



Safety Data Sheet

Section 01 - Identification

Product Identifier	Ammonium Chloride
Other Means of Identification	Sal ammoniac, Salmiac, Nushadir salt, Sal Armagnac.
Product Use and Restrictions on Use	Corrosion inhibitor, ion exchange agent, agricultural.
Initial Supplier Identifier	ClearTech Industries Inc. 1500 Quebec Avenue Saskatoon, SK. Canada S7K 1V7
Prepared By	ClearTech Industries Inc. Technical Writer Phone: 1 (800) 387-7503
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Section 02 - Hazard Identification

GHS-Classification

Acute Toxicity - Oral	Category 4
Serious Eye Damage/Eye Irritation	Category 2

Physical Hazards

No known physical hazards

Warning

Hazard Statements

H302 – Harmful if swallowed
H319 – Causes serious eye irritation

Pictograms



Precautionary Statements

P264 – Wash affected body parts thoroughly after handling.

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

P280 – Wear eye protection and face protection.

P301 + P312 – IF SWALLOWED: Call a POISON CENTRE or 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 all federal, provincial, and/or local regulations including the Canadian Environmental Protection Act.

Section 03 - Composition / Information on Ingredients

Chemical Name	CAS Number	Weight %	Unique Identifiers
Ammonium Chloride	12125-02-9	>98%	Not Available

Section 04 - First Aid Measures

Inhalation	If symptoms are experienced, remove victim to fresh air. Give artificial respiration only if breathing has stopped. If breathing is difficult, give oxygen. Seek immediate medical attention.
Skin Contact / Absorption	Remove contaminated clothing. Wash affected area with soap and water. Seek medical attention if irritation occurs or persists.
Eye Contact	Rinse eyes cautiously with lukewarm, gently flowing water for several minutes, while holding the eyelids open. Remove contact lenses, if present and easy to do. Continue rinsing for 15 to 20 minutes. Take care not to rinse contaminated water into the unaffected eye or onto the face. If eye irritation persists: Get medical advice / attention.
Ingestion	Do not induce vomiting. If vomiting occurs, lean victim forward to prevent breathing in vomitus. Rinse mouth thoroughly with water. Give 1-2 glasses of water to the victim to drink. If vomiting occurs naturally, rinse the mouth out again and give another 1-2 glasses of water. Do not give anything by mouth to an unconscious or convulsing person. Seek immediate medical attention.
Additional Information	Advice to physician: treat symptomatically.

Section 05 - Fire Fighting Measures

Suitable Extinguishing Media	Product does not burn. Where fire is involved, use any fire fighting agent appropriate for surrounding material; use water spray to cool fire-exposed surfaces.
Unsuitable Extinguishing Media	Not Available
Specific Hazards Arising From the Chemical	Thermal decomposition may result in Nitrogen oxides, ammonia, and hydrogen chloride.
Special Protective Equipment for Fire-Fighters	Wear NIOSH-approved self-contained breathing apparatus and protective clothing.
Further Information	Not Available

Section 06 - Accidental Release Measures

Personal Precautions / Protective Equipment / Emergency Procedures	Wear appropriate personal protective equipment. Ventilate area. Only enter area with PPE. Stop or reduce leak if safe to do so. Spray residue with plenty of water.
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Environmental Precautions	Prevent material from entering sewers.
Methods and Materials for Containment and Cleaning Up	Collect liquid and/or residue and dispose of in accordance with applicable regulations.

Section 07 - Handling and Storage

Precautions for Safe Handling	Use proper equipment for lifting and transporting all containers. Use sensible industrial hygiene and housekeeping practices. Wash thoroughly after handling. Avoid all situations that could lead to harmful exposure.
Conditions for Safe Storage	Store in a cool, dry, well-ventilated place. Keep container tightly closed, and away from incompatible materials.
Incompatibilities	Acids, alkalis, moisture, ammonium nitrate, corrosive to copper and copper compounds

Section 08 - Exposure Controls and Personal Protection

Exposure Limit(s)

Component	Regulation	Type of Listing	Value
Ammonium Chloride	NISOH REL	TWA	10 mg/m ³
Ammonium Chloride	NISOH REL	STEL	20 mg/m ³

Engineering Control(s)

Ventilation Requirements	Mechanical ventilation (dilution or local exhaust), process or personnel enclosure and control of process conditions must be provided in accordance with all fire codes and regulatory requirements. Supply sufficient replacement air to make up for air removed by exhaust systems.
Other	Emergency shower and eyewash must be available and tested in accordance with regulations and be in close proximity.

Protective Equipment

Eyes/Face	Chemical goggles, full-face shield, or a full-face respirator is to be worn at all times when product is handled. Contact lenses should not be worn; they may contribute to severe eye injury.
Hand Protection	Impervious gloves of chemically resistant material (rubber or PVC) should be worn at all times. Wash contaminated clothing and dry thoroughly before reuse.
Skin and Body Protection	Body suite, aprons, and/or coveralls of chemical resistant material should be worn at all times. Wash contaminated clothing and dry thoroughly before reuse. Impervious boots of chemically resistant material should be worn at all times. No special footwear is required other than what is mandated at place of work.
Respiratory Protection	For dusty conditions wear a NIOSH/MSHA-approved dust or mist respirator. A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 or applicable federal/provincial requirements must be followed whenever workplace conditions warrant respirator use. NIOSH's "Respirator Decision Logic" may be useful in determining the suitability of various types of respirators.
Thermal Hazards	Not Available

Section 09 - Physical and Chemical Properties

Appearance

Physical State	Solid, powder
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Colour	White
Odour	Odourless
Odour Threshold	Not Available
<u>Property</u>	
pH	~5 (10% solution)
Melting Point/Freezing Point	328°C
Initial Boiling Point and Boiling Range	520°C
Flash Point	Not Applicable
Evaporation Rate	Not Applicable
Flammability	Non-Flammable
Upper Flammable Limit	Not Applicable
Lower Flammable Limit	Not Applicable
Vapour Pressure	0.13 kPa @ 20°C
Vapour Density (Air=1)	Not Applicable
Relative Density	1.53 g/cm ³
Solubility(ies)	Soluble in water.
Partition Coefficient: n-octanol/water	Not Applicable
Auto-ignition Temperature	Not Applicable
Decomposition Temperature	650-760°C
Viscosity	Not Applicable
Explosive Properties	None
Specific Gravity (Water=1)	Not applicable
% Volatiles by Volume	Not Available
Formula	NH ₄ Cl
Molecular Weight	53.489

Section 10 - Stability and Reactivity

Reactivity	Not Available
Stability	Stable
Possibility of Hazardous Reactions	Polymerization will not occur.
Conditions to Avoid	Generation of airborne dusts, moisture, elevated temperatures. Incompatible materials
Incompatible Materials	Acids, alkalis, moisture, ammonium nitrate, corrosive to copper and copper compounds

Hazardous Decomposition Products

At elevated temperatures nitrogen oxides, ammonia, and hydrogen chloride may be released.

Section 11 - Toxicological Information

Acute Toxicity Estimate

Component	Oral LD ₅₀	Dermal LD ₅₀	LC ₅₀
Ammonium Chloride	1650 mg/kg (rat)	Not Available	Not Available

Chronic Toxicity – Carcinogenicity

Component	IARC
Ammonium chloride	Not carcinogenic

Skin Corrosion/Irritation	May become acidic following contact with moisture on the skin. Can cause mild irritation.
Ingestion	Harmful if swallowed. In large doses may cause metabolic acidosis secondary to hyperchloremia.
Inhalation	Dust or mist inhalation may irritate nose, throat, and lungs.
Serious Eye Damage/Irritation	Can cause severe irritation.
Respiratory or Skin Sensitization	Not available
Germ Cell Mutagenicity	Not available
Reproductive Toxicity	Not available
STOT-Single Exposure	Not available
STOT-Repeated Exposure	Not available
Aspiration Hazard	Not available
Synergistic Materials	Not Available

Section 12 - Ecological Information

Ecotoxicity

Component	Toxicity to Algae	Toxicity to Fish	Toxicity to Daphnia and Other Aquatic Invertebrates
Ammonium chloride	EC50 (hormosira banksia 72 hrs): 0.07 mg/l	LC ₅₀ (Onocohynchus mykiss, 96hr): 0.08 mg/L	EC ₅₀ (Daphnia obtusa, 21 days): 0.03 mg/L
Biodegradability	Not Available		
Bioaccumulation	Not Available		
Mobility	Not Available		
Other Adverse Effects	Not available		

Section 13 - Disposal Considerations

Waste From Residues/Unused Products	Dispose in accordance with all federal, provincial, and/or local regulations including the Canadian Environmental Protection Act.
Contaminated Packaging	Dispose in accordance with all federal, provincial, and/or local regulations including the Canadian Environmental Protection Act.

Section 14 - Transport Information

UN Number	Not Regulated
UN Proper Shipping Name	Not Regulated
Transport Hazard Class(es)	Not Regulated
Packaging Group	Not Regulated
Environmental Hazards	Not listed as a marine pollutant under Canadian TDG Regulations, schedule III.
Special Precautions	Not Available
Transport in Bulk	Not Available
TDG	
Other	Secure containers (full and/or empty) with suitable hold down devices during shipment and ensure all caps, valves, or closures are secured in the closed position.

TDG PRODUCT CLASSIFICATION: This product has been classified on the preparation date specified at section 14 of this MSDS / SDS, for transportation in accordance with the requirements of part 2 of the Transportation of Dangerous Goods Regulations. If applicable, testing and/or published test data regarding the classification of this product are listed in the references at section 16 of this MSDS / SDS.

Section 15 - Regulatory Information

NOTE: THE PRODUCT LISTED ON THIS SDS HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CANADIAN CONTROLLED PRODUCTS REGULATIONS. THIS SDS CONTAINS ALL INFORMATION REQUIRED BY THOSE REGULATIONS.

Section 16 - Other Information

Preparation Date July 13, 2018

Note: The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations.

Attention: Receiver of the chemical goods / SDS coordinator

As part of our commitment to the Canadian Association of Chemical Distributors (CACD) Responsible Distribution[®] initiative, ClearTech Industries Inc. and its associated companies require, as a condition of sale, that you forward the attached Safety Data Sheet(s) to all affected employees, customers, and end-users. ClearTech will send any available supplementary handling, health, and safety information to you at your request.

If you have any questions or concerns please call our customer service center.

References:

- 1) CHEMINFO
- 2) eChemPortal
- 3) TOXNET
- 4) Transportation of Dangerous Goods Canada
- 5) HSDB
- 6) ECHA

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