

## SAFETY DATA SHEET

Preparation Date: 10/17/2014

Revision date 4/9/2019

Revision Number: G2

### 1. IDENTIFICATION

**Product identifier**

**Product code:** A1166  
**Product Name:** AMMONIUM CHLORIDE, GRANULAR, TECHNICAL

**Other means of identification**

**Synonyms:** Sal ammonia  
 Sal ammoniac  
 Ammonium muriate  
 Amchlor  
 Ammoneric

**CAS #:** 12125-02-9  
**RTECS #** BP4550000  
**Cl#:** Not available

**Recommended use of the chemical and restrictions on use**

**Recommended use:** Fertilizer compositons. Electroplating agent. Diuretics. Expectorants.  
**Uses advised against** No information available

**Supplier:** Spectrum Chemical Mfg. Corp  
 14422 South San Pedro St.  
 Gardena, CA 90248  
 (310) 516-8000

**Order Online At:** <https://www.spectrumchemical.com>  
**Emergency telephone number** Chemtrec 1-800-424-9300  
**Contact Person:** Tom Tyner (USA - West Coast)  
**Contact Person:** Ibad Tirmiz (USA - East Coast)

### 2. HAZARDS IDENTIFICATION

**Classification**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Acute toxicity - Oral	Category 4
Serious eye damage/eye irritation	Category 2A

**Label elements**

<b>Warning</b>
<b>Hazard statements</b> Harmful if swallowed Causes serious eye irritation



**Hazards not otherwise classified (HNOC)**

Not Applicable

**Other hazards**

Causes mild skin 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

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.

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

Rinse mouth

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Component	CAS No	Weight-%
Ammonium Chloride	12125-02-9	100

**4. FIRST AID MEASURES**

**First aid measures**

**General Advice:**

National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222. First aider needs to protect himself. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

**Skin Contact:**

Wash off immediately with soap and plenty of water removing all contaminated clothing and shoes. Get medical attention if irritation develops. If skin irritation persists, call a physician.

**Eye Contact:**

Flush eyes with water for 15 minutes. Get medical attention.

**Inhalation:**

Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**Ingestion:**

Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Obtain medical attention.

**Most important symptoms and effects, both acute and delayed**

**Symptoms**

Irritating to eyes  
May cause skin irritation  
May cause digestive (gastrointestinal) tract irritation

May cause nausea and vomiting  
May cause metabolic acidosis  
Central nervous system effects  
May cause cardiovascular effects  
May affect respiration  
May affect the urinary system  
It may affect the kidneys

**Indication of any immediate medical attention and special treatment needed**

**Notes to Physician:** Treat symptomatically.

**Protection of first-aiders**

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

**5. FIRE-FIGHTING MEASURES**

**Extinguishing Media**

**Suitable Extinguishing Media:**

The product is not flammable. If it is involved in a fire, extinguish the fire using an agent suitable for the type of surrounding fire.

**Unsuitable Extinguishing Media:**

No information available.

**Specific hazards arising from the chemical**

**Hazardous combustion products**

Nitrogen oxides, ammonia, hydrogen chloride gas

**Hazardous combustion products**

If it is involved in a fire the following can be released:  
Nitrogen oxides (NOx). Ammonia. hydrogen chloride gas.

**Specific hazards**

The substance itself does not burn, but may decompose upon heating.

**Special Protective Actions for Firefighters**

**Specific Methods:**

No information available

**Special Protective Equipment for Firefighters:**

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

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

**Personal Precautions:** Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Use personal protective equipment. Avoid dust formation.

**Environmental precautions** Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Do not let this chemical enter the environment. Prevent entry into waterways, sewers.

### Methods and material for containment and cleaning up

**Methods for containment** Stop leak if you can do it without risk. Cover with plastic sheet to prevent spreading.

**Methods for cleaning up** Sweep up and shovel into suitable containers for disposal. Avoid creating dust. Clean contaminated surface thoroughly.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

#### **Technical Measures/Precautions:**

Provide sufficient air exchange and/or exhaust in work rooms. Avoid dust formation. Keep away from incompatible materials.

#### **Safe Handling Advice**

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid dust formation. Do not ingest. Do not breathe vapors/dust. Keep away from heat and sources of ignition. Handle in accordance with good industrial hygiene and safety practice.

### Conditions for safe storage, including any incompatibilities

#### **Technical Measures/Storage Conditions:**

Hygroscopic. Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials.

#### **Incompatible Materials:**

Acids  
Oxidizing agents  
Alkalis

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

#### **National occupational exposure limits**

##### **United States**

Component	CAS No	OSHA	NIOSH	ACGIH	AIHA WEEL
Ammonium Chloride	12125-02-9	None	10 mg/m <sup>3</sup> TWA 20 mg/m <sup>3</sup> STEL	20 mg/m <sup>3</sup> STEL fume 10 mg/m <sup>3</sup> TWA fume	None

##### **Canada**

Component	CAS No	Canada - Alberta	Canada - British Columbia	Canada - Ontario	Canada - Quebec
Ammonium Chloride	12125-02-9	10 mg/m <sup>3</sup> TWA fume	10 mg/m <sup>3</sup> TWA fume	20 mg/m <sup>3</sup> STEL	None

		20 mg/m <sup>3</sup> STEL fume	20 mg/m <sup>3</sup> STEL fume		
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### Australia and Mexico

Component	CAS No	Australia	Mexico
Ammonium Chloride	12125-02-9	20 mg/m <sup>3</sup> STEL 10 mg/m <sup>3</sup> TWA	10 mg/m <sup>3</sup> TWA 20 mg/m <sup>3</sup> STEL

### Appropriate engineering controls

**Engineering measures to reduce exposure:** Ensure adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

### Individual protection measures, such as personal protective equipment

#### Personal Protective Equipment

- Eye protection:** Goggles
- Skin and body protection:** Long sleeved clothing  
Chemical resistant apron  
Gloves
- Respiratory protection:** Wear respirator with dust filter.
- Hygiene measures:** Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state:</b> Solid	<b>Appearance:</b> Granular. Crystalline. Crystals. Crystalline block.	<b>Color:</b> White.
<b>Odor:</b> Odorless.	<b>Taste</b> Cooling. Saline.	<b>Formula</b> NH <sub>4</sub> Cl
<b>Molecular/Formula weight (g/mole):</b> 53.49	<b>Flammability (solid, gas)</b> no data available	<b>Flashpoint (°C/°F):</b> No information available
<b>Flash Point Tested according to:</b> Not applicable	<b>Autoignition Temperature (°C/°F):</b> No information available	<b>Lower Explosion Limit (%):</b> No information available
<b>Upper Explosion Limit (%):</b> No information available	<b>Melting point/range(°C/°F):</b> No information available	<b>Decomposition temperature(°C/°F):</b> 338-340 °C/640.4-644 °F (sublimation)
<b>Boiling point/range(°C/°F):</b> No information available	<b>Bulk density:</b> No information available	<b>Density (g/cm<sup>3</sup>):</b> No information available
<b>Specific gravity:</b> 1.5274- 1.567 @ 20 deg. C	<b>pH</b> No information available	<b>Vapor pressure @ 20°C (kPa):</b> No information available
<b>Evaporation rate:</b>		

No information available

**Vapor density:**  
1.8-1.9

**VOC content (g/L):**  
No information available

**Odor threshold (ppm):**  
No information available

**Partition coefficient  
(n-octanol/water):**  
No information available

**Viscosity:**  
No information available

**Miscibility:**  
No information available

**Solubility:**  
Insoluble in Acetone  
Insoluble in Ether  
Insoluble in Ethyl acetate  
Soluble in Methanol  
Soluble in Water  
Solubility in Water:  
29.7 g/100ml water at 0 deg. C  
75.8 g/100 ml water at 100 deg. C  
37.8 lbs./100 lbs. water at 70 deg. F  
28.3% (w/w) in water at 25 deg. C  
39.5 g/100 ml @ 25 deg. C  
Soluble in liquid ammonia

## 10. STABILITY AND REACTIVITY

### Reactivity

Reactive with strong acids

Reactive with oxidizing agents

Can react violently or explosively with ammonium nitrate, bromine pentafluoride, iodine heptafluoride, bromine trifluoride, ammonium bromide, alkalis and their carbonates, lead and silver salts, and potassium chlorate

Attacks copper and copper compounds

### Chemical stability

**Stability:** Stable under recommended storage conditions.

**Possibility of Hazardous Reactions:** Hazardous polymerization does not occur

**Conditions to avoid:** Heat. Avoid dust formation. Incompatible materials.

**Incompatible Materials:** Acids  
Oxidizing agents  
Alkalis

**Hazardous decomposition products:** Ammonia. Nitrogen oxides (NO<sub>x</sub>). Hydrogen chloride gas.

### Other Information

**Corrosivity:** No information available

**Special Remarks on Corrosivity:** No information available

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

**Principal Routes of Exposure:**  
Ingestion. Inhalation.

## Acute Toxicity

### Component Information

Ammonium Chloride	
CAS No	12125-02-9

**LD50/oral/rat** = 1650 mg/kg Oral LD50 Rat; 1410 mg/kg  
**LD50/oral/mouse** = 1300 mg/kg (RTECS)  
**LD50/dermal/rabbit** = No information available  
**LD50/dermal/rat** = No information available  
**LC50/inhalation/rat** = No information available  
**LC50/inhalation/mouse** = No information available  
**Other LD50 or LC50 information** = No information available

### Product Information

**LD50/oral/rat** =  
**Value - Acute Tox** = 1410 mg/kg

**LD50/oral/mouse** =  
**Value - Acute Tox Oral** = 1300 mg/kg

**LD50/dermal/rabbit**  
**Value - Acute Tox** = No information available

**LD50/dermal/rat**  
**VALUE - Acute Tox Dermal** = No information available

**LC50/inhalation/rat**  
**VALUE-Vapor** = No information available  
**VALUE-Gas** = No information available  
**VALUE-Dust/Mist** = No information available

**LC50/Inhalation/mouse**  
**VALUE-Vapor** = No information available  
**VALUE - Gas** = No information available  
**VALUE - Dust/Mist** = No information available

### Symptoms

**Skin Contact:** May cause skin irritation. Mild skin irritation.

**Eye Contact:** Causes eye irritation. Moderately irritating to the eyes. It may cause Salt Cataract, increased ocular pressure, and degeneration of the retina.

**Inhalation** May cause irritation of respiratory tract.

**Ingestion** Harmful if swallowed. May cause digestive (gastrointestinal) tract irritation. Ingestion may cause nausea, vomiting. May cause thirst. May affect behavior/central nervous system (headache, somnolence, confusion, drowsiness, tremor, convulsions, coma), eyes (Mydriasis), cardiovascular system (bradycardia), respiration (respiratory stimulation, apnea, hyperventilation, pulmonary edema). May cause serious metabolic acidosis with hypokalemia. Transient hyperglycemia and glycosuria may also occur. May cause hyperchloremia.

**Aspiration hazard** No information available.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Chronic Toxicity** Prolonged or repeated ingestion may cause metabolic acidosis and affect the urinary system (kidneys).  
Inhalation: Prolonged or repeated inhalation may cause asthma-like allergy. Symptoms may include bronchospasm, shortness of breath, wheezing, cough, and/or chest tightness.

**Sensitization:** No information available.

**Mutagenic Effects:** No information available

**Carcinogenic effects:** Not considered carcinogenic.

Component	CAS No	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
Ammonium Chloride	12125-02-9	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

*ACGIH (American Conference of Governmental Industrial Hygienists)*

*IARC (International Agency for Research on Cancer)*

*NTP (National Toxicology Program)*

*OSHA (Occupational Safety and Health Administration of the US Department of Labor)*

**Reproductive toxicity** No data is available

**Reproductive Effects:** No information available  
**Developmental Effects:** No information available  
**Teratogenic Effects:** No information available

**Specific Target Organ Toxicity**

**STOT - single exposure** No information available.  
**STOT - repeated exposure** No information available.  
**Target Organs:** Lungs. Respiratory system. Kidneys.

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

**Ecotoxicity effects:** Aquatic environment.

*Ammonium Chloride - 12125-02-9*

**Fish** LC50: =209mg/L (96h, Cyprinus carpio) LC50: =725mg/L (24h, Lepomis macrochirus)

**Crustacea** LC50: =202mg/L (24h, Daphnia magna)

**Persistence and degradability:** No information available

**Bioaccumulative potential:** No information available.

**Mobility in soil** No information available



Other adverse effects No information available.

### 13. DISPOSAL CONSIDERATIONS

#### Disposal Methods

##### Waste from residues / unused products:

Waste must be disposed of in accordance with Federal, State and Local regulation.

##### Contaminated packaging:

Empty containers should be taken for local recycling, recovery or waste disposal

Component	CAS No	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Ammonium Chloride	12125-02-9	None	None	None	None

### 14. TRANSPORT INFORMATION

#### DOT

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class** No information available  
**Subsidiary Class** No information available  
**Packing group:** No information available  
**Emergency Response Guide Number** No information available  
**Marine Pollutant** No data available  
**DOT RQ (lbs):** 5000 lbs./2270 kg  
**Special Provisions** No Information available  
**Symbol(s):** No information available  
**Description:** No information available

#### TDG (Canada)

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available  
**Marine Pollutant** No Information available  
**Description:** No information available

#### ADR

**UN Number** Not regulated  
**Proper Shipping Name:** No information available  
**Transport hazard class(es)** No information available  
**Packing group** No information available  
**Subsidiary Risk:** No information available

#### IMDG

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available  
**Marine Pollutant** No information available

**RID**

**UN Number** Not Regulated  
**Proper Shipping Name:** No information available  
**Transport hazard class(es)** No information available  
**Subsidiary Risk:** No information available  
**Packing group** No information available

**ICAO (air)**

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available

**IATA**

**UN Number** Not Regulated  
**Proper Shipping Name:** No information available  
**Transport hazard class(es)** No information available  
**Subsidiary Risk:** No information available  
**Packing group** No information available  
**Precautionary Statements - Response** No information available  
**Special Provisions** No information available

**15. REGULATORY INFORMATION****International Inventories**

Component	CAS No	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	China IECSC	Australia (AICS)	EINECS-No.
<i>Ammonium Chloride</i>	12125-02-9	PresentACTIVE	Present KE-01645	Present	Present (1)-218	Present	Present	Present 235-186-4

**U.S. Regulations***Ammonium Chloride*

**Massachusetts RTK:** Present  
**New Jersey RTK Hazardous Substance List:** 0093  
**New Jersey - Discharge Prevention - List of Hazardous Substances:** Present  
**Pennsylvania RTK:** Environmental hazard  
**Pennsylvania RTK - Environmental Hazard List** Present  
**Minnesota - Hazardous Substance List:** Present  
**New York Release Reporting - List of Hazardous Substances:**  
 5000 lb RQ  
 100 lb RQ  
**Louisiana Reportable Quantity List for Pollutants:** 5000lbfinal RQ  
 2270kgfinal RQ  
**California Directors List of Hazardous Substances:** Present  
**FDA - Food Additives Generally Recognized as Safe (GRAS):** 21 CFR 184.1138  
**FDA - 21 CFR - Total Food Additives** 178.1010, 184.1138 (also listed as Ammonia (also includes Ammonium chloride))  
**- List Sourced from EAFUS**

**California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.****Chemicals Known to the State of California to Cause Cancer:**

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

**Chemicals Known to the State of California to Cause Reproductive Toxicity:**

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Component	CAS No	Carcinogen	Developmental Toxicity	Male	Female
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				<b>Reproductive Toxicity</b>	<b>Reproductive Toxicity:</b>
Ammonium Chloride	12125-02-9	Not Listed	Not Listed	Not Listed	Not Listed

#### CERCLA/SARA

Component	CAS No	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting de minimis
Ammonium Chloride	12125-02-9	5000 lb final RQ 2270 kg final RQ	None	None	None	None

#### U.S. TSCA

Component	CAS No	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Ammonium Chloride	12125-02-9	Not Applicable	Not Applicable

#### Canada

##### WHMIS 2015 - GHS Classifications

WHMIS 2015 Hazard Classification Information:

Component  
Ammonium Chloride  
12125-02-9 ( 100 )

WHMIS 2015 Hazard Classification  
Acute toxicity - Oral - Category 4: H302 Harmful if swallowed.;  
Serious Eye Damage/Eye Irritation - Category 2: H319 Causes serious eye irritation.;  
Combustible Dust - Category 1: May form combustible dust concentrations in air (factors such as combustibility and explosiveness of dusts including composition and shape and size of particles could cause substance to belong to 'Combustible dust' hazard class)

**Canada Hazardous Products Regulation** This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

#### DSL/NDSL

Component	CAS No	Canada (DSL)	Canada (NDSL)
Ammonium Chloride	12125-02-9	Present	Not Listed

Component	CAS No	CEPA Schedule I - Toxic Substances
Ammonium Chloride	12125-02-9	Not listed
Component	CAS No	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Ammonium Chloride	12125-02-9	Not listed

#### EU Classification

##### EU GHS - SV - CLP 1272/2008

Component	CAS No	EU GHS - SV - CLP (1272/2008)
Ammonium Chloride	12125-02-9	Acute toxicity - Oral - Acute Tox. 4: H302 Harmful if swallowed. (Minimum classification); Serious Eye

		Damage/Eye Irritation - Eye Irrit. 2: H319 Causes serious eye irritation.017-014-00-8
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EU - CLP (1272/2008)

**R-phrase(s)**

R22 - Harmful if swallowed  
R36 - Irritating to eyes

**S -phrase(s)**

S 2 - Keep out of the reach of children.  
S22 - Do not breathe dust

Component	CAS No	Classification	Concentration Limits:	Safety Phrases
Ammonium Chloride	12125-02-9	Xn; R22 Xi; R36	No information	

The product is classified in accordance with Annex VI to Directive 67/548/EEC

**Indication of danger:**

Xi - Irritant  
Xn - Harmful



**16. OTHER INFORMATION**

Preparation Date: 10/17/2014  
Revision date 4/9/2019  
Prepared by: Sonia Owen

**Disclaimer:**

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

**End of Safety Data Sheet**