

# Material Safety Data Sheet



## Martrex, Inc.

### Section 1: Chemical Product and Company Information

**Product name:** Monoammonium Phosphate Technical Grade 12-61-0

**Reference Number:** MAP-Tech Grade 12-61-0

**Web:** [www.martrexinc.com](http://www.martrexinc.com)

**Supplier/ Further Information:** Martrex, Inc.

P. O. Box 1709

**Phone:** 952/933-5000

14525 Highway 7

**Toll Free:** 800/328-3627

Minnetonka, Minnesota 55345-3793

**FAX:** 952/933-1889

**EPA Registration Number:** n/a

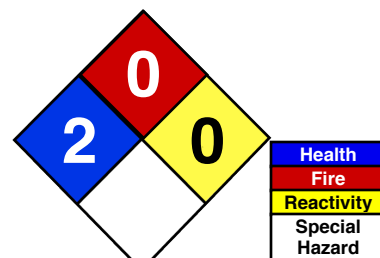
**CAS#:** 7722-76-1

**Chemical Name:** Monoammonium Phosphate

**Synonyms:** Ammonium Phosphate, Monobasic; Monoammonium Phosphate; MAP Technical Grade 12-61-0

**Chemical Family:** Inorganic Chemical

**MSDS Number:** n/a



For Rating Explanation see Section 16

**24 Hour Emergency Phone - Chemtrec Transport: 1-800-424-9300; Medical: 1-800-441-3637**

### Section 2: Composition/Information on Ingredients

Component	SARA Listed Hazardous?	CAS#	%	RTECS#	Other Limits
1. MAP (NH <sub>4</sub> ) <sub>2</sub> PO <sub>4</sub>	no	7722-76-1	100%	no data	See Section 15

Component	OSHA PEL	OSHA STEL	OSHA CEIL	ACGIH TLV	ACGIH STEL	ACGIH CEIL
1. (continued)	no data	no data	no data	10 mg/m <sup>3</sup> Nuisance Dust	no data	no data

### Section 3: Hazards Identification

**Emergency Overview:** Minimal hazard under normal conditions and use.

**NFPA:** Health: **2** Flammability: **0** Reactivity: **0** Special: no data

**Potential Health Effects:**

**Primary Routes of Exposure / Entry:** Skin contact, Inhalation, Eye contact.

**Target Organs:** Skin, lungs, eyes

**Acute Exposure Symptoms**

**Inhalation:** Inhalation of vapors or mist may be irritating to the respiratory tract.

**Eye Contact:** Dusty conditions may cause mechanical aggravation to respiratory mucous membranes. Dust from this product may cause particulate discomfort to eyes.

**Skin Contact:** Slight dermal abrasion is possible with prolonged contact, especially around cuffs and collars. Not normally absorbed through the skin.

**Ingestion:** Minimal hazard under normal conditions and use. Ingestion of large quantities may cause gastrointestinal discomfort, diarrhea, vomiting, weakness or other medically related problems. Seek medical attention.

**Chronic Exposure Symptoms:**

**Inhalation:** Long-term exposure may cause irritating to the respiratory tract.

**24 Hour Emergency Phone - Chemtrec Transport: 1-800-424-9300; Medical: 1-800-441-3637**

**Skin:** Long-term exposure may cause irritation of the skin.

**Medical Conditions Aggravated By Long-Term Exposure:** Respiratory Disease and Dermal related medical conditions. All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

**Carcinogenicity Data:**

NTP: No OSHA: No IARC Monograph: No Not Listed:

**Also See:** Section 11 for more Toxicological information

#### Section 4: First Aid Measures

**Inhalation:** Remove to fresh air. If breathing becomes difficult, oxygen may be given, preferably with a physician's advice. If not breathing, give artificial respiration. **Get medical attention.**

**Eye Exposure:** Flush eyes with large quantities of running water for a minimum of 15 minutes. If victim is wearing contact lenses, remove them. Hold eyelids apart during the flushing to ensure rinsing of entire surface of the eye and lids with water. **DO NOT let victim rub eye(s).** Do not attempt to neutralize with chemical agents. Oils/ointments should not be used at this time. **Get medical attention.**

**Skin Exposure:** In case of contact, immediately wash with plenty of soap and water for at least 15 minutes. **Seek medical attention.** Remove contaminated clothing and shoes before reuse or discard if they cannot be thoroughly cleaned.

**Ingestion:** If victim is conscious and alert, give 2-3 glasses of water to drink and do not induce vomiting. Never give anything to eat or drink to someone who is unconscious, having convulsions, or unable to swallow. **Seek immediate medical attention.** Do not leave victim unattended. To prevent aspiration of swallowed product, lay victim on side with head lower than waist. Vomiting may occur spontaneously. If vomiting occurs and the victim is conscious, give water to further dilute the chemical.

**NOTE TO THE PHYSICIAN:** Consult standard literature. Treatment based on the sound judgment of the physician and the individual reactions of the patient.

#### Section 5: Fire Fighting Measures

**Flammability Classification:**

**A Flash Point:** Non-flammable

**Auto-ignition Temperature:** no data

**LEL (Lower explosion limit):** no data

**UEL (Upper explosion limit):** no data

**Extinguishing Media:** Not combustible. Use extinguishing method suitable for surrounding fire.

**Unusual Fire and Explosive Hazards:** Thermal decomposition products may be hazardous.

**Hazardous Decomposition Materials:** During extremely high temperatures fire conditions, the product may reach melting point and decompose to release NH<sub>3</sub>, NO<sub>x</sub>, PO<sub>x</sub>

**Personal Protective Equipment:** Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing

**Fire-Fighting Instructions:** Keep personnel removed from and upwind of fire; isolate hazard area and deny entry. Dike area to prevent runoff and contamination of water sources. Dispose of fire control water later.

**Special Procedures:** Thermal decomposition products may be hazardous: ammonia fumes, phosphorus oxides and nitrogen oxides.

#### Section 6: Accidental Release Measures

**Procedure to be Followed in Case of Leak or Spill:** Keep unnecessary people away; isolate hazard area and deny entry.

**Spill and Leak Personal Procedures:** Wear appropriate protective chemical resistant clothing and chemical resistant gloves to prevent skin contact. Consult the glove/clothing manufacturer to determine the appropriate type glove/ clothing for a given application. Wear chemical goggles, and a face shield

**Containment of Spill:**

Dike or retain dilution water or water from fire fighting for later disposal. Sweep or vacuum up and place in an appropriate closed container. Clean up residual material by washing area with water and detergent. **DO NOT RETURN MATERIAL TO ITS ORIGINAL CONTAINER.** Prevent material from entering public sewer system or any waterways. Runoff from fire control or dilution water may cause pollution.

**Cleanup and Disposal of Spill:** Chemical additions, processing or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate or otherwise inappropriate. **Be advised:** state/local requirements for waste disposal may be more restrictive or otherwise different from federal laws and regulations. Consult state/local regulations regarding proper disposal of material.

**Environmental and Regulatory Reporting:** See Section 13 for disposal information and Sections 14 and 15 for regulatory requirements.

**Section 7: Handling and Storage****Precautions to be taken in handling and storing:**

Avoid direct or prolonged contact with skin and eyes. Keep containers closed when not being used. Store in closed containers. This product is hygroscopic and tends to cake in storage. Store in a cool, dry area. Prevent spillage and separate from strong oxidizers. Use normal safety procedures and good personal hygiene. Keep out of the reach of children.

**Section 8: Exposure Controls / Personal Protection**

**Ventilation Protection:** Where engineering controls are indicated by use conditions or a potential for excessive exposure exists, the following traditional exposure control techniques may be used to effectively minimize employee exposures: local exhaust ventilation at the point of generation.

**Respiratory Protection (specify type):** Approved dust respirator when necessary. When respirators are required, select NIOSH/MSHA approved equipment based on actual or potential airborne concentrations and in accordance with the latest OSHA standard (29 CFR 1910.134) and/or ANSI Z88.2 recommendations.

**Eye Protection:** Eye and face protection requirements will vary dependent upon work environment conditions and material handling practices. Appropriate ANSI Z87 approved equipment should be selected for the particular use intended for this material. It is generally regarded as good practice to wear a minimum of safety glasses with side shields when working in industrial environments.

**Skin Protection:** Skin contact should be minimized through use of gloves and suitable long-sleeved clothing (i.e. shirts and pants). Consideration must be given to both to durability as well as permeation resistance.

**Other Protective Clothing and Equipment:** Minimize breathing dust. Avoid prolonged or repeated breathing of dust and contact with skin. Remove contaminated clothing; launder before reuse. Cleanse skin thoroughly after contact, before meals and end of work period.

**Hygienic Work Practices:** All food / smoking materials should be kept in a separate area away from the storage/use location. Eating, drinking and smoking should be prohibited in areas where there is a potential for significant exposure to this material. Before eating, drinking or smoking, hands and face should be thoroughly washed. Facilities storing or using this material should be equipped with an eyewash and safety shower.

**Section 9: Physical and Chemical Properties**

**Chemical Name:** Ammonium Phosphate, Monobasic

**Percent Equivalent (12-61-0):** 100%

**Physical State:** solid

**Color and Appearance:** White solid crystal

**Odor:** odorless

**Odor Threshold:** n/a

**pH:** n/a

**Specific Gravity (@ 25°C):** 1.8

**Vapor Pressure(mm/hg):** n/a

**Vapor Density (air=1):** n/a

**Density:** 63 lbs/ft<sup>3</sup>  
**Bulk Density:** n/a  
**Volatiles by Volume:** n/a  
**Boiling Point:** Decomposes 330°F  
**Softening Point:** n/a  
**Freezing Point:** n/a  
**Evaporation Rate:** n/a  
**Solubility in water:** Soluble - 29.4 wt/wt at 77°F  
**Reaction with Water:** None  
**Viscosity:** n/a  
**Other Solubilities:** n/a  
**Chemical Formula:** (NH<sub>4</sub>)H<sub>2</sub>PO<sub>4</sub>  
**Formula Wt:** 115.03

**NOTE:** These physical data are typical values, based on material tested, and may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as a specification for the product.

### Section 10: Stability and Reactivity

**Chemical Stability** (under normal conditions of storage, handling, use): Stable X Unstable \_\_\_\_  
**Hazardous Polymerization:** Polymerizes under extremely high temperature, liberating ammonia.  
**Conditions to Avoid:** Extremely high temperature; Hygroscopic; protect from moisture; strong oxidizing agents  
**Chemical Incompatibility:** Strong Oxidizing agents. Reacts with alkali to liberate ammonia. Ammonium salts react with sodium hypochlorite to form nitrogen Trichloride which decomposes explosively. Aqueous solutions are corrosive to mild steel.  
**Hazardous Decomposition Products:** During extremely high temperatures fire conditions, the product may reach melting point and decompose to release NH<sub>3</sub>, NO<sub>x</sub>, PO<sub>x</sub>

### Section 11: Toxicological Information

**Acute Dermal Toxicity:** LD<sub>50</sub> (rat) is greater than 5,000 mg/kg (ppm); not acutely toxic by dermal exposure. (TFI Product Testing Results, OECD Guideline 402).  
**Acute Oral Toxicity:** LD<sub>50</sub> (rat) is greater than 2,000 mg/kg (ppm); not acutely toxic by oral exposure. (TFI Product Testing Results, OECD Guideline 425)  
**Acute Fish Toxicity:** 96-hour LC<sub>50</sub> is greater than 85.9 mg/L (ppm); low acute toxicity. (TFI Product Testing Results, OECD Guideline 203)

### Section 12: Ecological Information

**EPA Ecotoxicity rating:** No data found for product.  
**Acute Toxicity:** No data  
**Chronic Toxicity:** No data  
**Environmental Fate**  
**Stability in Water:** No data  
**Stability in soil:** No data  
**Transport and Distribution:** No data  
**Biological Oxygen Demand(BOD5):** No data  
**Chemical Oxygen Demand:** No data.  
**Activated Sludge Respiration Inhibition Test:** No data  
**Degradation products**  
**Biodegradation:** No data found for product.  
**Photo Degradation:** No data found for product.

**Section 13: Disposal Considerations**

**Disposal Procedures:** Chemical additions, processing or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate or otherwise inappropriate. Be advised that state/local requirements for waste disposal may be more restrictive or otherwise different from federal laws and regulations. Consult state/local regulations regarding proper disposal of material.

**RCRA Hazardous Waste Number:** no data

**Best demonstrated available treatment:** no data

**Container Cleaning And Disposal:** Be advised that state/local requirements for container disposal may be more restrictive or otherwise different from federal laws and regulations. Consult state/local regulations regarding proper disposal of container.

**Disposal Regulatory Requirements:** Dispose of in accordance with local, state and federal regulations. Consult your attorney or appropriate regulatory officials for information on such disposal.

**Section 14: Transport Information**

	USDOT	TDG - Canada
<b>Proper Shipping Name:</b>	Monoammonium Phosphate	Monoammonium Phosphate
<b>Hazard Class:</b>	not regulated by DOT	no data
<b>Hazard Identification Number:</b>	not regulated by DOT	no data
<b>Packing Group:</b>	not regulated by DOT	no data
<b>Transport Labeling/Placarding:</b>	not regulated by DOT	no data
<b>Reportable Quantity/ Reportable Limit:</b>	not regulated by DOT	no data
<b>Notes:</b>	no data	

**Section 15: Regulatory Information**

**TSCA:** Yes

**DSL (Canadian):** Yes

**EPA Regulations:**

**TSCA 8(d) inventory:** No

**RCRA Hazardous Waste Number:** No

**CERCLA Hazardous Substance:** No

**CERCLA Reportable Quantity (RQ):** no data

**SARA 311/312 Codes:** Acute: Yes Chronic: No

**SARA (Hazard Categories Title III rules):** no data

**SARA 313 Toxic Chemical:** no data

**SARA 302 EHS:** This product does not contain ingredients listed in Appendix A and B as Extremely Hazardous substances.

**SARA 302 EHS Threshold Planning Quantity:** no data

**OSHA Regulations:** This product does NOT contain any products considered hazardous under the Federal OSHA HazCom. Standard 29 CFR 1910.1200.

**OSHA: TWA =** no data

**ACGIH: TWA =** no data

**State Regulations:** Since state and local laws vary, consult your attorney or appropriate regulatory officials for information relating to spill reporting.

**Section 16: Other Information**

**ACGIH** - American Conference of Governmental Industrial Hygienists

**ANSI** - American National Standards Institute

**CAS** - Chemical Abstracts Service

**CERCLA** - Comprehensive Environmental Response, Compensation & Liability Act of 1980

**CFR** - Code of Federal Regulations

**CHEMTREC** - Chemical Transportation Emergency Center

**DOT** - U.S. Department of Transportation

**DSL** - Canadian Domestic Substance List

**EHS** - Extremely Hazardous Substance

**EPA** - U.S. Environmental Protection Agency

**HMIS** - Hazardous Material Identification System

**IARC** - International Agency for Research on Cancer

**LEL/UEL** - Lower and Upper Explosive Limit

**mg/m<sup>3</sup>** - Milligrams per cubic meter

**MSDS** - Material Safety Data Sheet

**NAERG** - North American Emergency Response Guidebook

**NIOSH** - National Institute of Occupational Safety and Health

**NFPA** - National Fire Protection Association NTP - National Toxicology Program

**OSHA** - Occupational Safety and Health Administration

**PEL** - Permissible Exposure Limit (set by OSHA)

**PPE** - Personal Protective Equipment

**RCRA** - Resource Conservation and Recovery Act of 1976

**SARA** - Superfund Amendments and Reauthorization Act



**TDG (Canadian)**: Transport of Dangerous Goods Regulations

**TLV** - Threshold Limit Value (set by ACGIH)

**TWA** - Time weighted average

**TSCA** - US Toxic Substance Control Act

**WHMIS** - US Workplace Hazardous Material Information System

					
Rating Number	Health Hazard	Flamibility Hazard	Instability Hazard	Rating Symbol	Special Hazard
4	Can be lethal	Will vaporize and readily burn at normal temperatures	May explode at normal temperatures and pressures	ALK	Alkaline
3	Can cause serious or permanent injury	Can be ignited under almost all ambient temperatures	May explode at high temperature or shock	ACID	Acidic
2	Can cause temporary incapacitation or residual injury	Must be heated or high ambient temperature to burn	Violent chemical change at high temperatures or pressures	BIO	BioHazard
1	Can cause significant irritation	Must be pre-heated before ignition can occur	Normally stable. High temperatures make unstable	COR	Strong Corrosive
0	No Hazard	Will not burn	Stable	CRYO	Cryogenic
				OXY	Oxidizer
					Radioactive
				W	Reacts violently or explosively with water
				W OX	Reacts violently or explosively with water or oxidizer

*This chart for reference only - For complete specifications consult the NFPA Standard*

**MSDS Issue Date:** n/a  
**Revised Date:** 10-25-11  
**Supersedes:** n/a

**Disclaimer:** Martrex, Inc. provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose. **MARTREX, INC. MAKES NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE INFORMATION SET FORTH HEREIN OR THE PRODUCT TO WHICH THE INFORMATION REFERS. ACCORDINGLY, MARTREX, INC. WILL NOT BE RESPONSIBLE FOR DAMAGES RESULTING FROM USE OF OR RELIANCE UPON THIS INFORMATION.**