

# SAFETY DATA SHEET

Version 6.2  
Revision Date 31.03.2022  
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## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifiers

Product name : Ammonium oxalate monohydrate

Product Number : 221716  
Brand : SIGALD  
CAS-No. : 6009-70-7

### 1.2 Other means of identification

Oxalic acid diammonium salt

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

Identified uses : For R&D use only. Not for pharmaceutical, household or other uses.

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

Company : SIGMA-ALDRICH NEW ZEALAND CO.  
PO Box 106-406  
1143 AUCKLAND  
NEW ZEALAND

Telephone : 0800 936 666  
Fax : 0800 937 777

### 1.5 Emergency telephone

Emergency Phone # : 0800 928 888 (NZ)  
+64 9 801 0034 (Int'l CHEMTREC)

## SECTION 2: Hazards identification

### 2.1 GHS Classification

Acute toxicity, Oral (Category D), H302  
Acute toxicity, Dermal (Category D), H312  
Eye irritation (Category A), 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 statement(s)  
H302 : Harmful if swallowed.  
H312 : Harmful in contact with skin.  
H319 : Causes serious eye irritation.

## Precautionary statement(s)

### Prevention

P264	Wash skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P280	Wear protective gloves/ eye protection/ face protection.

### Response

P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
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 or doctor/ physician if you feel unwell.
P322	Specific measures (see supplemental first aid instructions on this label).
P330	Rinse mouth.
P337 + P313	If eye irritation persists: Get medical advice/ attention.
P363	Wash contaminated clothing before reuse.

### Disposal

P501	Dispose of contents/ container to an approved waste disposal plant.
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## 2.3 Other hazards - none

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## SECTION 3: Composition/information on ingredients

Substance / Mixture : Substance

### 3.1 Substances

Synonyms : Oxalic acid/diammonium salt

Formula :  $C_2H_8N_2O_4 \cdot H_2O$

Molecular weight : 142.11 g/mol

CAS-No. : 6009-70-7

EC-No. : 238-135-4

Index-No. : 607-007-00-3

### Hazardous ingredients

Component	Classification	Concentration
<b>Oxalic acid, ammonium salt monohydrate</b>		
	6.1 D; 6.4 A; H302, H312, H319	<= 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

Show this material safety data sheet to the doctor in attendance.

#### If inhaled

After inhalation: fresh air.

**In case of skin contact**

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.

**In case of eye contact**

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

**If swallowed**

After swallowing: immediately make victim drink water (two glasses at most). 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

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**SECTION 5: Firefighting measures****5.1 Extinguishing media****Suitable extinguishing media**

Water Foam Carbon dioxide (CO<sub>2</sub>) 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**

Carbon oxides

Nitrogen oxides (NO<sub>x</sub>)

Combustible.

Development of hazardous combustion gases or vapours possible in the event of fire.

**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**

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

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**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. 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.

**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 dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

## 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

#### Advice on safe handling

Work under hood. Do not inhale substance/mixture.

#### Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

For precautions see section 2.2.

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

#### Storage conditions

Tightly closed. Dry.

#### Storage class

Storage class (TRGS 510): 13: Non Combustible Solids

### 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

Contains no substances with occupational exposure limit values.

### 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

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 EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://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 EN374 please

contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://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

### **Body Protection**

protective clothing

### **Respiratory protection**

required when dusts 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.

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

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

- |   |   |
|---|---|
| a) Physical state                               | crystalline   |
| b) Color  | white   |
| c) Odor   | odorless  |
| d) Melting point/freezing point                 | Melting point/range: 133 °C - dec.  |
| e) Initial boiling point and boiling range      | (decomposition)   |
| f) Flammability (solid, gas)                    | The product is not flammable. - Flammability (solids)                                 |
| g) Upper/lower flammability or explosive limits | No data available   |
| h) Flash point                                  | No data available   |
| i) Autoignition temperature                     | No data available   |
| j) Decomposition temperature                    | No data available   |
| k) pH   | 6.0 - 7.0 at 14.2 g/l at 25 °C  |
| l) Viscosity                                    | Viscosity, kinematic: No data available<br>Viscosity, dynamic: No data available      |
| m) Water solubility                             | 41.8 g/l at 20 °C - OECD Test Guideline 105   |
| n) Partition coefficient: n-octanol/water       | log Pow: < -4.8 at 20 °C - OECD Test Guideline 107 - Bioaccumulation is not expected. |

- |                             |   |
|-----------------------------|---|
| o) Vapor pressure           | < 0.1 hPa at 20 °C - OECD Test Guideline 104                |
| p) Density                  | 1.50 g/cm <sup>3</sup> at 20.1 °C - OECD Test Guideline 109 |
| Relative density            | No data available   |
| q) Relative vapor density   | No data available   |
| r) Particle characteristics | No data available   |
| s) Explosive properties     | No data available   |
| t) Oxidizing properties     | none  |

## 9.2 Other safety information

No data available

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

### 10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

### 10.3 Possibility of hazardous reactions

Risk of explosion with:  
sodium hypochlorite  
Violent reactions possible with:  
Oxidizing agents  
Strong acids

### 10.4 Conditions to avoid

no information available

### 10.5 Incompatible materials

Iron, Mild steel, Lead

### 10.6 Hazardous decomposition products

In the event of fire: see section 5

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

LD50 Oral - Rat - male and female - 375 mg/kg

Remarks: (in analogy to similar compounds)

(ECHA)

The value is given in analogy to the following substances: Oxalic acid

Inhalation: No data available

Acute toxicity estimate Dermal - 1,100.1 mg/kg  
(Expert judgment)

**Skin corrosion/irritation**

Skin - reconstructed human epidermis (RhE)  
Result: No skin irritation - 42 min  
(OECD Test Guideline 439)  
Remarks: (in analogy to similar products)

**Serious eye damage/eye irritation**

Eyes - Human  
Result: Eye irritation - 6 h  
(OECD Test Guideline 492)  
Remarks: (in analogy to similar products)

**Respiratory or skin sensitization**

Local lymph node assay (LLNA) - Mouse  
Result: negative  
(OECD Test Guideline 429)

**Germ cell mutagenicity**

No data available

**Carcinogenicity**

No data available

**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

**11.2 Additional Information**

Cough, Shortness of breath, Headache, Nausea, Vomiting

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

Systemic effects:

After absorption:

Headache  
agitation, spasms  
Circulatory collapse

Damage to:

Kidney

The following applies to oxalates in general: nausea and vomiting after swallowing. Mucosal irritations, coughing, and dyspnoea after inhalation. Systemic effect: drop in the blood calcium level, toxic effect on kidneys, cardiovascular disorders.

The following applies to ammonium salts in general: after swallowing: local irritation symptoms, nausea, vomiting, diarrhoea. Systemic effect: after the uptake of very large quantities: drop in blood pressure, collapse, CNS disorders, spasms, narcotic conditions, respiratory paralysis, haemolysis.

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

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## SECTION 12: Ecological information

### 12.1 Toxicity

Toxicity to daphnia and other aquatic invertebrates      semi-static test EC50 - Daphnia magna (Water flea) - > 33 mg/l - 48 h  
(OECD Test Guideline 202)

Toxicity to algae      static test ErC50 - Pseudokirchneriella subcapitata (green algae) - > 78 mg/l - 72 h  
(OECD Test Guideline 201)

### 12.2 Persistence and degradability

Biodegradability      aerobic - Exposure time 20 d  
Result: 89 % - Readily biodegradable.  
Remarks: (in analogy to similar compounds)  
(ECHA)  
The value is given in analogy to the following substances: Oxalic acid

### 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

### 12.7 Other adverse effects

Discharge into the environment must be avoided.

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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 local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself. See [www.retrologistik.com](http://www.retrologistik.com) for processes regarding the return of chemicals and containers, or contact us there if you have further questions.





**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](http://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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