



## Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31

Printing date 27.11.2024

Version number 2.00 (replaces version 1.00)

Revision: 27.11.2024

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

- **Product identifier**
- **Trade name:** Ammonium chloride
- **Article number:** 2078
- **CAS Number:**  
12125-02-9
- **EC number:**  
235-186-4
- **Index number:**  
017-014-00-8
- **Registration number** The substance is exempt from REACH-registration.
- **Relevant identified uses of the substance or mixture and uses advised against**
- **Application of the substance / the mixture** Ingredient for pharmaceutical drugs
- **Uses advised against** No relevant information available.
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
CAELO  
Caesar & Loretz GmbH  
Herderstr. 31  
D-40721 Hilden  
GERMANY
- **Further information obtainable from:**  
E-mail: info@caelo.de  
Tel.: +49210349940 (during regular opening hours)
- **Emergency telephone number:**  
Poison Information Center Bonn  
Venusberg-Campus 1, 53127 Bonn  
Tel: +49 (0) 228-192400

### 2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**  
Acute Tox. 4 H302 Harmful if swallowed.  
Eye Irrit. 2 H319 Causes serious eye irritation.
- **Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**  
The substance is classified and labelled according to the CLP regulation.

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**Hazard pictograms**

GHS07

**Signal word** Warning**Hazard statements**

H302 Harmful if swallowed.

H319 Causes serious eye irritation.

**Precautionary statements**

P280 Wear eye protection / face protection.

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

P330 Rinse mouth.

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.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**Other hazards****Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.**Determination of endocrine-disrupting properties** Not applicable.

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### 3 Composition/information on ingredients

**Substances****CAS No. Description**

CAS: 12125-02-9 ammonium chloride

**Identification number(s)****EC number:** 235-186-4**Index number:** 017-014-00-8

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### 4 First aid measures

**Description of first aid measures****After inhalation:**

Bring the person out of the contaminated area to fresh air.

Call a doctor immediately.

Show product-label or this MSDS.

**After skin contact:**

Take off contaminated clothes and shoes, wash immediately with plenty of water and soap.

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- **After eye contact:**  
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
  - **After swallowing:**  
Drink plenty of water.  
Call for a doctor immediately.
  - **Most important symptoms and effects, both acute and delayed**  
No further relevant information available.
  - **Indication of any immediate medical attention and special treatment needed**  
If swallowed, gastric irrigation.
- 

### 5 Firefighting measures

- **Extinguishing media**
  - **Suitable extinguishing agents:**  
All regular extinguishing media can be used.  
Use fire extinguishing methods suitable to surrounding conditions.
  - **Special hazards arising from the substance or mixture**  
not combustible  
In case of fire, the following can be released:  
ammonia  
Hydrogen chloride (HCl)  
Chlorine gas
  - **Advice for firefighters**
  - **Protective equipment:** In case of fire wear suitable protective clothes and respiratory protection.
  - **Additional information**  
Prevent from entering into drains. Fire residues must be disposed in accordance with official regulations.
- 

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Avoid formation of dust.
  - **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
  - **Methods and material for containment and cleaning up:**  
Take up dry. Clean up with water.  
Dispose contaminated material as waste according to section 13.
  - **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.
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### 7 Handling and storage

- **Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace.
  - **Information about fire - and explosion protection:** No special measures required.
  - **Conditions for safe storage, including any incompatibilities**
  - **Storage:**
  - **Requirements to be met by storerooms and receptacles:**  
Tightly closed. Store at a dry place. At room temperature (+15°C to +25°C).
  - **Information about storage in one common storage facility:** Not required.
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- **Further information about storage conditions:** No further information
  - **Storage class:** TRHS 510: 13 non-combustible solids
  - **Specific end use(s)** No further relevant information available.
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### 8 Exposure controls/personal protection

- **Control parameters**
  - **Ingredients with limit values that require monitoring at the workplace:**  
**CAS: 12125-02-9 ammonium chloride**  
OEL Short-term value: 20 mg/m<sup>3</sup>  
Long-term value: 10 mg/m<sup>3</sup>
  - **Additional information:** The lists valid during the making were used as basis.
  - **Exposure controls**
  - **Appropriate engineering controls** No further data; see section 7.
  - **Individual protection measures, such as personal protective equipment**
  - **General protective and hygienic measures:**  
Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes.  
Avoid contact with the eyes and skin.
  - **Respiratory protection:** Dust protection mask.
  - **Hand protection** Protective gloves
  - **Material of gloves**  
Rubber gloves  
Natural rubber, NR  
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
  - **Penetration time of glove material**  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
  - **Eye/face protection** Tightly sealed goggles
- 

### 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
  - **General Information**
  - **Physical state** Solid
  - **Colour:** White
  - **Odour:** Odourless
  - **Odour threshold:** Not determined.
  - **Melting point/freezing point:** 338 °C
  - **Boiling point or initial boiling point and boiling range** Undetermined.
  - **Flammability** Product is not flammable.
  - **Lower and upper explosion limit**
  - **Lower:** Not determined.
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· <b>Upper:</b>	Not determined.
· <b>Flash point:</b>	Not applicable.
· <b>Decomposition temperature:</b>	Not determined.
· <b>pH (50 g/l) at 20 °C</b>	4.5–5.5
· <b>Viscosity:</b>	
· <b>Kinematic viscosity</b>	Not applicable.
· <b>Dynamic:</b>	Not applicable.
· <b>Solubility</b>	
· <b>water at 20 °C:</b>	372 g/l
· <b>Partition coefficient n-octanol/water (log value)</b>	Not determined.
· <b>Vapour pressure at 30 °C:</b>	<1.3 hPa
· <b>Density and/or relative density</b>	
· <b>Density at 20 °C:</b>	1.53 g/cm <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not applicable.
· <b>Particle characteristics</b>	Not determined
· <b>Other information</b>	
· <b>Appearance:</b>	
· <b>Form:</b>	Solid
· <b>Important information on protection of health and environment, and on safety.</b>	
· <b>Ignition temperature:</b>	Not determined.
· <b>Explosive properties:</b>	Product does not present an explosion hazard.
· <b>Change in condition</b>	
· <b>Evaporation rate</b>	Not applicable.
· <b>Information with regard to physical hazard classes</b>	
· <b>Explosives</b>	Void Void
· <b>Flammable gases</b>	Void Void
· <b>Aerosols</b>	Void Void
· <b>Oxidising gases</b>	Void Void
· <b>Gases under pressure</b>	Void Void
· <b>Flammable liquids</b>	Void Void
· <b>Flammable solids</b>	Void Void
· <b>Self-reactive substances and mixtures</b>	Void Void
· <b>Pyrophoric liquids</b>	Void Void

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· <b>Pyrophoric solids</b>	Void
	Void
· <b>Self-heating substances and mixtures</b>	Void
	Void
· <b>Substances and mixtures, which emit flammable gases in contact with water</b>	Void
	Void
· <b>Oxidising liquids</b>	Void
	Void
· <b>Oxidising solids</b>	Void
	Void
· <b>Organic peroxides</b>	Void
	Void
· <b>Corrosive to metals</b>	Void
	Void
· <b>Desensitised explosives</b>	Void
	Void

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### 10 Stability and reactivity

- **Reactivity** No further relevant information available.
  - **Chemical stability**
  - **Thermal decomposition / conditions to be avoided:** Decomposition above 350 °C.
  - **Possibility of hazardous reactions** No dangerous reactions known.
  - **Conditions to avoid** No further relevant information available.
  - **Incompatible materials:**
    - Strong oxidizing agents
    - alkali hydroxide
    - halogens
  - **Hazardous decomposition products:** No dangerous decomposition products known.
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### 11 Toxicological information

- **Information on hazard classes as defined in Regulation (EC) No 1272/2008**
  - **Acute toxicity** Harmful if swallowed.
  - **LD/LC50 values relevant for classification:**
    - Oral LD50 1,410 mg/kg (rat)
    - Dermal LD50 2,000 mg/kg (rat)
  - **Primary irritant effect:**
  - **Skin corrosion/irritation**
    - May cause skin irritation.
    - Based on available data, the classification criteria are not met.
  - **Serious eye damage/irritation** Causes serious eye irritation.
  - **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
  - **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
  - **Carcinogenicity** Based on available data, the classification criteria are not met.
  - **Reproductive toxicity** Based on available data, the classification criteria are not met.
  - **STOT-single exposure** Based on available data, the classification criteria are not met.
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- **STOT-repeated exposure** Based on available data, the classification criteria are not met.

- **Aspiration hazard** Based on available data, the classification criteria are not met.

- **Information on other hazards**

- **Endocrine disrupting properties**

On the basis of the available data, the substance does not meet the criteria for the identification of substances having properties of interference with the endocrine system, in accordance with Article 59, paragraph 1 of the REACH Regulation and the criteria established in the Delegated Regulation (EU) 2017 / 2100 of the Commission or in Commission Regulation (EU) 2018/605.

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## 12 Ecological information

- **Toxicity**

- **Aquatic toxicity:**

LC50 209 mg/L /4d (Fish)

EC50 1,300 mg/L (algae)

136.6 mg/L /48h (invertebrates)

1,300 mg/L (Microorganism)

- **Persistence and degradability** No further relevant information available.

- **Bioaccumulative potential** No further relevant information available.

- **Mobility in soil** No further relevant information available.

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

- **Endocrine disrupting properties**

Based on the available data, the substance does not meet the criteria for the identification of substances with properties affecting the endocrine system according to Article 59(1) of the REACH Regulation and the criteria of the Commission Delegated Regulation (EU) 2017/2100 or in the Commission Regulation (EU) 2018/605.

The product does not contain substances with endocrine disrupting properties.

- **Other adverse effects**

- **Additional ecological information:**

- **General notes:**

Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

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## 13 Disposal considerations

- **Waste treatment methods**

- **Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- **Uncleaned packaging:**

- **Recommendation:** Disposal must be made according to local regulations.

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## \* 14 Transport information

- **UN number or ID number**

Not subject to transport regulations.

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· ADR, IMDG, IATA	not regulated
· UN proper shipping name	
· ADR	not regulated
· IMDG, IATA	not regulated
· Transport hazard class(es)	
· ADR, ADN, IMDG, IATA	
· Class	not regulated
· Packing group	
· ADR, IMDG, IATA	not regulated
· Environmental hazards:	Not applicable.
· Special precautions for user	Not applicable.
· Maritime transport in bulk according to IMO instruments	Not applicable.
· UN "Model Regulation":	not regulated

### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Named dangerous substances - ANNEX I** Substance is not listed.
- **LIST OF SUBSTANCES SUBJECT TO AUTHORISATION (ANNEX XIV)** Not listed
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 65, 75
- **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**  
Substance is not listed.
- **National regulations:**
- **Storage of hazardous substances in in nonstationary vessels (TRGS 510) (Germany)**  
TRHS 510: 13 non-combustible solids
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### 16 Other information

- The information provided is based on our current level of knowledge. This MSDS has been compiled and is exclusively for this product intended.
- **Reasons for alterations** This version replaces all old versions.
  - **Date of previous version:** 27.11.2024
  - **Version number of previous version:** 1.00
  - **Abbreviations and acronyms:**  
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
GHS: Globally Harmonised System of Classification and Labelling of Chemicals  
EINECS: European Inventory of Existing Commercial Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
MAL-Code: Måleteknisk Arbejdshygiejnisk Luftbehov (Regulation for the labeling concerning inhalation hazards, Denmark)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
Acute Tox. 4: Acute toxicity – Category 4  
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
  - **\* Data compared to the previous version altered.**