

MATERIAL SAFETY DATA SHEET



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AMMONIUM PHOSPHATE MONOBASIC

MSDS No. M0012

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Ammonium Phosphate Monobasic

Synonyms: Ammonium Dihydrogen Phosphate, Phosphoric Acid Monoammonium Salt

Chemical Formula: $(\text{NH}_4)\text{H}_2\text{PO}_4$

Recommended Use: This product is recommended for laboratory and manufacturing use only. It is not recommended for drug, food or household use.

2. HAZARDS IDENTIFICATION



Label Elements

Signal Word: WARNING!

Hazard Statements:

- H303 – May be harmful if swallowed.
- H316 – Causes mild skin irritation.
- H319 – Causes serious eye irritation.
- H333 – May be harmful if inhaled.

Precautionary Statements:

- P281 – Use personal protective equipment as required.
- P335 – Brush loose particles off skin.

Emergency Overview

Causes eye, skin, and respiratory tract irritation. Harmful if swallowed or inhaled. Target Organs: Respiratory system, eyes, and skin.

HMIS Rating:

Health – 1 Flammability – 0 Physical Hazard – 1 PPE – User supplied

NOTE: HMIS ratings use a numbering scale that ranges from 0 - 4 to indicate the degree of hazard. A value of zero means the chemical presents no hazard while a value of four indicates a high hazard. These ratings are based on the inherent properties of this chemical under expected conditions of normal use and are not intended to be used in emergency situations. PPE is determined by the user based on their needs and conditions.

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3. COMPOSITION AND INFORMATION ON INGREDIENTS

<u>Ingredient</u>	<u>CAS No</u>	<u>Percent</u>	<u>Hazardous</u>
Ammonium Phosphate Monobasic	7722-76-1	>99%	Yes

4. FIRST-AID MEASURES

Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Ingestion: If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.

Skin Contact: Get medical aid if irritation develops or persists. Flush skin with plenty of soap and water.

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

Notes to Physician: Treat symptomatically and supportively.

5. FIRE FIGHTING MEASURES

Flammability: Not expected to be a fire hazard

Auto-ignition Temperature: Not available.

Flash Point: Not available.

Flammable Limits: Not available.

Products of Combustion: Will decompose into toxic and irritating gases (ammonia, nitrogen oxides, and oxides of phosphorous) under fire conditions.

Specific Fire Hazards: As in any fire, always wear self-contained breathing apparatus in pressure-demand (MSA/NIOSH approved or equivalent), and full protective gear. Approach fire from upwind to avoid hazardous vapors and toxic decomposition products. Use water spray to keep fire-exposed containers cool.

Specific Explosion Hazards: None.

Fire Fighting Media: Use water, dry chemical, carbon dioxide, or chemical foam.

National Fire Protective Association: Health - 1, Flammability - 0, Reactivity - 0

NOTE: NFPA ratings use a numbering scale that ranges from 0 - 4 to indicate the degree of hazard. A value of zero means the chemical presents no hazard while a value of four indicates a high hazard. They are for use by emergency personnel to address the hazards that are presented by short term, acute exposure to this product under fire, spill, or similar emergencies. Ratings involve data and interpretations that may vary from company to company.

6. ACCIDENTAL RELEASE MEASURES

Sweep up spilled material and place in suitable container. Provide ventilation. Wear a self contained breathing apparatus and appropriate personal protection as described in Section 8.

7. HANDLING AND STORAGE

Precautions: Wash thoroughly after handling. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation. Use with adequate ventilation.

Storage: Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Store protected from moisture.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Personal Protection: Wear protective chemical goggles or appropriate eye protection. Use appropriate protective gloves and protective clothing to prevent skin exposure. A respiratory protection program that meets OSHA 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever possible. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

Exposure Limits: None listed.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State and Appearance: White crystals.

Odor: odorless

Molecular Formula: $(\text{NH}_4)_2\text{H}_2\text{PO}_4$

Molecular Weight: 115.03

Auto-ignition Temperature: Not available.

Flash Point: Not available.

Flammable Limits: Not available.

pH: 3.8-4.4 (5% solution).

Boiling Point: Not available

Freezing/Melting Point: 190° C

Decomposition Temperature: >190° C

Specific Gravity: 1.8

Vapor Density (Air=1): Not available

Vapor Pressure: Not available

Viscosity: Not available.

Solubility: Soluble in water

10. STABILITY AND REACTIVITY

Stability: Stable under ordinary conditions of use and storage.

Conditions to Avoid: Dust generation, excess heat.

Incompatibility With Various Substances: Strong bases, sodium hypochlorite.

Hazardous Decomposition Products: Nitrogen oxides, ammonia, and oxides of phosphorus.

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Routes of Entry: Inhalation, ingestion, skin contact

Acute Exposure Hazards:

INHALATION HAZARD: May cause respiratory tract irritation.

INGESTION HAZARD: May cause digestive tract irritation with nausea, vomiting and diarrhea.

SKIN CONTACT HAZARD: Causes slight skin irritation.

EYE CONTACT HAZARD: Causes mild eye irritation.

Chronic Exposure Hazards: Prolonged or repeated skin contact may cause dermatitis.

Animal Toxicity:

Skin, rabbit: LD50 >7940 mg/kg;

Oral (rat): LD50 = 5750 mg/kg;

Carcinogenicity: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65

Epidemiology: Not information available.

Teratogenicity: No information available.

Mutagenicity: Not information available.

Neurotoxicity: No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity: No information available.

Environmental Fate: When too many nutrients such as phosphorus are in the water, algae grows maniacally. Algae blooms are followed by a die-off, and as material decays, it consumes oxygen like a forest fire. No fish, plants or insects can live in oxygen-free zones.

13. DISPOSAL CONSIDERATIONS

Material that cannot be saved for recovery or recycling should be managed in an appropriate and approved waste facility. Processing, use or contamination of this product may change the waste management options. Waste generators must decide if discarded material is a hazardous waste. State and local disposal regulations may differ from federal disposal definitions found in 40 CFR 261.3. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. TRANSPORT INFORMATION

Not regulated for transportation

15. REGULATORY INFORMATION

US Federal Regulations:

TSCA: CAS# 7722-76-1 is listed on the TSCA Inventory.

Health and Safety Reporting List: CAS# 7722-76-1: Not listed.

Chemical Test Rules: CAS# 7722-76-1 is not listed.

Section 12b: CAS# 7722-76-1 is not listed.

TSCA Significant New Use Rule: CAS# 7722-76-1 does not have an SNUR under TSCA.

CERCLA Hazardous Substances: CAS# 7722-76-1 does not have a final RQ.

SARA Section 302: CAS# 7722-76-1 does not have a TPQ

SARA Codes: CAS# 7722-76-1: acute

Section 313: Ammonium Phosphate Dibasic (CAS# 7722-76-1) is not subject to SARA Title III Section 313 and 40 CFR 373 reporting requirements.

Clean Air Act: CAS# 7722-76-1 is not listed as a hazardous air pollutant (HAP). It is not a Class 1 Ozone Depleter. It is not a Class 2 Ozone Depleter.

Clean Water Act: CAS# 7722-76-1 is not listed as a Hazardous Substance. It is not a Priority Pollutant. It is not a Toxic Pollutant.

OSHA: CAS# 7722-76-1 is not considered highly hazardous by OSHA.

US State Regulations:

CAS# 7722-76-1 is not found on state right to know lists.

California Prop 65: California No Significant Risk Level: Not listed

Canada:

DSL/NDL: CAS# 7722-76-1 is listed on Canada's DSL list.

WHMIS: This product has a WHMIS classification of Not Controlled. This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and this MSDS contains all the information required by those regulations.

Ingredient Disclosure List: CAS# 7722-76-1 is not listed on Canada's Ingredient Disclosure List.

DSCL (EEC):

Hazard Symbols: None

Risk Phrases: None.

Safety Phrases: S24/25 Avoid contact with skin and eyes.

WGK (Water Danger/protection): CAS# 7722-76-1: 1

16. OTHER INFORMATION

Originally Prepared: 10/24/2006

Last Revised: 11/14/2019 – Corrected chemical formula.

The information contained herein is based on current knowledge and experience; no responsibility is accepted that the information is sufficient or correct in all cases. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers and the protection of the environment.

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