

SAFETY DATA SHEET

BIOPHARM INC.

1. Identification:

Product Identifier: Ammonium Chloride ACS
Product code: BA2026
Synonym(s): Ammonium Chloride
Recommended use: Manufacture of other chemical products, professional, scientific, and technical activities.
Recommended restrictions: None known.

Manufacturer/Supplier/Distributor Information

Company name: Biopharm Inc.
Address: 187 South Tilley Road
Hatfield, AR 71945
Telephone: (870) 389-6114
Website: www.bphchem.com
E-mail: support@bphchem.com
Emergency phone number: Chemtrec 800-424-9300

2. Hazard(s) identification:

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

Acute Toxicity (Oral)	Category 4
Eye Irritation	Category 2A
Acute Aquatic Toxicity	Category 2
Chronic Aquatic Toxicity	Category 2

Label elements:

Signal word: Warning
Hazard statement: Harmful if swallowed
Precautionary statement:

Prevention Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/ protective clothing/ eye protection/ face protection. IF exposed or concerned: Get medical advice/ attention

Response IF INGESTED: Do not induce vomiting. Never give anything by mouth to an unconscious person. Immediately seek medical attention.
IF INHALED: Remove to fresh air. Give artificial respiration, if not breathing. If breathing is difficult, have a trained person administer oxygen. Call a physician.
IF ON SKIN: Immediately flush with cool, running water for at least 15 minutes. Remove contaminated clothing. If irritation persists, obtain medical assistance.
IF IN EYES: Immediately flush with cool, running water for at least 15 minutes, occasionally lifting upper and lower eye lids to ensure rinsing under them. Seek medical aid.

Storage	Store locked up
Disposal	To be performed in compliance with all current local, state and federal regulations
Hazard(s) not otherwise classified (HNOC):	None known
Supplemental information:	No information available

3. Composition/information on ingredients

Mixtures

<u>Chemical Name</u>	<u>CAS number</u>	<u>%</u>
Ammonium Chloride	12125-02-9	100

4. First-aid measures

Inhalation:	Remove to fresh air. Give artificial respiration if not breathing. Have trained personnel administer oxygen if breathing is difficult. Call a physician
Ingestion:	Rinse mouth. Never give anything by mouth to a person who is unconscious
Skin contact:	Wash off with soap and plenty of water. Consult a physician
Eye contact:	Flush eyes with water as a precaution
Most important symptoms/effects, acute and delayed:	The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
General information:	Ensure medical personnel are aware of the material(s) involved and take precautions to protect themselves

5. Fire-fighting measures

Suitable extinguishing media:	Alcohol-resistant foam. Carbon dioxide. Dry chemical powder. Water fog. Sand or earth may be used for small fires only		
Unsuitable extinguishing media:	Do not use water jet as an extinguisher, as this will spread the fire		
Specific hazards arising from the chemical	No data available		
Special protective equipment and precautions for firefighters	Wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode		
Fire-fighting equipment/instructions	Wear self-contained breathing apparatus for firefighting if necessary		
NFPA	Health: 2	Flammability: 0	Reactivity: 0

6. Accidental release measures

Personal precautions, protective equipment, and emergency procedures:	Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.
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Methods and materials for containment and cleaning up:	Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal
Environmental precautions:	Contact local authorities in case of spillage to drain/aquatic environment. Avoid discharge into drains, water courses, or onto the ground. Avoid release to the environment. Prevent further leakage or spillage if safe to do so

7. Handling and storage

Precautions for safe handling:	Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.
Conditions for safe storage, including any incompatibilities:	Keep container tightly closed in a dry and well-ventilated place.

8. Exposure controls/personal protection

Exposure Guidelines:

<u>Component</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>
Ammonium Chloride	10.0000 mg/m ³ (TWA)	No data

Engineering measures: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday

Personal protective equipment:

Eye/face protection:	Wear protective eyeglasses or chemical safety goggles
Skin and body protection:	Wear appropriate protective gloves and clothing to prevent skin exposure
Respiratory protection:	In case of insufficient ventilation, wear suitable respiratory equipment
Hygiene measures:	Handle in accordance with good industrial hygiene and safety practice

9. Physical and chemical properties

Appearance:	White, crystalline
Odor:	No data available
Odor threshold:	No data available
Vapor Pressure (mm Hg):	1.3 hPa at 160.4 °C
Vapor density (Air = 1):	No data available
pH:	4.5-5.5 at 50.00000 g/l at 20.0 °C
Relative density:	No data available
Melting point/freezing point:	340 °C
Solubility in Water:	Soluble
Boiling Point (°F):	No data available
Flash point:	No data available
Evaporative Rate (H₂O = 1):	No data available

Flammability (solid, gas):	No data available
Upper/lower flammability or explosive limits	
Flammability limit - lower	No data available
Flammability limit - upper	No data available
Explosive limit – lower	No data available
Explosive limit - upper	No data available
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity:	No data available
Other information:	
Bulk density	500 kg/m ³
Percent Volatile by Volume:	No data

10. Stability and reactivity

Reactivity:	No data available
Chemical stability:	Stable under normal conditions.
Possibility of hazardous reactions:	No data available
Conditions to avoid:	Exposure to moisture may affect product quality.
Incompatible materials:	Strong acids. Strong bases. Strong oxidizing agents.
Hazardous decomposition products:	Under fire conditions-Nitrogen oxides (NO _x), Hydrogen chloride gas

11. Toxicological information

Information on likely routes of exposure:

Ingestion:	No data available
Inhalation:	Slight irritation. Coughing
Skin Contact:	May cause slight or mild irritation to the skin.
Eye Contact:	May cause slight or mild irritation

Information on toxicological effects

Acute toxicity This product is not classified as an acute toxicity hazard. See below for individual ingredient acute toxicity data.

<u>Component</u>	<u>LD₅₀ Oral</u>	<u>LD₅₀ Dermal</u>	<u>LC₅₀ Inhalation</u>
Ammonium Chloride	1650 mg/kg (rat)	No data available	No data available

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

Skin corrosion/irritation	Red skin. Swelling of the skin. Itching. Skin rash/inflammation.
Serious eye damage/irritation	No data available
Respiratory Sensitization	Will not occur

Skin sensitization	No data available
Carcinogenicity	May cause cancer
IARC Monographs. Overall Evaluation of Carcinogenicity	
	Not regulated
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1096)	
	Not regulated
U.S. National Toxicology Program (NTP) Report on Carcinogens	
	Not regulated
Mutagenic effects	No data available
Reproductive effects	No data available
STOT – single exposure	Not classified
STOT – repeated exposure	Not classified
Aspiration hazard	No data available
Chronic effects	Red skin. Swelling of the skin. Itching. Skin rash/inflammation.

12. Ecological information

Ecotoxicity:	<p>Toxicity to fish: LC50-Oncorhynchus mykiss (rainbow trout) -3.98 mg/l - 96 h (Ammonium Chloride) NOEC-Oncorhynchus mykiss (rainbow trout) -57 mg/l - 96 h (Ammonium Chloride)</p> <p>Toxicity to daphnia and other aquatic invertebrates LC50-Daphnia magna (water flea) – 161 mg/l – 48 h (Ammonium Chloride)</p> <p>Growth inhibition NOEC-Daphnia magna (Water flea) – 0.1 mg/l – 216 h (Amonium Chloride)</p>
Persistence and degradability:	No data available.
Bioaccumulation/ Accumulation:	No data available
Mobility in soil:	No data available
Other adverse effects:	Toxic to aquatic life.

13. Disposal considerations

Waste disposal methods:	To be performed in compliance with all current local, state and federal regulations. Spills onto sand, soil, or other absorbent may be handled by placing the affected soil into approved containers then label and store for proper treatment or disposal.
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14. Transport information

DOT: UN number: 3077 Class: 9 Packing Group: III
Proper shipping name: Environmentally hazardous substance, solid, n.o.s. (Ammonium Chloride)
Reportable Quantity: 5000 lbs

15. Regulatory information

U.S. Federal regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D) Not Applicable

U.S. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) Not regulated

CERCLA Hazardous Substances List (40 CFR 302.4) Not regulated

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard Categories Immediate Hazard – No

Delayed Hazard – No

Fire Hazard – No

Pressure Hazard – No

Reactivity Hazard – No

Other Federal regulations

Clean Air Act Not regulated

Clean Water Act Not regulated

California Prop 65 WARNING: This product contains a chemical known to the State of California to cause cancer.

16. Other information, including date of preparation or last revision

Revision date July 1, 2024

Disclaimer The statements contained herein are offered as informational data only and are believed to be correct. However, this product should be handled by persons having related technical skills, and at their own discretion and risk. Since seller has no control over the use of this product, no warranty, expressed or implied, is made and seller assumes no liability in connection with any use of this information or from contact and/or handling of this product.