

**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING****Product identifier****Product name** Phosphorus Tablets**Other means of identification****Product Code(s)** 5422A**Recommended use of the chemical and restrictions on use****Recommended Use** Use as a laboratory reagent.**Details of the supplier of the safety data sheet**LaMotte Company, Inc.  
802 Washington Avenue  
P.O. Box 329  
Chestertown, MD 21620 USA  
T 410-778-3100  
F 410-778-9748**Emergency telephone number**

24 Hour Emergency Number (CHEM-TEL):USA, Canada, Puerto Rico 1-800-255-3924 Outside North American Continent (Call collect) 813-248-0585

**2. HAZARDS IDENTIFICATION**

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

**EMERGENCY OVERVIEW****Appearance** White**Physical state** Tablet**Odor** None**Precautionary Statements - Prevention**

Wear protective gloves/protective clothing/eye protection/face protection. Keep out of the reach of children.

**Precautionary Statements - Response**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or physician.

IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

IF SWALLOWED: Drink 1 or 2 glasses of water. Call a physician immediately.

**Precautionary Statements - Storage**

Store in a well-ventilated place. Keep cool.

**Unknown Acute Toxicity**

4.46% of the mixture consists of ingredient(s) of unknown toxicity.

**3. COMPOSITION/INFORMATION ON INGREDIENTS\***

This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Chemical name	CAS No	Weight-%
Ammonium molybdate tetrahydrate	12054-85-2	2
Sodium bisulfate*	7681-38-1	10-15

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

LaMotte Company proprietary formulation under the State of New Jersey Trade Secret Protection Law, assigned the NJTSRN 80100291-5034p, and may be disclosed only in a medical emergency

#### 4. FIRST AID MEASURES

##### First Aid Measures

<b>General advice</b>	No hazards which require special first aid measures. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. Keep out of reach of children.
<b>Eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If irritation persists or develops, contact a physician.
<b>Skin contact</b>	Wash off with soap and plenty of water removing all contaminated clothes and shoes. If irritation develops or persists, consult physician.
<b>Inhalation</b>	Remove to fresh air. Not an expected route of exposure.
<b>Ingestion</b>	Do NOT induce vomiting. Drink plenty of water. Consult a physician.
<b><u>Self-protection of the first aider</u></b>	Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

#### 5. FIREFIGHTING MEASURES

##### Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Dry chemical, CO<sub>2</sub>, water spray or alcohol-resistant foam.

##### Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

#### 6. ACCIDENTAL RELEASE MEASURES

##### Personal precautions, protective equipment and emergency procedures

<b>Personal precautions</b>	Avoid contact with eyes, skin and clothing.
<b>Environmental precautions</b>	See Section 12 for additional Ecological Information.
<b><u>Methods and material for containment and cleaning up</u></b>	
<b>Methods for containment</b>	Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13).
<b>Methods for cleaning up</b>	Sweep up and shovel into suitable containers for disposal. After cleaning, flush away traces with water.

#### 7. HANDLING AND STORAGE

##### Precautions for safe handling

**Handling** Avoid contact with eyes, skin and clothing. Handle in accordance with good industrial hygiene and safety practice. Do not taste or swallow. Do not eat, drink, or smoke when using this product.

**Conditions for safe storage, including any incompatibilities**

**Storage** Keep container tightly closed in a dry and well-ventilated place. Keep away from heat. Protect from moisture. Keep out of the reach of children.

**Incompatible Products** Acids. Strong reducing agents.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control parameters**

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Ammonium molybdate tetrahydrate 12054-85-2	TWA: 0.5 mg/m <sup>3</sup> Mo respirable fraction	TWA: 5 mg/m <sup>3</sup> Mo (vacated) TWA: 5 mg/m <sup>3</sup> Mo	IDLH: 1000 mg/m <sup>3</sup> Mo
Sodium bisulfate* 7681-38-1	-	-	Not Established

**Appropriate engineering controls**

**Engineering Measures** Showers  
Eyewash stations  
Ventilation systems.

**Individual protection measures, such as personal protective equipment**

**Eye/Face Protection** Wear safety glasses with side shields (or goggles).

**Skin and body protection** Protective gloves.

**Hygiene Measures** Take off contaminated clothing and wash before reuse.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Information on basic physical and chemical properties**

<b>Physical state</b>	Tablet	<b>Odor</b>	None
<b>Appearance</b>	White	<b>Odor threshold</b>	Not Applicable
<b>Color</b>	White		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>pH</b>	2	(1 tablet in 10mL of water)
<b>Melting point / freezing point</b>	No information available	
<b>Boiling point / boiling range</b>	No information available	
<b>Flash point</b>	Not Applicable -	
<b>Evaporation rate</b>	No information available	
<b>Flammability (solid, gas)</b>	No information available	
<b>Flammability Limit in Air</b>		
<b>Upper flammability limit:</b>	No information available	
<b>Lower flammability limit:</b>	No information available	
<b>Vapor pressure</b>	No information available	
<b>Vapor density</b>	No information available	
<b>Specific gravity</b>	No information available	
<b>Water solubility</b>	Soluble in water	
<b>Solubility in other solvents</b>	Soluble	
<b>Partition coefficient</b>	No information available	
<b>Autoignition temperature</b>	Not Applicable	
<b>Decomposition temperature</b>	No information available	
<b>Kinematic viscosity</b>	No information available	
<b>Dynamic viscosity</b>	No information available	

**Explosive properties** Not Applicable  
**Oxidizing properties** No information available

**Other Information**

**Softening point** No information available  
**Molecular weight** No information available  
**VOC Content (%)** No information available  
**Density** No information available  
**Bulk density** No information available

**10. STABILITY AND REACTIVITY**

**Stability** Stable.  
**Hazardous polymerization** Hazardous polymerization does not occur.  
**Conditions to avoid** Excessive heat. Moisture.  
**Incompatible materials** Acids. Strong reducing agents.  
**Hazardous decomposition products** None under normal use.

**11. TOXICOLOGICAL INFORMATION****Information on likely routes of exposure****Component identification**

Chemical name	ATEmix (oral)	ATEmix (dermal)	Inhalation LC50
Ammonium molybdate tetrahydrate 12054-85-2	Not Established	Not Established	Not Established
Sodium bisulfate* 7681-38-1	= 2490 mg/kg ( Rat )	Not Established	Not Established

**Information on toxicological effects**

Chemical name	ACGIH	IARC	NTP	OSHA
Ammonium molybdate tetrahydrate 12054-85-2	A3	Not Established	Not Established	Not Established
Sodium bisulfate* 7681-38-1	Not Established	Not Established	Not Established	Not Established

**ATEmix (oral)** 5,222.00 mg/kg

**12. ECOLOGICAL INFORMATION****Ecotoxicity**

Chemical name	Toxicity to Algae	Toxicity to Fish	Daphnia Magna (Water Flea)
Ammonium molybdate tetrahydrate 12054-85-2	Not Established	Not Established	Not Established
Sodium bisulfate* 7681-38-1	Not Established	Not Established	190: 48 h Daphnia magna mg/L EC50

**Persistence and degradability**

No information available.

**Bioaccumulation/Accumulation**

No information available.

Chemical name	Log Pow
Ammonium molybdate tetrahydrate 12054-85-2	Not Established
Sodium bisulfate*	Not Established

7681-38-1

**13. DISPOSAL CONSIDERATIONS****Disposal Methods** Dispose of waste product or used containers according to local regulations.**Contaminated packaging** Do not reuse empty containers.

Chemical name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Ammonium molybdate tetrahydrate 12054-85-2	Not Established	-	Not Established	Not Established
Sodium bisulfate* 7681-38-1	Not Established	-	Not Established	Not Established

Chemical name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Ammonium molybdate tetrahydrate 12054-85-2	Not Established	Not Established	Not Established	Not Established
Sodium bisulfate* 7681-38-1	Not Established	Not Established	Not Established	Not Established

Chemical name	California Hazardous Waste Status
Ammonium molybdate tetrahydrate 12054-85-2	-
Sodium bisulfate* 7681-38-1	-

**14. TRANSPORT INFORMATION****DOT** Not regulated**IATA** Not regulated**IMDG/IMO** Not regulated**15. REGULATORY INFORMATION****International Inventories**

<b>TSCA</b>	Complies
<b>DSL/NDSL</b>	Complies
<b>EINECS/ELINCS</b>	Does not comply
<b>ENCS</b>	Does not comply
<b>IECSC</b>	Complies
<b>KECL</b>	Does not comply
<b>PICCS</b>	Complies
<b>AICS</b>	Complies

**Legend:****TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances**ENCS** - Japan Existing and New Chemical Substances**IECSC** - China Inventory of Existing Chemical Substances**KECL** - Korean Existing and Evaluated Chemical Substances**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

**US Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical name	SARA 313 - Threshold Values %
Ammonium molybdate tetrahydrate 12054-85-2	1.0
Sodium bisulfate* 7681-38-1	Not Established

**SARA 311/312 Hazard Categories**

Acute health hazard	Yes
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

**CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Ammonium molybdate tetrahydrate 12054-85-2	Not Established	Not Established	Not Established	Not Established
Sodium bisulfate* 7681-38-1	Not Established	Not Established	Not Established	Not Established

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	RQ
Ammonium molybdate tetrahydrate 12054-85-2	-	Not Established	-
Sodium bisulfate* 7681-38-1	-	Not Established	-

**US State Regulations****California Proposition 65**

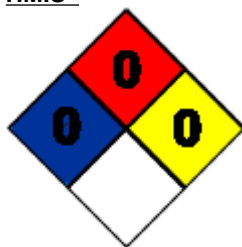
Chemical name	California Proposition 65
Ammonium molybdate tetrahydrate 12054-85-2	Not Established
Sodium bisulfate* 7681-38-1	Not Established

**U.S. State Right-to-Know Regulations**

Chemical name	New Jersey	Massachusetts	Pennsylvania
Ammonium molybdate tetrahydrate 12054-85-2	Not Established	Not Established	Not Established
Sodium bisulfate* 7681-38-1	Not Established	Not Established	Not Established

**CPSC (Consumer Product Safety Commission) - Specially Regulated Substances****16. OTHER INFORMATION**

<b>NFPA</b>	Health hazard 0	Flammability 0	Instability 0	<b>Physical and Chemical Hazards</b> N/A
<b>HMIS</b>	Health hazard 1	Flammability 0	Stability 0	



Health Hazard	<b>1</b>
Fire Hazard	<b>0</b>
Reactivity	<b>0</b>

**Issuing Date**

Jun-01-2015

**Reason for revision**

Update to Format MSDS was reviewed per Canada request - Canada requires MSDS to be dated within 3 years of the request

**Disclaimer**

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

**End of Safety Data Sheet**