

Issuing Date 9/26/2011

Revision Number 0

**1. PRODUCT AND COMPANY IDENTIFICATION**

<b>Product Name</b>	<b>PHOSPHATE ACID REAGENT</b>
<b>Product Code(s)</b>	V-6282
<b>Recommended Use</b>	Test kit reagent. Industrial (not for food or food contact use).
<b>Company</b>	LaMotte Company, Inc. 802 Washington Avenue P.O. Box 329 Chestertown, MD 21620 USA
<b>Emergency Telephone Number</b>	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****DANGER!****Emergency Overview**

Corrosive

Liquid and mist can cause severe burns to all body tissue  
Inhalation may cause coughing, chest pains, damage to lungs. Ingestion may be fatal  
May be harmful if swallowed, inhaled, or absorbed through skin

**Appearance** Clear, colorless**Physical State** Liquid**Odor** Odorless

**OSHA Regulatory Status** This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). Safety information is given for exposure to the reagent as sold and considers exposure to the chemical if user has direct eye and skin contact.

**Potential Health Effects**

**Principle Routes of Exposure** Eye or skin contact, ingestion, and inhalation

**Acute Toxicity****Eyes**

Corrosive to the eyes and may cause severe damage including blindness.

**Skin**

Corrosive. Can cause redness, pain, and severe skin burns. Harmful if absorbed through skin.

**Inhalation**

May be harmful if inhaled. Corrosive to respiratory system. Depending on exposure, the effects from inhalation of corrosive mists can vary from mild irritation to serious damage to respiratory tract.

**Ingestion**

Corrosive. Can cause immediate pain and burning in the mouth, throat, esophagus and GI tract. May cause nausea, vomiting, and diarrhea, and in severe cases death.

**Chronic Effects**

Chronic exposure to corrosive mists or vapors may cause erosion of the teeth. Chronic exposure to mists containing sulfuric acid is a cancer hazard

**Aggravated Medical Conditions**

Hypersensitivity may occur in those with preexisting skin disorders. Respiratory disorders. Preexisting eye disorders. Those with impaired liver or kidney function may be more susceptible to the effects of this substance.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %
Antimony potassium tartrate	28300-74-5	<0.05
Ammonium molybdate tetrahydrate	12054-85-2	1
Sulfuric acid	7664-93-9	5-15
Water	7732-18-5	to 100%

## 4. FIRST AID MEASURES

<b>Eye Contact</b>	Immediately flush eyes with gentle stream of water for at least 15 minutes, occasionally lifting upper and lower eyelids. Seek immediate medical attention/advice.
<b>Skin Contact</b>	Wash off immediately with soap and plenty of water for at least 15 minutes while removing all contaminated clothing and shoes. Remove and wash contaminated clothing before re-use. Excess acid on skin can be neutralized with a 2% solution of sodium bicarbonate in water. Call a physician immediately.
<b>Inhalation</b>	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and contact emergency personnel. Call a physician immediately.
<b>Ingestion</b>	DO NOT INDUCE VOMITING. Drink large quantity of water. Call a physician immediately. Never give anything by mouth to an unconscious person.
<b>Protection of First-aiders</b>	Use personal protective equipment. See Section 8 for more detail. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

## 5. FIRE-FIGHTING MEASURES

<b>Flammable Properties</b>	Not combustible, but a strong oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition.			
<b>Flash Point</b>	Not applicable			
<b>Suitable Extinguishing Media</b>	Dry chemical, CO <sub>2</sub> , alcohol-resistant foam or water spray.			
<b>Explosion Data</b>				
<b>Specific Hazards Arising from the Chemical</b>	Contact with most metals causes the formation of explosive and flammable hydrogen gas.			
<b>NFPA</b>	<b>Health Hazard 3</b>	<b>Flammability 0</b>	<b>Stability 0</b>	<b>Physical and Chemical Hazards W</b>
<b>HMIS</b>	<b>Health Hazard 3</b>	<b>Flammability 0</b>	<b>Stability 2</b>	

## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions</b>	Evacuate personnel to safe areas. Ensure adequate ventilation. Use personal protective equipment. Refer to Section 8. Wear protective gloves/clothing and eye/face protection. Avoid contact with skin, eyes, and clothing.
<b>Methods for Cleaning Up</b>	Neutralize spill with alkaline material (sodium bicarbonate), being careful to prevent splattering, then containerize slurry and hold for later disposal. After cleaning, flush away traces with water.

## 7. HANDLING AND STORAGE

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

**Storage** Keep containers tightly closed in a dry, cool, and well-ventilated place. Store away from strong bases or metals. Do not store near combustible materials. Keep away from incompatible materials such as cyanides or sulfides. Keep out of the reach of children.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Antimony potassium tartrate 28300-74-5	TWA: 0.5 mg/m <sup>3</sup>	TWA: 0.5 mg/m <sup>3</sup>	TWA: 0.5 mg/m <sup>3</sup>
Ammonium molybdate tetrahydrate 12054-85-2	TWA: 3 mg/m <sup>3</sup> TWA: 10 mg/m <sup>3</sup> TWA: 0.5 mg/m <sup>3</sup>	TWA: 15 mg/m <sup>3</sup> TWA: 5 mg/m <sup>3</sup>	IDLH: 1000 mg/m <sup>3</sup>
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup>	IDLH: 15 mg/m <sup>3</sup> TWA: 1 mg/m <sup>3</sup>
Water 7732-18-5	None Known	None Known	None Known

**Engineering Measures** Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

**Personal Protective Equipment**

**Eye/Face Protection**

Safety glasses with side-shields. If splashes are likely to occur, wear: Face-shield. Maintain eye wash and quick drench shower facilities in work area.

**Skin and Body Protection**

Wear protective gloves/clothing. Nitrile rubber. Gloves & Lab Coat.

**Respiratory Protection**

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

**Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance</b>	Clear, colorless	<b>Odor</b>	Odorless
<b>Physical State</b>	Liquid	<b>pH</b>	<1
<b>Flash Point</b>	Not applicable	<b>Autoignition Temperature</b>	Not applicable
<b>Boiling Point/Range</b>	No information available		
<b>Freezing Point</b>	No information available		

<b>Vapor Pressure</b>	No information available	<b>Vapor Density</b>	>1 (Air = 1)
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**10. STABILITY AND REACTIVITY**

**Stability** Stable under normal conditions of use and storage. Reacts with water.

**Incompatible Products** Water. Strong bases. Metals. Combustible materials. Cyanides. Sulfides.

**Conditions to Avoid** Excessive heat. Incompatible products. Moisture.

**Hazardous Decomposition Products** Hydrogen gas. Sulfur oxides (SOx).

**Hazardous Reactions** Contact with metals may evolve flammable hydrogen gas. May release flammable gasses when heated or in contact with water.

**Hazardous Polymerization** Hazardous polymerization does not occur.

## 11. TOXICOLOGICAL INFORMATION

### Acute Toxicity

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Antimony potassium tartrate	115 mg/kg ( Rat )	None Known	None Known
Ammonium molybdate tetrahydrate	None Known	None Known	None Known
Sulfuric acid	2140 mg/kg ( Rat )	None Known	510 mg/m <sup>3</sup> ( Rat ) 2 h
Water	90 mL/kg ( Rat )	None Known	None Known

### Chronic Toxicity

**Chronic Toxicity** Chronic exposure to corrosive mists or vapors may cause erosion of the teeth. Chronic exposure to mists containing sulfuric acid is a cancer hazard.

Chemical Name	ACGIH	IARC	NTP	OSHA
Antimony potassium tartrate	None Known	None Known	None Known	None Known
Ammonium molybdate tetrahydrate	A3	None Known	None Known	None Known
Sulfuric acid	A2	Group 1	Known	X
Water	None Known	None Known	None Known	None Known

**ACGIH: (American Conference of Governmental Industrial Hygienists)**

A2 - Suspected Human Carcinogen

A3 - Animal Carcinogen

**IARC: (International Agency for Research on Cancer)**

Group 1 - Carcinogenic to Humans

**NTP: (National Toxicity Program)**

Known - Known Carcinogen

**OSHA: (Occupational Safety & Health Administration)**

X - Present

Chemical Name	EU - Endocrine Disruptors Candidate List	EU - Endocrine Disruptors - Evaluated Substances	Japan - Endocrine Disruptor Information
Antimony potassium tartrate	None Known	None Known	None Known
Ammonium molybdate tetrahydrate	None Known	None Known	None Known
Sulfuric acid	None Known	None Known	None Known
Water	None Known	None Known	None Known

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

The material may be toxic to aquatic life.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Microtox	Daphnia Magna (Water Flea)
Antimony potassium tartrate	None Known	None Known	None Known	None Known
Ammonium molybdate tetrahydrate	None Known	None Known	None Known	None Known
Sulfuric acid	None Known	LC50> 500 mg/L Brachydanio rerio 96 h	None Known	EC50 = 29 mg/L 24 h
Water	None Known	None Known	None Known	None Known

**Bioaccumulation/Accumulation**

When released into the soil, this material may leach into ground water. When released into the air, this material may be removed from the atmosphere to a moderate extent by wet or dry deposition.

Chemical Name	Log Pow
Antimony potassium tartrate	None Known
Ammonium molybdate tetrahydrate	None Known
Sulfuric acid	None Known
Water	None Known

**13. DISPOSAL CONSIDERATIONS**

**Waste Disposal Method**

Dispose of in accordance with local regulations. Should not be released into the environment.

Chemical Name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Antimony potassium tartrate - 28300-74-5	None Known	None Known	None Known	None Known
Ammonium molybdate tetrahydrate - 12054-85-2	None Known	None Known	None Known	None Known
Sulfuric acid - 7664-93-9	None Known	None Known	None Known	None Known
Water - 7732-18-5	None Known	None Known	None Known	None Known

14. TRANSPORT INFORMATION
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DOT

<b>Proper Shipping Name</b>	SULFURIC ACID (with <51% ACID)
<b>Hazard Class</b>	8
<b>UN-No</b>	2796
<b>Packing Group</b>	II
<b>Reportable Quantity (RQ)</b>	1000

IATA

<b>UN-No</b>	2796
<b>Proper Shipping Name</b>	SULPHURIC ACID (with <51% ACID)
<b>Hazard Class</b>	8
<b>Packing Group</b>	II

IMDG/IMO

<b>Proper Shipping Name</b>	SULFURIC ACID (with <51% acid)
<b>Hazard Class</b>	8
<b>UN-No</b>	2796
<b>Packing Group</b>	II

15. REGULATORY INFORMATION

**International Inventories**

Component	TSCA	DSL	EINECS/ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Antimony potassium tartrate 28300-74-5 ( <0.05 )	TSCA	X	EINECS/ELINCS	2-2953	X	KECL	X	X
Ammonium molybdate tetrahydrate 12054-85-2 ( 1 )	TSCA	DSL	EINECS/ELINCS	ENCS	X	KECL	X	X
Sulfuric acid 7664-93-9 ( 5-15 )	Present	X	X	1-430; 1-724	X	KE-32570	X	X
Water 7732-18-5 ( to 100% )	Present	X	X	ENCS	X	KE-35400	X	X

**U.S. Federal Regulations**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	CAS-No	Weight %	SARA 313 - Threshold Values %
Antimony potassium tartrate	28300-74-5	<0.05	1.0
Ammonium molybdate tetrahydrate	12054-85-2	1	1.0
Sulfuric acid	7664-93-9	5-15	1.0
Water	7732-18-5	to 100%	None Known

**SARA 311/312 Hazard Categories**

<b>Acute Health Hazard</b>	Yes
<b>Chronic Health Hazard</b>	Yes
<b>Fire Hazard</b>	No
<b>Sudden Release of Pressure Hazard</b>	No
<b>Reactive Hazard</b>	Yes

**Clean Water Act**

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Component	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Antimony potassium tartrate 28300-74-5 ( <0.05 )	None Known	X	None Known	X
Ammonium molybdate tetrahydrate 12054-85-2 ( 1 )	None Known	None Known	None Known	None Known
Sulfuric acid 7664-93-9 ( 5-15 )	1000 lb	None Known	None Known	X
Water 7732-18-5 ( to 100% )	None Known	None Known	None Known	None Known

Chemical Name	CAS-No	Weight %	HAPS data	VOC Chemicals	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Antimony potassium tartrate	28300-74-5	<0.05	Present (includes any unique chemical substance that contains Antimony as part of its infrastructure)	None Known	None Known	None Known
Ammonium molybdate tetrahydrate	12054-85-2	1	None Known	None Known	None Known	None Known

Sulfuric acid	7664-93-9	5-15	None Known	None Known	None Known	None Known
Water	7732-18-5	to 100%	None Known	None Known	None Known	None Known

**CERCLA**

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs
Antimony potassium tartrate	100 lb	None Known
Ammonium molybdate tetrahydrate	None Known	None Known
Sulfuric acid	1000 lb	1000 lb
Water	None Known	None Known

**U.S. State Regulations**

**California Proposition 65**

Warning! California Proposition 65 has classified "strong inorganic acid mists containing sulfuric acid" as a chemical known to the State of California to cause cancer. This classification applies only to "mists" containing sulfuric acid and not to sulfuric acid or sulfuric acid solutions, as is this solution.

Chemical Name	CAS-No	California Prop. 65
Antimony potassium tartrate	28300-74-5	None Known
Ammonium molybdate tetrahydrate	12054-85-2	None Known
Sulfuric acid	7664-93-9	Carcinogen
Water	7732-18-5	None Known

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Antimony potassium tartrate	X	X	X	X	X
Ammonium molybdate tetrahydrate	None Known	None Known	None Known	None Known	None Known
Sulfuric acid	X	X	X	X	X
Water	None Known	None Known	None Known	None Known	None Known

**International Regulations**

**Mexico - Grade**

Chemical Name	Carcinogen Status	Exposure Limits
Antimony potassium tartrate	None Known	Mexico: TWA= 0.5 mg/m <sup>3</sup>
Ammonium molybdate tetrahydrate	None Known	Mexico: TWA= 10 mg/m <sup>3</sup> Mexico: TWA= 5 mg/m <sup>3</sup>
Sulfuric acid	A2	Mexico: TWA= 1 mg/m <sup>3</sup>
Water	None Known	None Known

**Canada**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

Component	WHMIS Hazard Class
Antimony potassium tartrate 28300-74-5 ( <0.05 )	1 % D1B
Ammonium molybdate tetrahydrate 12054-85-2 ( 1 )	1 % Uncontrolled product according to WHMIS classification criteria
Sulfuric acid 7664-93-9 ( 5-15 )	1 % D1A E
Water 7732-18-5 ( to 100% )	Uncontrolled product according to WHMIS classification criteria





<b>Chemical Name</b>	<b>NPRI</b>
Sulfuric acid	X

16. OTHER INFORMATION

NFPA	HMIS	PPE	Transport Symbol						
	<table border="1"> <tr> <td>Health Hazard</td> <td style="text-align: center;"><b>3</b></td> </tr> <tr> <td>Fire Hazard</td> <td style="text-align: center;"><b>0</b></td> </tr> <tr> <td>Reactivity</td> <td style="text-align: center;"><b>2</b></td> </tr> </table>	Health Hazard	<b>3</b>	Fire Hazard	<b>0</b>	Reactivity	<b>2</b>		
Health Hazard	<b>3</b>								
Fire Hazard	<b>0</b>								
Reactivity	<b>2</b>								

**Prepared By** Regulatory Affairs Department

**Issuing Date** 9/26/2011

**Revision Date** 27-Sep-2011

**Revision Note**  
Initial Release

**Disclaimer**

The information provided on this MSDS 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 MSDS**