



PURITAN PRODUCTS

Effective Date: 06/19/17
Replaces Revision: 02/03/14

NON-EMERGENCY TELEPHONE
610-866-4225

24-HOUR CHEMTREC EMERGENCY TELEPHONE
800-424-9300

SDS – SAFETY DATA SHEET

1. Identification

Product Identifier: AMMONIUM CHLORIDE SOLUTION 0.5 - 26%

Synonyms: Sal Ammoniac Solution, Ammonium Muriate Solution

Chemical Formula: Not applicable to mixtures

Recommended Use of the Chemical and Restrictions On Use: Laboratory Reagent

Manufacturer / Supplier: Puritan Products; 2290 Avenue A, Bethlehem, PA 18017 **Phone:** 610-866-4225

Emergency Phone Number: 24-Hour Chemtrec Emergency Telephone 800-424-9300

2. Hazard(s) Identification

Classification of the Substance or Mixture:

Acute toxicity, Oral (Category 4)

Eye irritation (Category 2A)

Acute aquatic toxicity (Category 2)

Risk Phrases:

Symbol: Xn, Xi

R22: Harmful if swallowed.

R36: Irritating to eyes.

Label Elements:

Trade Name: AMMONIUM CHLORIDE SOLUTION 0.5 - 26%

Signal Word: Warning



Hazard Statements:

H302: Harmful if swallowed.

H319: Causes serious eye irritation.

Precautionary Statements:

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

3. Composition / Information on Ingredients

CAS Number: Not applicable to mixtures
EC Number: Not applicable to mixtures
Index Number: Not applicable to mixtures
Molecular Weight: Not applicable to mixtures

Ingredient	CAS No.	EC Number	Percent	Hazardous	Chemical Characterization
Ammonium Chloride	12125-02-9	235-186-4	0.5 - 26%	Yes	Substance
Water	7732-18-5	231-791-2	74 - 99.5%	No	Mixture

4. First-aid Measures

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give Oxygen. Get medical attention.

Ingestion: DO NOT INDUCE VOMITING unless directed by a physician. Never give anything by mouth to an unconscious person. Get medical attention.

Skin Contact: Immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention.

5. Fire-fighting Measures

Fire: Not considered to be a fire hazard. At fire temperatures, ammonium chloride begins to corrode metals and may dissociate into Ammonia and Hydrogen Chloride. Mixtures of about 16% to 25% (by volume) Ammonia gas in air are flammable.

Explosion: Not considered to be an explosion hazard.

Fire Extinguishing Media: Use any means suitable for extinguishing surrounding fire. Water spray may be used to keep fire exposed containers cool.

Special Information: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures: Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering.

Environmental Precautions and Methods and Materials for Containment and Cleaning Up: Spills: Sweep up and containerize for reclamation or disposal. Vacuuming or wet sweeping may be used to avoid dust dispersal. Do not let product enter drains. US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802.

7. Handling and Storage

Precautions for Safe Handling and Conditions for Safe Storage, Including Any Incompatibilities: Keep in a tightly closed container. Protect from physical damage. Store in a cool, dry, ventilated area away from sources of heat, moisture and incompatibilities. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

8. Exposure Controls / Personal Protection

Airborne Exposure Limits: ACGIH Threshold Limit Value (TLV): 10 mg/m³ (TWA); 20 mg/m³ (STEL) Fume

Ventilation System: A system of local and / or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

Personal Respirators (NIOSH Approved): If the exposure limit is exceeded and engineering controls are not feasible, a half face piece particulate respirator (NIOSH type N95 or better filters) may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full face piece particulate respirator (NIOSH type N100 filters) may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency, or respirator supplier, whichever is lowest. If oil particles (e.g. lubricants, cutting fluids, Glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full face piece positive-pressure, air-supplied respirator. **WARNING:** Air-purifying respirators do not protect workers in Oxygen-deficient atmospheres.

Skin Protection: Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Eye Protection: Use chemical safety goggles and / or full face shield where dusting or splashing of solutions is possible. Maintain eye wash fountain and quick-drench facilities in work area.

9. Physical and Chemical Properties

Appearance: Clear liquid

Odor: Odorless

Odor Threshold: Not determined

pH: 5.5 (1% aq.sol.); 5.1 (3% aq.sol.); 5.0 (10% aq.sol.)

% Volatiles by volume @ 21C (70F): 0

Melting Point: 338C (640F) Sublimes – for Ammonium Chloride

Boiling Point / Boiling Range: 520C (968F) – for Ammonium Chloride

Flash Point: Not applicable

Evaporation Rate (BuAc=1): No information found

Flammability: Not applicable

Upper / Lower Flammability or Explosive Limits: Not applicable

Vapor Pressure (mm Hg): 1.0 @ 160C (320F) – for Ammonium Chloride

Vapor Density (Air=1): 1.9 – for Ammonium Chloride

Relative Density: No data available

Solubility: 29.7g/100g water @ 0C (32F) – for Ammonium Chloride

Partition Coefficient: n-octanol / water: No data available

Auto-ignition Temperature: No data available

Decomposition Temperature: No data available

Viscosity: No data available

10. Stability and Reactivity

Reactivity and / or Chemical Stability: Stable under ordinary conditions of use and storage.

Possibility of Hazardous Reactions and Conditions to Avoid: Heat, moisture, incompatibles.

Incompatible Materials: Concentrated acids, strong bases, silver salts, Potassium Chlorate, Ammonium Nitrate, Bromine Trifluoride and Iodine Heptafluoride. Ammonium Chloride reacts explosively with Potassium Chlorate or Bromine Trifluoride, and violently with Bromine Pentafluoride, Ammonium compounds, nitrates, and Iodine Heptafluoride. Explosive Nitrogen Trichloride may result from reaction of Ammonium Chloride and Hydrogen Cyanide.

Hazardous Decomposition Products: Involvement in a fire causes decomposition to form Hydrogen Chloride and Ammonia.

11. Toxicological Information

Emergency Overview: WARNING! CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. HARMFUL IF SWALLOWED OR INHALED.

Potential Health Effects:

If inhaled or swallowed, this compound can cause fluoride poisoning. Early symptoms include nausea, vomiting, diarrhea, and weakness. Later effects include central nervous system effects, cardiovascular effects and death.

Inhalation: Causes irritation to the respiratory tract. Symptoms may include coughing, shortness of breath.

Ingestion: Causes irritation to the gastrointestinal tract. Symptoms may include nausea, vomiting and diarrhea.

Skin Contact: Causes irritation to skin. Symptoms include redness, itching, and pain.

Eye Contact: Causes irritation, redness, and pain.

Chronic Exposure: No information found.

Aggravation of Pre-existing Conditions: No information found.

Specific Target Organ Toxicity - Single Exposure (Globally Harmonized System:) No data available.

Specific Target Organ Toxicity - Repeated Exposure (Globally Harmonized System:) No data available.

Numerical Measures of Toxicity: Cancer Lists: NTP Carcinogen

Ingredient	Known	Anticipated	IARC Category
Ammonium Chloride (12125-02-9)	No	No	None
Water (7732-18-5)	No	No	None

Acute Toxicity:

Ammonium Chloride:

Oral rat LD50 : 1650 mg/kg

Investigated as a mutagen.

12. Ecological Information

Ecotoxicity: Toxic to aquatic life.

Persistence and Degradability: Expected to be readily biodegradable.

Bioaccumulative Potential: This material is not expected to significantly bioaccumulate.

Mobility in Soil: Considerable mobility.

Other adverse effects: US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802.

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

Land Transport ADR/RID and GGVS/GGVE (Cross Border / Domestic)

Not dangerous goods

Maritime Transport IMDG/GGVSea

Not dangerous goods

Air Transport ICAO-TI and IATA-DGR

Not dangerous goods

15. Regulatory Information

Chemical Inventory Status – Part 1

Ingredient	TSCA	EC	Japan	Australia
Ammonium Chloride (12125-02-9)	Yes	Yes	Yes	Yes
Water (7732-18-5)	Yes	Yes	Yes	Yes

Chemical Inventory Status – Part 2

Ingredient	Korea	Canada		Phil.
		DSL	NDSL	
Ammonium Chloride (12125-02-9)	Yes	Yes	No	Yes
Water (7732-18-5)	Yes	Yes	No	Yes

Federal, State & International Regulations - Part 1

Ingredient	SARA 302		SARA 313	
	RQ	TPQ	List Chemical	Catg.
Ammonium Chloride (12125-02-9)	No	No	No	No
Water (7732-18-5)	No	No	No	No

Federal, State & International Regulations - Part 2

Ingredient	RCRA		TSCA	
	CERCLA	261.33	8(d)	
Ammonium Chloride (12125-02-9)	5000	No	No	
Water (7732-18-5)	No	No	No	

Chemical Weapons Convention: No		TSCA 12(b): No		CDTA: No	
SARA 311/312:	Acute: Yes	Chronic: No	Fire: No	Pressure: No	
Reactivity: No		Mixture / Liquid			

16. Other Information

Revision 06/19/17 – modified Effective Date

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