

**Section 1: Product & Company Information**

**Product Identifier:** Ammonium Chloride

**Other Means of Identification**

Product Number: 160000

**Recommended Use and Restrictions on Use**

Recommended Use: Food, Feed, Pharma, Metallurgy

Restrictions on Use: No data available.

**Manufacturer / Importer / Supplier / Distributor Information**

**Company Name:** CORECHEM Inc.

**Address:** 4320 Greenway Drive  
Knoxville, TN 37918  
USA

**Information Telephone Number:** 1-865-524-4239

**Fax Number:** 1-865-524-3375

**Website:** www.corecheminc.com

**Contact Person:** Regulatory Manager

**E-mail:** regulatory@corecheminc.com

**Emergency Phone Number:** Chemtrec® 1-800-424-9300 / Outside USA 1-703-527-3887 (monitored 24 hours/day)

**Section 2: Hazards Identification**

**GHS Hazard Classification(s)**

In accordance with OSHA Hazard Communication Standard 29 CFR 1910.1200 (HazCom 2012).

**Physical Hazard(s)**

Not classified.

**Health Hazard(s)**

Acute Toxicity, Oral - 4

(Corrosion) Damage/Irritation, Eye - 2A

**Environmental Hazard(s)**

Not classified.

**Label Elements**

**Signal Word**

**WARNING**

**Hazard Symbol(s)**



**Hazard Statement(s)**

H302: Harmful if swallowed.

H319: Causes serious eye irritation.

**Precautionary Statements**

**General**

Not applicable.

**Prevention**

P264: Wash face, hands and any exposed skin thoroughly after handling.

P270: Do not eat, drink or smoke when using this product.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

**Response**

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

P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P330: Rinse mouth.

P337 + P313: If eye irritation persists: Get medical advice/attention.

**Storage**

Not applicable.

**Disposal**

P501: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

**Hazard(s) not otherwise classified (HNOC)**

None known.

**Section 3: Composition/Information on Ingredients**

**Substance**

Chemical Identity <sup>2</sup>	Common Name/Synonym(s)	CAS # <sup>3</sup>	Weight %	Impurity or Stabilizing Additive
Ammonium Chloride	-	12125-02-9	99%	No
Anti-Caking Agent	-	—	0-<1%	No

- Information regarding the composition and the percent ranges of the mixtures ingredients are not presented as it Confidential Business Information (CBI). Where a medical emergency exists (as determined by medical/professional), timely disclosure of CBI is assured. The information omitted pertains to only the names of the substances and the concentration in the mixture (product) and can only be requested by a doctor/physician or Local/State/Provincial or Federal Authority.
- Non-hazardous ingredients are not presented as to protect the proprietary formula of the product.
- “—”Indicates ingredient is a mixture and contains multiple ingredients or may have no identifying CAS number.

**Section 4: First-Aid Measures**

**General Information**

Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Wash contaminated clothing before reuse.

**Inhalation**

If irritation develops remove person to fresh air. Get medical attention if irritation persists.

**Skin Contact**

Wash with soap and water. Remove any contaminated clothing and wash if before reuse. Get medical attention if irritation develops.

**Eye Contact**

Flush with plenty of water for several minutes, holding eyelids open to assure thorough flushing. If contact lenses are present, remove them after the first 5 minutes if easy to do, and continue flushing. Obtain medical attention if irritation persists.

**Ingestion**

Do not induce vomiting unless directed to do so by medical personnel. If person is alert have them rinse their mouth with water. Get medical attention.

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

**Symptoms**

Causes eye irritation. May cause mild skin and respiratory irritation. Harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting, thirst, headaches, hyperventilation and drowsiness.

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

**Hazards**

No data available.

**Treatment**

Treat symptomatically. Symptoms may be delayed.

**Section 5: Fire-Fighting Measures**

**General Fire Hazards**

This material is not combustible but will decompose under fire conditions.

**Suitable (and Unsuitable) Extinguishing Media**

**Suitable Extinguishing Media**

Use any media appropriate for the surrounding fire.

**Unsuitable Extinguishing Media**

No data available.

**Specific Hazards Arising from the Chemical**

When heated to decomposition, nitrogen oxide, hydrogen chloride gas and ammonia gas will be produced.

**Special Protective Equipment and Precautions for Firefighters**

**Special Fire-Fighting Equipment Procedures**

Use water spray to keep fire-exposed containers cool. Water may be ineffective in fighting the fire. Fight fire from a protected location. Move containers from fire area if you can do so without risk.

**Special Protective Equipment for Fire-Fighters**

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

**Section 6: Accidental Release Measures**

**Personal Precautions, Protective Equipment and Emergency Procedures**

Wear appropriate protective equipment. Evacuate area. Avoid creating and breathing dust. Avoid contact with eyes, skin and clothing.

**Methods and Materials for Containment and Clean-Up**

Pick up and arrange disposal without creating dust. Sweep up and shovel. Do not flush with water. Keep in suitable, closed containers for disposal.

**Notification Procedures**

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

**Environmental Precautions**

Avoid release into the environment. Report releases as required by local and national authorities.

**Section 7: Handling and Storage**

**Precautions for Safe Handling**

Avoid contact with eyes. Avoid prolonged contact with skin and clothing. Avoid creating and breathing dust. Do not swallow. Use with adequate ventilation. Wash thoroughly with soap and water after handling. Remove contaminated clothing and launder before reuse. Do not smoke while handling. Do not reuse containers. Empty containers retain product residue and can be hazardous. Follow all SDS precautions when handling empty containers.

**Conditions for Safe Storage, including any Incompatibilities**

Keep container tightly closed. Store in a cool, dry, well-ventilated place. Store away from incompatible materials (See Section 10). Ensure that all local regulations regarding handling and storage facilities are followed.

**Section 8: Exposure Controls/Personal Protection**

**Control Parameters**

**Occupational Exposure Limits**

Chemical Identity	Type	Value	Source
Ammonium Chloride - Fume.	TWA	10 mg/m <sup>3</sup>	US. ACGIH Threshold Limit Values
	STEL	20 mg/m <sup>3</sup>	US. ACGIH Threshold Limit Values
	STEL	20 mg/m <sup>3</sup>	US OSHA Table Z-1
	TWA	10 mg/m <sup>3</sup>	US OSHA Table Z-1

**Biological Limit Values**

The product does not contain any relevant quantities of hazardous materials with assigned biological limit values.

**Appropriate Engineering Controls**

Use with adequate general or local ventilation to maintain exposure levels below the exposure limits.

**Individual protection measures, such as personal protective equipment (PPE)**

**General Information**

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

**Eye/Face Protection**

Wear safety glasses with side shields (or goggles) and a face shield. Wear a full-face respirator, if needed.

**Skin Protection**

**Hand Protection**

Wear appropriate chemical resistant gloves.

**Other**

Wear protective clothing if needed to avoid skin contact and contamination of personal clothing.

**Respiratory Protection**

If the exposure levels are excessive, a local authority approved respirator should be worn. Respirator selection and use should be based on the contaminate type, form and concentration. Follow OSHA 1910.134 and ANSI Z88.2 or other applicable regulations and standards and good industrial hygiene practice.

**Hygiene Measures**

When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated footwear that cannot be cleaned. Wash hands before breaks and immediately after handling the product. Wash contaminated clothing before reuse. Avoid contact with eyes, skin, and clothing.

**Section 9: Physical and Chemical Properties**

**Appearance:**

Physical State: Crystalline solid  
Color: Off white

Odor: Odorless

Odor Threshold: No data available.

pH: 4.3-5.5 (5% Aqueous solution)

Melting Point/Freezing Point: 642 °F (399 °C)

Initial Boiling Point and Boiling Range: 520 °C

Flash Point: Not applicable.

Evaporation Rate (butyl acetate=1): No data available.

Flammability (solid, gas): Noncombustible Solid

**Upper/Lower Limit on Flammability or Explosive Limits**

Flammability Limit – Upper: No data available.  
Flammability Limit – Lower: No data available.  
Explosive Limit – Upper: No data available.  
Explosive Limit – Lower: No data available.

**Vapor Pressure:** 0.13 kPa (160.4 °C)

**Vapor Density (air=1):** No data available.

**Relative Density (water=1):** 900 g/L

**Solubility(ies):**  
Solubility in water: 37 G /100 g saturated solution @ 20 °C  
Solubility (other): No data available.

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

**Auto-Ignition Temperature:** No data available.

**Decomposition Temperature:** 968 °F (520°C)

**Viscosity:** No data available.

**Other Information:**

Molecular Weight: 53.5 g/mol  
Formula: (ClH4N)

**Section 10: Stability and Reactivity**

**Reactivity**

Reacts to produce Ammonia and hydrogen Chloride.

**Chemical Stability**

Material is stable under normal conditions.

**Possibility of Hazardous Reactions**

Reacts with alkalis to release ammonia. Reacts with acids to release hydrogen chloride.

**Conditions to Avoid**

Heating to decomposition may produce nitrogen oxides, hydrogen chloride and ammonia gas.

**Incompatible Materials**

Avoid strong oxidizing agents, alkalis, acids and nitrates. Corrodes most metals at high temperatures.

**Hazardous Decomposition Products**

ammonia Nitrogen Oxides hydrogen chloride

**Section 11: Toxicological Information**

**Information on routes of exposure**

**Ingestion:** May cause gastrointestinal irritation, nausea, vomiting, thirst, headaches, hyperventilation and drowsiness. Large amounts may cause severe metabolic acidosis with symptoms such as headaches, drowsiness, vomiting, confusion, thirst and hyperventilation.

**Inhalation:** May cause irritation of the nose, throat and upper respiratory tract with sneezing, coughing and a sore throat.

**Skin Contact:** May cause irritation.

**Eye Contact:** Causes serious eye irritation.

**Information on Toxicological Effects**

**Acute Toxicity (List all possible routes of exposure)**

**Oral**

Ammonium Chloride: LD50 (Rat): 1,410 mg/kg  
Ammonium chloride: 1410-1566 mg/kg

**Dermal**

Ammonium Chloride: LD50: 1410 mg/kg  
Ammonium Chloride: LD50: (Rabbit > 2000 mg/kg)

**Inhalation**

No data available.

**Repeated Dose Toxicity**

No data available.

**Skin Corrosion/Irritation**

May cause skin irritation.

**Serious Eye Damage/Eye Irritation**

Causes serious eye irritation.

**Respiratory/Skin Sensitization**

Not a skin sensitizer.

**Carcinogenicity**

**IARC Monographs on the Evaluation of Carcinogenic Risks to Humans**

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

## US. National Toxicology Program (NTP) Report on Carcinogens

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

## US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

### Germ Cell Mutagenicity

#### In Vitro

No mutagenic components identified.

#### In Vivo

No mutagenic components identified.

### Reproductive Toxicity

None known.

### Specific Target Organ Toxicity – Single Exposure

None known.

### Specific Target Organ Toxicity – Repeated Exposure

None known.

### Aspiration Hazard

Not classified.

### Other Effects

None known.

## Section 12: Ecological Information

### Ecotoxicity

#### Acute Hazards to the Aquatic Environment

##### Fish

Ammonium Chloride: LC50: (*Prosopium Williamsoni*) 46.27 mg/L

##### Aquatic Invertebrates

Ammonium Chloride: EC50: (*Daphnia Magna*) 136.6

##### Toxicity to Aquatic Plants

Ammonium Chloride: EC50: (*Chlorella Vulgaris*) 1300 mg/L

#### Chronic Hazards to the Aquatic Environment

##### Fish

No data available.

##### Aquatic Invertebrates

No data available.

##### Toxicity to Aquatic Plants

No data available.

### Persistence and Degradability

#### Biodegradation

Expected to be readily biodegradable.

#### BOD/COD Ratio

No data available.

### Bioaccumulative Potential

#### Bioconcentration Factor (BCF)

No data available on bioaccumulation.

#### Partition Coefficient n-octanol / water (log Kow)

No data available.

### Mobility in Soil

No Mobility in soil is expected. Ammonium chloride is highly soluble and dissociates into ammonia and chloride ions.

### Other Adverse Effects

The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

## Section 13: Disposal Considerations

### Disposal Instructions

This material when discarded is not a hazardous waste as that term is defined by the resource, Conservation and Recovery Act (RCRA), 40 CFR 261. Dry material may be landfilled or recycled in accordance with local state and federal regulations. Dispose in accordance with all local, state and federal regulations.

### Contaminated Packaging

Handle contaminated packages in the same way as the substance itself. Emptied containers may retain hazardous residue and explosive vapors. Keep away from heat, sparks, and flames. Do not cut, puncture, or weld on or near this container. Follow label warnings until container is thoroughly cleaned or destroyed.

## Section 14: Transportation Information

### US Department of Transportation (DOT)

This material is not regulated as a hazardous material for transport by the U.S. Department of Transportation in accordance with 49 CFR 172.101.

## Section 15: Regulatory Information

### US Federal Regulations

#### Toxic Substance Control Act (TSCA), Chemical Substance Inventory, Section 8(b)

This product or ingredient(s) are listed on the TSCA inventory. Any impurities present in this product are exempt from listing.

#### Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Hazardous Substance List (40 CFR 302.4)

The following chemical(s) in this material are subject to reporting levels established by CERCLA:

Ammonium Chloride CAS# 12125-02-9

#### Clean Air Act (CAA), Section 112(r)

No chemical(s) in this material are subject to the reporting requirements of CAA.

#### Emergency Planning and Community Right-To-Know Act (EPCRA)

##### EPCRA 302 Extremely Hazardous Substance

No chemical(s) in this material are subject to the reporting requirements of SARA Title III, Section 302.

##### EPCRA 304 Emergency Response Notification

No chemical(s) in this material are subject to the reporting requirements of SARA Title III, Section 304.

##### EPCRA 311/312 Emergency and Hazardous Materials Reporting

Fire Hazard: No  
Sudden Release of Pressure: No  
Reactive: No  
Acute (Immediate) Health Hazard: Yes  
Chronic (Delayed) Health Hazard: No

##### EPCRA 313 Toxic Chemical Release Inventory (TRI) Reporting

This material does not contain any chemical(s) with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

### US State Regulations

#### California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

*Important Note: Due to the changing nature of regulatory requirements, the information in this document should NOT be considered all-inclusive or authoritative. Users should make their own investigations to determine the suitability of the information for their particular purposes. International, Federal, State and Local regulations should be consulted to determine compliance with all required reporting requirements.*

## Section 16: Other Information

### Hazardous Materials Identification System (HMIS®) Classification

Health Hazard: 2

Chronic Health Hazard: /

Flammability: 0

Physical Hazard: 0

(Hazard Rating: 0 – Minimal / 1 – Slight / 2 – Moderate / 3 – Serious / 4 – Severe)

### National Fire Protection Association (NFPA 704) Rating

Health Hazard: 2

Fire Hazard: 0

Reactivity Hazard: 0

Special: N/A

(Hazard Rating: 0 – Minimal / 1 – Slight / 2 – Moderate / 3 – Serious / 4 – Severe)

Prepared By: Regulatory Manager

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### Key to Abbreviations and Acronyms

ATE - Acute Toxicity Estimate

BCF - Bioconcentration Factor

EC50 - Effective concentration, 50%

IDHL - Immediately Dangerous to Life and Health

Kg - Kilogram

l - Liter

lb - Pound

LC50 - Lethal Concentration, 50%

LD50 - Lethal Dose, 50%

ACGIH - American Conference of Industrial Hygienists

AIHA - American Industrial Hygiene Association

BEI - Biological Exposure Indices

CAS - Chemical Abstracts Service

DOT - US Department of Transportation

EPA - US Environmental Protection Agency

GHS - Globally Harmonized System of Classification and Labelling of Chemicals

IARC - International Agency for Research on Cancer

IATA - International Air Transport Association

mg - milligram

ml - milliliter

N/A - Not Applicable

N/D - Not Determined

PEL - Permissible Exposure Limit

REL - Recommended Exposure Limit

STEL - Short-term Exposure Limit

TWA - Time weighted average

IBC - Intermediate Bulk Container

IMDG - International Maritime Dangerous Goods

NIOSH - National Institute for Occupational Safety and Health

NTP - National Toxicology Program

OSHA - US Occupational Health and Safety Administration

SARA - US EPA Superfund Amendments and Reauthorization Act

TSCA - US EPA Toxic Substances Control Act

UN - United Nations

**References**

HSDB® - Hazardous Substances Data Bank

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