

# SAFETY DATA SHEET

Creation Date 30-Oct-2009

Revision Date 18-Dec-2025

Revision Number 8

This safety data sheet was created pursuant to the requirements of: US OSHA Hazard Communication Standard 2024 (29 CFR 1910.1200)

## 1. Identification

|                             |   |
|-----------------------------|---|
| <b>Product Name</b>         | Ammonium chloride   |
| <b>Cat No. :</b>            | <b>A649-3; A649-500; A661-3; A661-10; A661-500; A687-10; A687-100; A687-212; A687-500</b> |
| <b>CAS No</b>               | 12125-02-9  |
| <b>Synonyms</b>             | Sal ammoniac; Ammonium muriate (Granular/Crystalline/USP/FCC/EP/Certified ACS)            |
| <b>Recommended Use</b>      | Laboratory chemicals.   |
| <b>Uses advised against</b> | Food, drug, pesticide or biocidal product use.  |

## Details of the supplier of the safety data sheet

### Company

Fisher Scientific Company  
One Reagent Lane  
Fair Lawn, NJ 07410  
Tel: (201) 796-7100

### **Emergency Telephone Number**

CHEMTREC®, Inside the USA: 800-424-9300  
CHEMTREC®, Outside the USA: 001-703-527-3887

## 2. Hazard(s) identification

### Classification

This chemical is considered hazardous according to [US] OSHA (29 CFR 1910.1200, 2024)

Acute oral toxicity  
Serious Eye Damage/Eye Irritation

Category 4  
Category 2

## Label Elements

**Signal Word**  
Warning

**Hazard Statements**  
Harmful if swallowed  
Causes serious eye irritation

**Precautionary Statements****Prevention**

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Wear eye/face protection

**Eyes**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

If eye irritation persists: Get medical advice/attention

**Ingestion**

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell

Rinse mouth

**Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

None identified

**Hazards classified under paragraph (d)(1)(ii) of 1910.1200**

No information available

**3. Composition/information on Ingredients**

| Component         | CAS No     | Weight % |
|-------------------|------------|----------|
| Ammonium chloride | 12125-02-9 | <=100    |

**4. First-aid measures****General Advice**

If symptoms persist, call a physician.

**Eye Contact**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

**Skin Contact**

Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.

**Inhalation**

Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.

**Ingestion**

Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.

**Most important symptoms and effects**

None reasonably foreseeable.

**Notes to Physician**

Treat symptomatically

**5. Fire-fighting measures****Unsuitable Extinguishing Media**

No information available

|   |                          |
|---|--------------------------|
| <b>Flash Point</b>                      | No information available |
| <b>Method -</b>                         | No information available |
| <b>Autoignition Temperature</b>         | No information available |
| <b>Explosion Limits</b>                 |                          |
| <b>Upper</b>                            | No data available        |
| <b>Lower</b>                            | No data available        |
| <b>Sensitivity to Mechanical Impact</b> | No information available |
| <b>Sensitivity to Static Discharge</b>  | No information available |

#### Specific Hazards Arising from the Chemical

Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition.

#### Hazardous Combustion Products

None known.

#### Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

#### NFPA

Health  
2

Flammability  
0

Instability  
1

Physical hazards  
N/A

## 6. Accidental release measures

**Personal Precautions** Ensure adequate ventilation. Use personal protective equipment as required. Avoid dust formation.

**Environmental Precautions** Should not be released into the environment.

**Methods for Containment and Clean Up** Sweep up and shovel into suitable containers for disposal. Keep in suitable, closed containers for disposal.

## 7. Handling and Storage

**Handling** Wear personal protective equipment/face protection. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Avoid dust formation.

**Storage.** Keep containers tightly closed in a dry, cool and well-ventilated place. Store under an inert atmosphere. Air sensitive. Incompatible Materials. Strong oxidizing agents. Strong acids. Strong bases.

## 8. Exposure controls / personal protection

#### Exposure Guidelines

| Component         | ACGIH TLV   | OSHA PEL  | NIOSH  | Mexico OEL (TWA)  |
|-------------------|---|---|--|---|
| Ammonium chloride | TWA: 10 mg/m <sup>3</sup><br>STEL: 20 mg/m <sup>3</sup> | (Vacated) TWA: 10 mg/m <sup>3</sup><br>(Vacated) STEL: 20 mg/m <sup>3</sup> | REL = 10 mg/m <sup>3</sup> (TWA)<br>STEL: 20 mg/m <sup>3</sup> | TWA: 10 mg/m <sup>3</sup><br>STEL: 20 mg/m <sup>3</sup> |

#### Legend

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH: NIOSH - National Institute for Occupational Safety and Health

**Engineering Measures** Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas.

#### Personal Protective Equipment

|                                 |   |
|---------------------------------|---|
| <b>Eye/face Protection</b>      | Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. Tight sealing safety goggles.   |
| <b>Skin and body protection</b> | Wear appropriate protective gloves and clothing to prevent skin exposure.   |
| <b>Respiratory Protection</b>   | Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. |
| <b>Recommended Filter type:</b> | Particulates filter conforming to EN 143.   |
| <b>Hygiene Measures</b>         | Handle in accordance with good industrial hygiene and safety practice.  |

## 9. Physical and chemical properties

### Appearance

|  |                          |  |
|--|--------------------------|--|
| <b>Physical State</b>                          | Solid                    |  |
| <b>Color</b>                                   | White                    |  |
| <b>Odor</b>                                    | Odorless                 |  |
| <b>Odor Threshold</b>                          | No information available |  |
| <b>Property</b>                                | <b>Values</b>            | <b>Remarks</b>                           |
| <b>Melting Point/Range</b>                     | 340 °C / 644 °F          | <b>Method</b>                            |
| <b>Softening Point</b>                         | No data available        |  |
| <b>Boiling Point/Range</b>                     | No information available |  |
| <b>Flash Point</b>                             | No information available | <b>Method</b> - No information available |
| <b>Flammability (liquid)</b>                   | Not applicable           |  |
| <b>Flammability (solid,gas)</b>                | No information available | Solid                                    |
| <b>Explosion Limits</b>                        | No data available        |  |
| <b>Autoignition Temperature</b>                | No data available        |  |
| <b>Decomposition Temperature</b>               | 350 °C                   |  |
| <b>pH</b>                                      | 5.0 @ 25°C               | 10% aq. solution                         |
| <b>Viscosity</b>                               | Not applicable           |  |
| <b>Water Solubility</b>                        | 370 g/L (20°C)           | Solid                                    |
| <b>Solubility in other solvents</b>            | No information available |  |
| <b>Partition Coefficient (n-octanol/water)</b> |                          |  |
| <b>Component</b>                               | <b>log Pow</b>           |  |
| Ammonium chloride                              | -4.38                    |  |
| <b>Vapor Pressure</b>                          | 1.3 mbar @ 160 °C        |  |
| <b>Density / Specific Gravity</b>              | No data available        |  |
| <b>Bulk Density</b>                            | No data available        |  |
| <b>Vapor Density</b>                           | Not applicable           |  |
| <b>Particle characteristics</b>                | No data available        | Solid                                    |
| <b>Other Information</b>                       |                          |  |
| <b>Molecular Formula</b>                       | H4 Cl N                  |  |
| <b>Molecular Weight</b>                        | 53.49                    |  |
| <b>Evaporation Rate</b>                        | Not applicable - Solid   |  |

## 10. Stability and reactivity

|                        |  |
|------------------------|--|
| <b>Reactive Hazard</b> | None known, based on information available |
| <b>Stability</b>       | Hygroscopic.                               |

|   |   |
|---|---|
| <b>Conditions to Avoid</b>              | Incompatible products. Excess heat. Avoid dust formation. Exposure to moist air or water. |
| <b>Incompatible Materials</b>           | Strong oxidizing agents, Strong acids, Strong bases                                       |
| <b>Hazardous Decomposition Products</b> | None under normal use conditions  |
| <b>Hazardous Polymerization</b>         | Hazardous polymerization does not occur.  |
| <b>Hazardous Reactions</b>              | None under normal processing.   |

## 11. Toxicological information

### Information on expected route of exposure

|                   |  |
|-------------------|--|
| <b>Inhalation</b> | Not an expected route of exposure.             |
| <b>Ingestion</b>  | May be harmful if swallowed.                   |
| <b>Eyes</b>       | Avoid contact with eyes. Irritating to eyes.   |
| <b>Skin</b>       | Avoid contact with skin. May cause irritation. |

### Toxicology data for the components

| Component         | LD50 Oral          | LD50 Dermal  | LC50 Inhalation |
|-------------------|--------------------|--------------|-----------------|
| Ammonium chloride | 1650 mg/kg ( Rat ) | > 2000 mg/kg | -               |

**Toxicologically Synergistic Products** No information available

**(b) skin corrosion/irritation;** Based on available data, the classification criteria are not met

**(c) serious eye damage/irritation;** Category 2

**(d) respiratory or skin sensitization;**  
**Respiratory** Based on available data, the classification criteria are not met  
**Skin** Based on available data, the classification criteria are not met

**(e) germ cell mutagenicity;** Based on available data, the classification criteria are not met

**(f) carcinogenicity;** Based on available data, the classification criteria are not met

The table below indicates whether each agency has listed any ingredient as a carcinogen

| Component         | CAS No     | IARC       | NTP        | ACGIH      | OSHA       | Mexico     |
|-------------------|------------|------------|------------|------------|------------|------------|
| Ammonium chloride | 12125-02-9 | Not listed |

**(g) reproductive toxicity;** Based on available data, the classification criteria are not met

**(h) STOT-single exposure;** Based on available data, the classification criteria are not met

**(i) STOT-repeated exposure;** Based on available data, the classification criteria are not met

**Target Organs** None known.

**(j) aspiration hazard;** Not applicable  
Solid

**Symptoms / effects, both acute and delayed** No information available.

**Other Adverse Effects** The toxicological properties have not been fully investigated.

**Endocrine Disrupting Properties** This product does not contain any known or suspected endocrine disruptors.

## 12. Ecological information

### Ecotoxicity

| Component         | Freshwater Algae | Freshwater Fish                     | Microtox | Water Flea          |
|-------------------|------------------|-------------------------------------|----------|---------------------|
| Ammonium chloride | -                | Cyprinus carpio:<br>LC50 = 209 mg/L | -        | EC50 = 202 mg/L/24h |

**Persistence and Degradability** Persistence is unlikely

**Bioaccumulation/ Accumulation** No information available.

**Mobility** Will likely be mobile in the environment due to its water solubility.

| Component         | log Pow |
|-------------------|---------|
| Ammonium chloride | -4.38   |

## 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

## 14. Transport information

|                 |               |
|-----------------|---------------|
| <b>DOT</b>      | Not regulated |
| <b>TDG</b>      | Not regulated |
| <b>IATA</b>     | Not regulated |
| <b>IMDG/IMO</b> | Not regulated |

## 15. Regulatory Information

### United States of America Inventory

| Component         | CAS No     | TSCA | TSCA Inventory notification - Active-Inactive | TSCA - EPA Regulatory Flags |
|-------------------|------------|------|---|-----------------------------|
| Ammonium chloride | 12125-02-9 | X    | ACTIVE  | -                           |

#### **Legend:**

**TSCA** US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

'-' - Not Listed

**TSCA - Per 40 CFR 751, Regulation of Certain Chemical Substances & Mixtures, Under TSCA Section 6(h) (PBT)** Not applicable

**TSCA 12(b) - Notices of Export** Not applicable

### International Inventories

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (KECL).

| Component         | CAS No     | DSL | NDSL | EINECS    | PICCS | ENCS | ISHL | AICS | IECSC | KECL     |
|-------------------|------------|-----|------|-----------|-------|------|------|------|-------|----------|
| Ammonium chloride | 12125-02-9 | X   | -    | 235-186-4 | X     | X    | X    | X    | X     | KE-01645 |

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

#### U.S. Federal Regulations

##### **SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

| Component         | CAS No     | Weight % | SARA 313 - Threshold Values % | SARA 313 - Reporting thresholds |
|-------------------|------------|----------|-------------------------------|---------------------------------|
| Ammonium chloride | 12125-02-9 | <=100    | 1.0 %                         | -                               |

##### **SARA 311/312 Hazard Categories**

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

#### **CWA (Clean Water Act)**

| Component         | CWA - Hazardous Substances | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants |
|-------------------|----------------------------|-----------------------------|------------------------|---------------------------|
| Ammonium chloride | X                          | 5000 lb                     | -                      | -                         |

**Clean Air Act** Not applicable

**OSHA - Occupational Safety and Health Administration** Not applicable

#### **CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355).

| Component         | Hazardous Substances RQs | CERCLA Extremely Hazardous Substances RQs | SARA Reportable Quantity (RQ) |
|-------------------|--------------------------|---|-------------------------------|
| Ammonium chloride | 5000 lb                  | -   | 5000 lb<br>2270 kg            |

**California Proposition 65** This product does not contain any Proposition 65 chemicals.

#### **U.S. State Right-to-Know Regulations**

| Component         | Massachusetts | New Jersey | Pennsylvania | Illinois | Rhode Island |
|-------------------|---------------|------------|--------------|----------|--------------|
| Ammonium chloride | X             | X          | X            | -        | X            |

#### **U.S. Department of Transportation**

Reportable Quantity (RQ): Y  
DOT Marine Pollutant N  
DOT Severe Marine Pollutant N

**U.S. Department of Homeland Security** This product does not contain any DHS chemicals.

#### Other International Regulations

**Mexico - Grade** No information available

## Authorisation/Restrictions according to EU REACH

| Component         | CAS No     | REACH (1907/2006) - Annex XIV - Substances Subject to Authorization | REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances  | REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC) |
|-------------------|------------|---|--|---|
| Ammonium chloride | 12125-02-9 | -   | Use restricted. See entry 75.<br>(see link for restriction details)<br>Use restricted. See entry 65.<br>(see link for restriction details) | -   |

## REACH links

<https://echa.europa.eu/substances-restricted-under-reach>

## Safety, health and environmental regulations/legislation specific for the substance or mixture

| Component         | CAS No     | OECD HPV | Persistent Organic Pollutant | Ozone Depletion Potential | Restriction of Hazardous Substances (RoHS) |
|-------------------|------------|----------|------------------------------|---------------------------|--|
| Ammonium chloride | 12125-02-9 | Listed   | Not applicable               | Not applicable            | Not applicable                             |

## Contains component(s) that meet a 'definition' of per &amp; poly fluoroalkyl substance (PFAS)?

Not applicable

## Other International Regulations

| Component         | CAS No     | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements | Rotterdam Convention (PIC) | Basel Convention (Hazardous Waste) |
|-------------------|------------|---|--|----------------------------|------------------------------------|
| Ammonium chloride | 12125-02-9 | Not applicable  | Not applicable   | Not applicable             | Not applicable                     |

## 16. Other Information

## Prepared By

Product stewardship (Regulatory Affairs)  
Thermo Fisher Scientific  
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## Creation Date

30-Oct-2009

## Revision Date

18-Dec-2025

## Print Date

18-Dec-2025

## Revision Summary

Updated to the U.S. Department of Labor's Occupational Safety and Health Administration (OSHA) which published its Final Rule in the Federal Register revising the Hazard Communication Standard (HCS/HazCom), 29 CFR 1910.1200 (2024) (HCS §1910.1200, 2024), May 20, 2024, effective July 19, 2024.

## Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of SDS**