### SECTION 1 - General Information And Chemical Product Identification

<table>
<thead>
<tr>
<th>Trade Name:</th>
<th>Monoammonium Phosphate, Technical Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical Name:</td>
<td>Ammonium Phosphate, Monobasic</td>
</tr>
<tr>
<td>Application/Uses/ Restrictions:</td>
<td>Dry fertilizers; Flame-proofing of wood; Pulp and Paper - Flame-proofing of specialty paper and fabrics; Acidulation agent in dye baths; Fire extinguishers; No Restrictions Known</td>
</tr>
</tbody>
</table>

**Distributor Information**

LidoChem, Inc.  20 Village Court, Hazlet, NJ 07730, Phone: (732) 888 8000  
Fax: (732) 264 2751  * email: info@lidochem.com

**Emergency phone #:**  CHEMTREC - Day or Night - at 800 424 9300

### SECTION 2 - Hazard(s) Identification

**Classification of the substance or mixture (GHS-US)**

| NOT CLASSIFIED |

**GHS Precautionary Statements - Prevention, Response, Storage, Disposal**

**PREVENTION:** Not Applicable

**RESPONSE:** Not Applicable

**STORAGE:** Not Applicable

**DISPOSAL:** Not Applicable

**OSHA Defined Hazards**

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

**HNOC - Hazards Not Otherwise Classified**

No other hazards classified

**Signal Word**

None

### SECTION 3 Composition/information On Ingredients

<table>
<thead>
<tr>
<th>Molecular Weight:</th>
<th>115.03</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS#:</td>
<td>7722-76-1</td>
</tr>
<tr>
<td>Chemical FORMULA:</td>
<td>(NH₄)H₂PO₄</td>
</tr>
<tr>
<td>% by Wt.</td>
<td>100</td>
</tr>
</tbody>
</table>

**Common Name/Synonyms:**  
Ammonium Phosphate, Monobasic

For Chemical Emergencies Call CHEMTREC - Day or Night - at 800 424 9300.  
DATE PRINTED: 5/12/2017
### SECTION 5 - Fire And Explosion Data

<table>
<thead>
<tr>
<th>Suitable Extinguishing Media:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not combustible. Use extinguishing method suitable for surrounding fire.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>UnSuitable Extinguishing Media:</th>
</tr>
</thead>
<tbody>
<tr>
<td>None specified</td>
</tr>
</tbody>
</table>

**Specific Hazards arising from the chemical:**

Thermal decomposition products may be hazardous. These may include irritating ammonia fumes, phosphorus oxides and nitrogen oxides.

**Special protective equipment and precautions for fire-fighters:**

Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing.

**Fire-fighting equipment/instructions**

Keep unnecessary people away, isolate hazard area and deny entry. Dike area to prevent runoff and contamination of water sources. Dispose of fire control water later. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Specific Methods**

Use extinguishing method suitable for surrounding fire.
Section 6 - Accidental Release Measures

Personal precautions, protective equipment and emergency procedures:

No action shall be taken involving any personal risk or without suitable training. Keep unnecessary and unprotected personnel from entering. Put on appropriate personal protective equipment as recommended in Section 8. Wear appropriate protective gear for the situation.

Environmental Precautions:

Dike or retain dilution water or water from fire fighting for later disposal. Prevent material from entering public sewer system or any waterways. Runoff from fire control or dilution water may cause pollution.

Methods and Materials for Containment and Clean Up:

Sweep or vacuum up and place in an appropriate closed container. DO NOT RETURN MATERIAL TO ITS ORIGINAL CONTAINER. Clean up residual material by washing area with water and detergent. Prevent material from entering public sewer system or any waterways.

Section 7 - Handling and Storage

Precautions for safe handling:

Put on appropriate personal protective equipment (see Section 8 of SDS). Avoid direct or prolonged contact with skin and eyes.

Conditions for safe storage:

Keep containers closed when not being used. Store in closed containers. This product is hygroscopic and tends to cake in storage. Store in an area that is cool, dry.

Incompatibilities:

Strong bases. Strong acids

Section 8 - Exposure Control and Personal Protection

Occupational Exposure Limits:

<table>
<thead>
<tr>
<th>Chemical Identity:</th>
<th>CAS #:</th>
<th>Exposure Limit Values</th>
<th>SOURCE</th>
<th>OSHA/PPM</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>STEL</td>
<td>ACGIH Threshold Limit Values</td>
</tr>
<tr>
<td>Ammonium Phosphate, Monobasic</td>
<td>7722-76-1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Exposure Limits and Appropriate Engineering Controls:

Exposure limits represent regulated or recommended worker breathing zone concentrations measured by validated sampling and analytical methods, meeting OSHA requirements. The following limits (ACGIH, OSHA and other) apply to this material, where, if indicated, S=skin and C=ceiling limit:

ACGIH TLV/TWA PARTICULATES NOT OTHERWISE CLASSIFIED : 10 mg/m^3 total dust(INHALABLES)

Individual Protection Measures, (Personal Protective Equipment):

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 Protection:
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.

Respiratory Protection
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.

Ventilation Limits:
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.

Hygienic 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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance And Odor</td>
<td>White solid crystal, odorless</td>
</tr>
<tr>
<td>pH</td>
<td>4.4 - 4.8</td>
</tr>
<tr>
<td>Melting Point</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing Point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>Decomposes 330°F (17°C)</td>
</tr>
<tr>
<td>Flash Point</td>
<td>No data available</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubilities</td>
<td>Soluble - 29.4 wt/wt at 25° C (77°F)</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.8 at 25° C (77 deg F)</td>
</tr>
<tr>
<td>Bulk Density</td>
<td>No data available</td>
</tr>
<tr>
<td>Other Information</td>
<td></td>
</tr>
<tr>
<td>Flammable Limits</td>
<td>No data available</td>
</tr>
<tr>
<td>UEL</td>
<td>No data available</td>
</tr>
<tr>
<td>LEL</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor Pressure(mm/hg)</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor Density(air=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Autoignition Temp</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition Temp</td>
<td>No data available</td>
</tr>
<tr>
<td>Reactivity In Water</td>
<td>None</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No data available</td>
</tr>
</tbody>
</table>

Section 10 - Stability and Reactivity

Chemical Stability and Reactivity:
This material is stable under normal handling and storage conditions.

Possible Hazardous Reactions:
No data available

Conditions to Avoid:
Hygroscopic; protect from moisture

Incompatible Materials:
Strong bases. Strong acids

Hazardous Decomposition Products:
Decomposition products may be hazardous. These may include ammonia and phosphoric acid. Under fire conditions, phosphorous oxides and nitrogen oxides may also be produced.

For Chemical Emergencies Call CHEMTREC - Day or Night - at 800 424 9300.
**Section 11- Toxicological Information**

**Information On The Likely Routes Of Exposure:** Inhalation, Ingestion and Dermal.

**Symptoms Related To The Physical, Chemical And Toxicological Effects:**

**Inhalation Effects:**
No test data found for product.

**Skin Effects:**
Skin irritation, 500 mg, rabbit. Mild irritant.

**Dermal Toxicity:**
Practically non toxic (Rabbit LD50 > 7,940 mg/kg)

**Eye Effects:**
Eye irritation: Slightly irritating (Rabbit, 12.6/110.0, 1 hr exposure)

**Ingestion Effects:**
Oral - Practically non toxic (Rat LD 50 - 5,750 mg/kg)

**Sensitization:**
No test data found for product.

**Carcinogenicity/Mutagenicity:**
This product does not contain any substances that are considered by OSHA, NTP, IARC or ACGIH to be "probable" or "suspected" human carcinogens. No data available for mutagenicity.

**Reproductive Effects:**
No data found for product.

**Neurotoxicity:**
No data found for product.

**Target Organs:**
No data found for product.

**Additional Toxicological Information:**
None

**Section 12- Ecological Information**

**Ecotoxicity:**
No data found for product.

**Degradability:**
No data found for product.

**Bioaccumulative potential:**
No data found for product.

**Mobility in the Soil:**
No data found for product.

**Additional Adverse effect on environment:**
None
**SECTION 13 - Disposal Considerations**

**Disposal Instructions and Regulations:**
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.

**Hazardous Waste Code:** Not considered a hazardous waste

**Container Disposal Information:**
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.

**Section 14 - Transport Information**

**US DOT, IATA, IMO, ADR:**

**Proper Shipping Name:** Monoammonium Phosphate

<table>
<thead>
<tr>
<th>D. O. T. Hazard Class</th>
<th>UN #</th>
<th>Label Requirement</th>
<th>RQ</th>
<th>Placard</th>
<th>CAS</th>
<th>Environment Hazards</th>
<th>Marine Pollutant</th>
<th>Special Precautions</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Regulated by D.O.T.</td>
<td>N/Ap</td>
<td>None</td>
<td>N/Ap</td>
<td>None</td>
<td>7722-76-1</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Not regulated as dangerous goods.</td>
</tr>
</tbody>
</table>

**U.S. SARA Reporting Requirements:**

**SARA Title III Hazard Classes Section 302 - EXTREMELY HAZARDOUS SUBSTANCES:**
This product does NOT contain ingredients listed in Appendix A and B as Extremely Hazardous substances.

**SARA Title III Hazard Classes Sections 311/312:**
None

**SARA Section 313 Toxic Chemicals:**
This product contains the following toxic chemical subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right to Know Act:

**CAS#**

This material does not contain any chemical components with known CAS numbers that exceed the threshold reporting levels.

**SARA Superfund Section 110:**
This product does not contain ingredients listed as hazardous substances on the Priority List of CERCLA Hazardous substances.

**CERCLA, 40 CFR 117, 302:**
This product does not contain ingredients specified in the List of Extremely Hazardous Substances.

**CERCLA listed substances are:**
none

For Chemical Emergencies Call CHEMTREC - Day or Night - at 800 424 9300. DATE PRINTED: 5/12/2017
Other Federal Reporting Requirements:

CAA: This product does not contain any substances regulated as hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act.

CWA: No chemicals in product are listed a Hazardous Substances, Priority Pollutants or Toxic Pollutants under the CWA.

RCRA: Not considered a hazardous waste.

State Reporting Requirements:

State Right to Know Laws:

<table>
<thead>
<tr>
<th>CAS#</th>
<th>State RTK</th>
<th>Chemical Name</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>None</td>
</tr>
</tbody>
</table>

CALIFORNIA PROPOSITION 65:
This product does NOT contain a chemical or chemicals subject to California Proposition 65.

Michigan Critical Materials:
This product does not contain ingredients listed on the Michigan Critical Materials Register.

Global Lists/International Inventories:

Canada CEPA: All intentional ingredients are listed on the DSL.

Canada WHMIS: Not controlled

SECTION 16 - Other Information

Medical Conditions Possibly Aggravated by Exposure:
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.

Notes to Physician:
Ingestion: Gastric lavage may be indicated if performed soon after ingestion, or in patients who are comatose or at risk of convulsing. Protect airway by use of a cuffed endotracheal tube. Lavage with 150-mL lukewarm tap water of saline per wash for older children or adults. Continue until lavage return is clear. Lavage return should approximate the fluid given to avoid electrolyte imbalance.
All phosphate salts, except calcium salts, have a hypothetical risk of hypocalcemia, so calcium levels should be monitored.
Ammonium salts have a hypothetical risk of ammonia toxicity. In addition to calcium levels, ammonia and phosphate levels should be monitored.
Potassium salts have a hypothetical risk of hyperkalemia which can cause cardiac arrhythmia. In addition to calcium levels, potassium and phosphate levels should be monitored. Also consider continuous EKG monitoring to detect hyperkalemia.
Sodium salts have a hypothetical risk of hypernatremia. In addition to calcium levels, sodium and phosphate levels should be monitored.
Review: May 2005 - no changes, Sept 2008 no changes, Jan 2013 no changes,

5-24-15 SDS reviewed - updated to GHS requirements. This replaces all previous MSDS's -

Date of last revision:
5-1-2017

For Chemical Emergencies Call CHEMTREC - Day or Night - at 800 424 9300.
NOTICE: OSHA STANDARD 29 CFR 1910.1200 requires that information be provided to employees regarding the hazards of chemicals by means of a Hazard Communication Program including training, labeling, Material Safety Data Sheets, and access to written records. We request that you, and it is your legal duty, make all information in this Material Safety Data Sheet available to your employees.

Key Legend Information:

N/Ap: Not Applicable
N/R: Not Rated
ACGI: American Conference of Gov"ntal Industrial Hygienists
OSHA: Occupational Safety and Health Administration
PEL: Permissible Exposure Limit
STEL: Short Term Exposure Limit
IARC: International Agency for Research on Cancer
SARA Title III: Superfund Amendments and Reauthorization Act
CAA: Clean Air Act
RCRA: Resource Conservation Recovery Act
IATA: International Air Transport Association Shipping Info.
DSL: Domestic Substance List (Canada)

ND: Not Determined
NDA: No Data Available
TLV: Threshold Limit Value
TWA: Time Weighted Average
NTP: National Toxicology Program
TSCA: Toxic Substance Control Act
CERCLA: Comprehensive Response, Compensation and Liability Act
CWA: Clean Water Act
IMO: International Maritime Organization Shipping Info.

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind expressed or implied is made with respect to the information contained herein. This Safety Data Sheet was prepared to comply with OSHA Hazard Communication standard. (29 CFR 1910.1200 HazCom 2012). This supersedes any previous information. Since the actual use by others is beyond our control, no guarantee, expressed or implied, is made by LidoChem, Inc. as to the effects of such use or the results to be obtained, nor does LidoChem,Inc. assume any liability arising out of use, by others, of the products referred to herein. Nor is the information herein to be construed as absolutely complete since additional information may be necessary or desirable when particular or exceptional conditions or circumstances exist because of applicable laws or government regulations. All LidoChem Inc. SDS's are reviewed every three years or sooner if necessary. Please check the Review Date on Page 1 for most current version. Please request a new SDS from LidoChem, Inc. if the date is older than 3 years.