



LTS Research Laboratories, Inc.
Safety Data Sheet
Ammonium chloride

1. Product and Company Identification

Trade Name: Ammonium chloride
Chemical Formula: NH₄Cl
Recommended Use: Scientific research and development

Manufacturer/Supplier: LTS Research Laboratories, Inc.
Street: 37 Ramland Road
City: Orangeburg
State: New York
Zip Code: 10962
Country: USA
Tel #: 855-587-2436 / 855-lts-chem

24-Hour Emergency Contact: 800-424-9300 (US & Canada)
+1-703-527-3887 (International)

2. Hazards Identification

Signal Word: Warning



Hazard Statements: H302: Harmful if swallowed.
H319: Causes serious eye irritation.
H401: Toxic to aquatic life.

Precautionary Statements: P264: Wash skin thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P273: Avoid release to the environment.
P280 Wear eye protection/ face protection.
P301+P312+P330: IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. 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 to an approved waste disposal plant.

HMIS Health Ratings (0-4):

Health:	2
Flammability:	0
Physical:	1

3. Composition

Chemical Family: Nonmetal
Additional Names: Salmiac

Ammonium Chloride (NH₄Cl):
Percentage: 100 wt%
CAS #: 12125-02-9
EC #: 235-186-4

4. First Aid Procedures

General Treatment: Seek medical attention if symptoms persist.
Special Treatment: None
Important Symptoms: None

Inhalation: Remove victim to fresh air. Supply oxygen if breathing is difficult.
Keep patient warm. Seek immediate medical attention.

Ingestion: Seek immediate medical attention.

Skin: Immediately wash affected area with mild soap and water. Remove any contaminated clothing. Seek immediate medical attention.

Eyes: Flush eyes with water, blinking often for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek immediate medical attention.

5. Firefighting Measures

Flammability: Non-flammable

Extinguishing Media: No special restrictions - use suitable extinguishing agent for surrounding material and type of fire.

Spec. Fire Fighting Procedure: Use full-face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. See section 10 for decomposition products.

6. Accidental Release Measures

If Material Is Released/Spilled: Wear appropriate respiratory and protective equipment specified in special protection information. Keep unprotected persons away. Isolate spill area and provide ventilation. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for disposal. Take care not to raise dust.

Environmental Precautions: Isolate runoff to prevent environmental pollution.

7. Handling and Storage

Handling Conditions: Handle under dry protective gas. Avoid contact with skin and eyes.
Wash thoroughly after handling.

Storage Conditions: Store in a cool dry place in a tightly sealed container. Store under dry inert gas. Store away from water/moisture, humidity, oxidizing agents. This product is hygroscopic. Store apart from materials and conditions listed in section 10.

Work/Hygienic Maintenance: Do not use tobacco or food in work area. Wash thoroughly before eating and smoking. Do not blow dust off clothing or skin with compressed air.

Ventilation: Provide sufficient ventilation to maintain concentration at or below threshold limit.

8. Exposure Controls and Personal Protection

Permissible Exposure Limits:	10 mg/m ³ as NH ₄ Cl, long-term value
Threshold Limit Value:	10 mg/m ³ as NH ₄ Cl, long-term value
Special Equipment:	Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.
Respiratory Protection:	Dust Respirator
Protective Gloves:	Nitrile rubber gloves with minimum thickness of at least 0.11 mm
Eye Protection:	Safety glasses or goggles
Body Protection:	Protective work clothing. Wear close-toed shoes and long sleeves/pants.

9. Physical and Chemical Characteristics

Color	N/A
Form:	Powder, Granules, Pellets, Sputtering target, Custom parts
Odor:	Odorless
Water Solubility:	376 g/L
Boiling Point:	N/A
Melting Point:	340 °C
Flash Point:	N/A
Autoignition Temperature:	N/A
Density:	1.53 g/cc
Molecular weight:	53.49 g/mol

10. Reactivity

Stability:	Stable under recommended storage conditions
Reacts With:	Oxidizing agents, strong acids, strong bases
Incompatible Conditions:	Water/moisture
Hazardous Decomposition Products:	Nitrogen oxides, hydrogen chloride (HCl), ammonia

11. Toxicological Information

Potential Health Effects:	
Eyes:	Causes serious eye irritation
Skin:	May cause irritation
Ingestion:	Harmful if swallowed
Inhalation:	May cause irritation
Chronic:	N/A
Signs & Symptoms:	N/A
Aggravated Medical Conditions:	N/A
Median Lethal Dose:	1,650 mg/kg for rat by mouth
Carcinogen:	IARC: 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. NTP: 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. OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

12. Ecological Information

Aquatic Toxicity: N/A
Persistent Bioaccumulation Toxicity: N/A
Very Persistent, Very Bioaccumulative: N/A
Notes:
Toxicity to fish
LC50 - Oncorhynchus mykiss (rainbow trout) - 3.98 mg/l - 96h
NOEC- Oncorhynchus mykiss (rainbow trout) – 57 mg/l - 96h
Toxicity to daphnia and other aquatic invertebrates
LC50 - Daphnia magna (Water flea) - 161 mg/l - 48 h
Growth inhibition NOEC - Daphnia magna (Water flea) - 0.1 mg/l - 216 h
Do not allow material to be released to the environment without proper government permits.
Do not allow undiluted product or large quantities to reach ground water, water course or sewage system.
Avoid transfer not the environment.

13. Disposal Considerations

Dispose of in accordance with local, state, national, and international regulations.

14. Transportation Data

Hazardous: Hazardous as powder only.

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Hazard Class: 9 Miscellaneous hazardous materials
Packing Group: III
UN Number: UN3077
Proper Shipping Name: Environmentally hazardous substance, solid, n.o.s. (Ammonium chloride)

15. Regulatory Information

Sec 302 Extremely Hazardous: No
Sec 304 Reportable Quantities: 5000 lbs.
Sec 313 Toxic Chemicals: No

16. Other Information

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.