



THE POWER OF THREE<sup>3</sup>

**PHARMCO-AAPER**

AND COMMERCIAL ALCOHOLS

**Product Information (203) 740-3471**

**Emergency Assistance CHEMTREC 1-800-424-9300**

Section 1 – Chemical Product and Company Identification

**HMIS**

**H 2**

**F 0**

**R 0**

**PPE†**

†Sec. 8

**Product/Chemical Name:** Ammonium Chloride Untreated

**CAS Number:** 012125-02-9

**Other Designations:** Amchlor, Ammoneric, Ammonium Muriate

**Manufacturer:** **PHARMCO-AAPER**

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Brookfield, Connecticut 06804, USA

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Emergency Contact:

CHEMTREC 1-800-424-9300

**Emergency Overview**

Section 2 – Composition / Information on Ingredients

**Ingredient Name CAS Number % wt or % vol**

Ammonium Chloride 012125-02-9 100

**Trace Impurities:** None

**OSHA PEL ACGIH TLV NIOSH REL NIOSH**

**Ingredient TWA STEL TWA STEL TWA STEL IDLH**

Ammonium Chloride None estab None estab 10 mg/m3 20 mg/m3 None estab None estab None estab

**Toxicity Data:**

Section 3 – Physical and Chemical Properties

**Physical State:** Solid

**Appearance and Odor:** Colorless, white crystals, powder, granules

**Odor Threshold:** Odorless

**Vapor Pressure:** 1mm Hg at 160.4 °C

**Vapor Density (Air=1):** 1.9

**Formula Weight:** 53.49

**Density:** N/A

**Specific Gravity (H<sub>2</sub>O=1, at 4 °C):** 1.53

**pH:** 5.5

**Water Solubility:** 27% @ 20 deg C

**Other Solubilities:** N/A

**Boiling Point:** N/AP

**Freezing/Melting Point:** N/AP 644 F

**Viscosity:** N/A

**Refractive Index:** N/A  
**Surface Tension:** N/A  
**% Volatile:** N/AP  
**Evaporation Rate:** 0

#### Section 4 – Fire–Fighting Measures

**Flash Point:** none  
**Flash Point Method:** none  
**Burning Rate:** none  
**Autoignition Temperature:** none  
**LEL:** none  
**UEL:** none  
**Flammability Classification:** none  
**Extinguishing Media:** This product is not flammable. Use extinguishing media for surrounding fire.  
**Unusual Fire or Explosion Hazards:**  
**Hazardous Combustion Products:**  
**Fire–Fighting Instructions:** Do not release runoff from fire control methods to sewers or waterways.  
**Fire–Fighting Equipment:** Because fire may produce toxic thermal decomposition products, wear a self–contained breathing apparatus (SCBA) with a full facepiece operated in pressure–demand or positive–pressure mode.

#### Section 5 – Stability and Reactivity

**Stability:** Ammonium Chloride Untreated is stable at room temperature in closed containers under normal storage and handling conditions.  
**Polymerization:** Hazardous polymerization cannot occur.  
**Chemical Incompatibilities:** Halogens, cyanides, metal salts, Acids, bases, metals, oxidizing materials  
**Conditions to Avoid:** Keep away from heat, sparks, and open flames.  
**Hazardous Decomposition Products:** Thermal oxidative decomposition of Ammonium Chloride can produce Ammonia, halogenated compounds, oxides of nitrogen. Decomposes at 340 degrees C to form toxic and corrosive ammonia and hydrogen chloride gases.

#### Section 6 – Health Hazard Information

**Potential Health Effects**  
**Primary Entry Routes:**  
**Target Organs:**  
**Acute Effects**  
**Inhalation:** Inhalation may result in respiratory irritation and coughing.  
**Eye:** Contact with the eyes may cause irritation  
**Skin:** Contact with the skin may cause irritation  
**Ingestion:** Ingestion may cause irritation to mouth, esophagus and gastric system causing nausea, vomiting, and acidosis.  
**Carcinogenicity:** IARC, NTP, and OSHA do not list Ammonium Chloride Untreated as a carcinogen.  
**Medical Conditions Aggravated by Long–Term Exposure:** Pre–existing Kidney problems  
**Chronic Effects:**  
**Emergency and First Aid Procedures**  
**Inhalation:** Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention.  
**Eye Contact:** Flush eyes with water for at least 15 minutes. Call a physician if irritation persists.  
**Skin Contact:** Remove contaminated clothing and shoes. Wash exposed areas with soap and water. Call a physician if irritation persists.  
**Ingestion:** Call a physician immediately! Only induce vomiting if directed by a physician. If vomiting occurs spontaneously, keep head below hips to prevent aspiration into the lungs. Do not give anything by mouth to an unconscious person.  
**After first aid, get appropriate in–plant, paramedic, or community medical support.**  
**Note to Physicians:** There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.  
**Special Precautions/Procedures:**

#### Section 7 – Spill, Leak, and Disposal Procedures

**Spill /Leak Procedures:**  
**Small Spills:** Contain spill and ventilate area. Sweep up and containerize for disposal.

**Large Spills:** Contain spill and ventilate area. Permit only trained personnel wearing full protective equipment to enter the spill area. Collect the spill in a

waste container or remove with a vacuum truck. Prevent spill from entering natural watercourses.

**Containment:** For large spills, dike far ahead of liquid spill for later disposal. Do not release into sewers or waterways.

**Cleanup:** Wear complete protective clothing when cleaning up chemical spills.

**Regulatory Requirements:** Follow applicable OSHA regulations (29 CFR 1910.120).

**Disposal:** Contact your supplier or a licensed contractor for detailed recommendations. Follow applicable Federal, state, and local regulations.

**Disposal Regulatory Requirements:**

**Container Cleaning and Disposal:**

**Ecological Information:**

**EPA Regulations:**

RCRA Hazardous Waste Number: Not listed (40 CFR 261.33)

RCRA Hazardous Waste Classification (40 CFR 261.??): Not classified

CERCLA Hazardous Substance (40 CFR 302.4) listed/unlisted specific per RCRA, Sec. 3001; CWA, Sec. 311 (b)(4);

CWA, Sec. 307(a), CAA, Sec. 112

CERCLA Reportable Quantity (RQ), 5000 lb (?? kg)

SARA 311/312 Codes:

SARA Toxic Chemical (40 CFR 372.65): Not listed

SARA EHS (Extremely Hazardous Substance) (40 CFR 355): Not listed, Threshold Planning Quantity (TPQ)

**OSHA Regulations:**

Air Contaminant (29 CFR 1910.1000, Table Z-1, Z-1-A): Not listed

OSHA Specifically Regulated Substance (29CFR 1910.????)

**State Regulations:**

Section 8 – Exposure Controls / Personal Protection

**Engineering Controls:**

**Ventilation:** Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs (Sec. 2). Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.

**Administrative Controls:**

**Respiratory Protection:** Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear a MSHA/NIOSH-approved respirator. Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen. For emergency or nonroutine operations (cleaning spills, reactor vessels, or storage tanks), wear an SCBA. *Warning! Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.* If respirators are used, OSHA requires a written respiratory protection program that includes at least: medical certification, training, fit-testing, periodic environmental monitoring, maintenance, inspection, cleaning, and convenient, sanitary storage areas.

**Protective Clothing/Equipment:** Wear chemically protective gloves, boots, aprons, and gauntlets to prevent prolonged or repeated skin contact. Wear protective eyeglasses or chemical safety goggles, per OSHA eye- and face-protection regulations (29 CFR 1910.133). Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of, or in conjunction with contact lenses.

**Safety Stations:** Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.

**Contaminated Equipment:** Separate contaminated work clothes from street clothes. Launder before reuse. Remove this material from your shoes and clean personal protective equipment.

**Comments:** Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

Section 9 – Special Precautions and Comments

**Handling Precautions:** Avoid contact with skin, eyes, and clothing. Avoid breathing product dust or vapor. Do not take internally. Wash thoroughly after handling this material. This material is hygroscopic and may absorb water.

**Storage Requirements:** Keep container closed when not in use. Keep away from heat, sparks, and open flames. Store away from acids, alkalis, nitrites, and

silver salts.

**DOT Transportation Data (49 CFR 172.101):**

**Shipping Name:** Environmentally hazardous substances, solid, nos

**Hazard Class:** 9

**ID No.:** UN 3077

**Packing Group:** III

**Label:**

**Special Provisions (172.102):**

**Packaging Authorizations**

Not regulated by DOT according to 49 CFR.

**Quantity Limitations**

Not regulated by DOT according to 49 CFR.

The information contained herein is based on data considered to be accurate based on the material as packaged. However, no warranty is expressed regarding the accuracy of these data or the results to be obtained from the use thereof. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It is the user's obligation to determine the conditions of safe use of the product. While this MSDS is based on technical data judged to be reliable, PHARMCO-AAPER assumes not responsibility for the completeness or accuracy of the information contained herein.