards arising from the substance or mixture**
Carbon oxides
Nitrogen oxides (NOx)
Mixture with combustible ingredients.

**5.3 Advice for firefighters**
No data available

**5.4 Further information**
No data available

## SECTION 6: Accidental release measures

**6.1 Personal precautions, protective equipment and emergency procedures**
For personal protection see section 8.

**6.2 Environmental precautions**
No data available

**6.3 Methods and materials for containment and cleaning up**
No data available

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

## SECTION 7: Handling and storage

**7.1 Precautions for safe handling**
For precautions see section 2.2.



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

No data available

### 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**

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



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| | | | | |
|---|---|---|---|---|
| Formic acid | 64-18-6 | TWA | 5 ppm | USA. ACGIH Threshold Limit Values (TLV) |
| | | TWA | 5 ppm<br>9 mg/m3 | USA. NIOSH Recommended Exposure Limits |
| | | TWA | 5 ppm<br>9 mg/m3 | USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants |
| | | STEL | 10 ppm<br>19 mg/m3 | California permissible exposure limits for chemical contaminants (Title 8, Article 107) |
| | | PEL | 5 ppm<br>9 mg/m3 | California permissible exposure limits for chemical contaminants (Title 8, Article 107) |

### 8.2 Exposure controls

**Personal protective equipment**

**Skin protection**

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).
Full contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested:KCL 741 Dermatril® L

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).
Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested:KCL 741 Dermatril® L

**Control of environmental exposure**

Prevent product from entering drains.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

a) Appearance — Form: liquid

b) Odor — No data available



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| | | |
|---|---|---|
| c) | Odor Threshold | No data available |
| d) | pH | No data available |
| e) | Melting point/freezing point | No data available |
| f) | Initial boiling point and boiling range | No data available |
| g) | Flash point | 45 °C (113 °F) |
| h) | Evaporation rate | No data available |
| i) | Flammability (solid, gas) | No data available |
| j) | Upper/lower flammability or explosive limits | No data available |
| k) | Vapor pressure | No data available |
| l) | Vapor density | No data available |
| m) | Density | No data available |
| | Relative density | No data available |
| 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 | Not classified as explosive. |
| t) | Oxidizing properties | none |

**9.2 Other safety information**
No data available

## SECTION 10: Stability and reactivity

**10.1 Reactivity**
No data available

**10.2 Chemical stability**
No data available

**10.3 Possibility of hazardous reactions**
Violent reactions possible with:
Strong oxidizing agents



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### 10.4 Conditions to avoid
No data available

### 10.5 Incompatible materials
No data available

### 10.6 Hazardous decomposition products
In the event of fire: see section 5

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

**Mixture**

**Acute toxicity**
Acute toxicity estimate Oral - > 5,000 mg/kg
(Calculation method)
Acute toxicity estimate Inhalation - 4 h - 108.48 mg/l - vapor(Calculation method)

Acute toxicity estimate Dermal - > 5,000 mg/kg
(Calculation method)

**Skin corrosion/irritation**
No data available

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

**Respiratory or skin sensitization**
No data available

**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.

**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



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## 11.2 Additional Information

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

**Components**

**Acetonitrile**

**Acute toxicity**
LD50 Oral - Mouse - male and female - 617 mg/kg
(OECD Test Guideline 401)
LC50 Inhalation - Mouse - male and female - 4 h - 6.022 mg/l - vapor
(OECD Test Guideline 403)
Acute toxicity estimate Dermal - 1,500 mg/kg
(Expert judgment)
Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

**Skin corrosion/irritation**
Skin - Rabbit
Result: No skin irritation - 4 h
(OECD Test Guideline 404)

**Serious eye damage/eye irritation**
Eyes - Rabbit
Result: Causes serious eye irritation.
(OECD Test Guideline 405)
Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

**Respiratory or skin sensitization**
Buehler Test - Guinea pig
Result: negative
(OECD Test Guideline 406)

**Germ cell mutagenicity**
Test Type: Ames test
Test system: S. typhimurium
Result: negative
Remarks: (ECHA)
Test Type: In vitro mammalian cell gene mutation test
Test system: Chinese hamster ovary cells
Result: negative
Test Type: Mutagenicity (mammal cell test): chromosome aberration.
Test system: Chinese hamster ovary cells
Result: Positive results were obtained in some in vitro tests.
Remarks: (National Toxicology Program)
Test Type: sister chromatid exchange assay
Test system: Chinese hamster ovary cells
Result: negative
Remarks: Sister chromatid exchange
Test system: Saccharomyces cerevisiae
Result: positive
Remarks: Cytogenetic analysis
(ECHA)



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Test Type: In vitro mammalian cell gene mutation test
Test system: Mouse lymphoma test
Result: negative
Method: OECD Test Guideline 474
Species: Mouse - male and female
Result: negative

**Carcinogenicity**
No evidence of carcinogenicity in animal studies.

**Reproductive toxicity**
Animal testing did not show any effects on fertility.

**Specific target organ toxicity - single exposure**
The substance or mixture is not classified as specific target organ toxicant, single exposure.

**Specific target organ toxicity - repeated exposure**
The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

**Aspiration hazard**
No aspiration toxicity classification

**Formic acid**

**Acute toxicity**
LD50 Oral - Rat - male and female - 730 mg/kg
(OECD Test Guideline 401)
LC50 Inhalation - Rat - male and female - 4 h - 7.85 mg/l - vapor
(OECD Test Guideline 403)
Dermal: No data available

**Skin corrosion/irritation**
Skin - Rabbit
Result: Causes severe burns.
(OECD Test Guideline 404)
Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

**Serious eye damage/eye irritation**
Remarks: Causes serious eye damage.
conjunctivitis
Lacrimal irritation due to vapours.

**Respiratory or skin sensitization**
Buehler Test - Guinea pig
Result: negative
(OECD Test Guideline 406)
Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.



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**Germ cell mutagenicity**
Test Type: Ames test
Test system: Salmonella typhimurium
Result: negative
Test Type: sister chromatid exchange assay
Test system: Chinese hamster lung cells
Result: negative
Test Type: sister chromatid exchange assay
Test system: Human lymphocytes
Result: negative
Test Type: In vitro mammalian cell gene mutation test
Test system: Chinese hamster ovary cells
Result: negative
Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster ovary cells
Result: negative
Method: OECD Test Guideline 477
Species: Drosophila melanogaster - male
Result: negative

**Carcinogenicity**
No data available

**Reproductive toxicity**
No data available

**Specific target organ toxicity - single exposure**
Corrosive to the respiratory tract.

**Specific target organ toxicity - repeated exposure**

**Aspiration hazard**
No data available

## SECTION 12: Ecological information

### 12.1 Toxicity

**Mixture**
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 Endocrine disrupting properties
No data available



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## 12.7 Other adverse effects

No data available

**Components**

**Acetonitrile**

| | |
|---|---|
| Toxicity to fish | flow-through test LC50 - Pimephales promelas (fathead minnow) - 1,640 mg/l - 96 h<br>Remarks: (ECHA) |
| Toxicity to algae | static test NOEC - Phaeodactylum tricornutum - 400 mg/l - 72 h<br>(ISO 10253) |
| | static test ErC50 - Phaeodactylum tricornutum - 9,696 mg/l - 72 h<br>(ISO 10253) |
| Toxicity to bacteria | |
| Toxicity to fish(Chronic toxicity) | flow-through test NOEC - Oryzias latipes - 102 mg/l - 21 d<br>(OECD Test Guideline 204) |

**Formic acid**

| | |
|---|---|
| Toxicity to fish | static test LC50 - Danio rerio (zebra fish) - 130 mg/l - 96 h<br>(OECD Test Guideline 203)<br>Remarks: The value is given in analogy to the following substances: ammonium formate |
| Toxicity to daphnia and other aquatic invertebrates | static test EC50 - Daphnia magna (Water flea) - 365 mg/l - 48 h<br>(OECD Test Guideline 202)<br>Remarks: The value is given in analogy to the following substances: ammonium formate |
| Toxicity to algae | static test ErC50 - Pseudokirchneriella subcapitata - 1,240 mg/l - 72 h<br>(OECD Test Guideline 201)<br>Remarks: The value is given in analogy to the following substances: ammonium formate |
| Toxicity to bacteria | static test NOEC - activated sludge - 72 mg/l - 13 d<br>Remarks: (ECHA) |
| Toxicity to daphnia and other aquatic invertebrates(Chronic toxicity) | semi-static test NOEC - Daphnia magna (Water flea) - >= 100 mg/l - 21 d<br>(OECD Test Guideline 211) |



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## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

No data available

## SECTION 14: Transport information

**DOT (US)**

UN number: 1993 Class: 3 Packing group: III
Proper shipping name: Flammable liquids, n.o.s. (Acetonitrile)
Reportable Quantity (RQ): 50000 lbs
Poison Inhalation Hazard: No

**IMDG**

UN number: 1993 Class: 3 Packing group: III EMS-No: F-E, S-E
Proper shipping name: FLAMMABLE LIQUID, N.O.S. (Acetonitrile)

**IATA**

UN number: 1993 Class: 3 Packing group: III
Proper shipping name: Flammable liquid, n.o.s. (Acetonitrile)

## SECTION 15: Regulatory information

**CERCLA Reportable Quantity**

| Components | CAS-No. | Component RQ (lbs) | Calculated product RQ (lbs) |
|---|---|---|---|
| Acetonitrile | 75-05-8 | 5000 | 50000 |

**SARA 304 Extremely Hazardous Substances Reportable Quantity**

This material does not contain any components with a section 304 EHS RQ.

**SARA 302 Extremely Hazardous Substances Threshold Planning Quantity**

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

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

Acetonitrile 75-05-8 >= 10 - < 20 %

**Clean Air Act**

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 112 (40 CFR 61):



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| | | |
|---|---|---|
| Acetonitrile | 75-05-8 | >= 10 - < 20 % |

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).
The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489):

| | | |
|---|---|---|
| Acetonitrile | 75-05-8 | >= 10 - < 20 % |

**Clean Water Act**

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

| | | |
|---|---|---|
| Formic acid | 64-18-6 | >= 0.1 - < 1 % |

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

| | | |
|---|---|---|
| Formic acid | 64-18-6 | >= 0.1 - < 1 % |

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307
This product does not contain any priority pollutants related to the U.S. Clean Water Act

**US State Regulations**

**Massachusetts Right To Know**

| | |
|---|---|
| Acetonitrile | 75-05-8 |

**Pennsylvania Right To Know**

| | |
|---|---|
| Acetonitrile | 75-05-8 |
| Formic acid | 64-18-6 |

**Maine Chemicals of High Concern**

Product does not contain any listed chemicals

**Vermont Chemicals of High Concern**

Product does not contain any listed chemicals

**Washington Chemicals of High Concern**

Product does not contain any listed chemicals

**The ingredients of this product are reported in the following inventories:**

TSCA : Product contains substance(s) not listed on TSCA inventory.

**TSCA list**

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

## SECTION 16: Other information

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

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