



PO Box 329 • 802 Washington Avenue • Chestertown, MD 21620 • USA
 Telephone Number For Information 410-778-3100

24 Hour Emergency Number (CHEM-TEL): USA, Canada, Puerto Rico 800-255-3924;

Outside North American continent 813-248-0585 (call collect)

MSDS

Material Safety Data Sheet

1. Product Identification

Product Code: 4410
Product Description: VM Phosphate

Manufactured By:

LaMotte Company
 802 Washington Avenue
 Chestertown, MD 21620

2. Composition/Information on Ingredients

Hazardous	Name	CAS #	%	OSHA PEL	ACGIH TLV
Yes	Sulfuric Acid	7664-93-9	16	1 mg/cubic m	1 mg/cubic m
Yes	Molybdc acid ammonium salt tetrahydrate	12054-85-2	1.7	5 mg/cubic m soluble comp. as Mo	5 mg/cubic m soluble comp. respirable,as Mo
Yes	Ammonium metavanadate	7803-55-6	<0.1	C 0.5 mg/cubic m resp. dust as V205	C 0.05mg/cubic m resp. dust as V205
No	Water to 100%	7732-18-5	>82%		

3. Hazards Overview

Primary Route of Entry: Ingestion Skin

Poison! Danger! Corrosive. Liquid and vapor cause severe burns to all body tissue. Harmful or fatal if swallowed.

HMIS Hazard: (Scale: 4 = Extreme, 3 = High, 2 = Moderate, 1 = Slight, 0 = Least)

Health: 3 Flammability: 0 Reactivity: 2

Carcinogenicity: None

Other Health Related Comments:

Ammonium meta-vanadate is poisonous & increases the hazards of contact with sulfuric acid liquid or vapor. Molybdc Acid investigated as a possible cancer hazard. (See Section 11.)

4. First Aid Measures

Eye Contact: Immediately flush with water for 15 minutes. Get medical attention immediately.

Skin Contact: Immediately flush with water for 15 minutes while removing affected clothing. Consult physician.

Ingestion: Do not induce vomiting. Rinse out mouth, drink glass of water, and get medical attention immediately

Inhalation: Remove to fresh air. If breathing is difficult, give oxygen.

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5. Fire Fighting Measures

Flash Point: N/A **LEL:** N/A **UEL:** N/A

Fire Rating

Extinguishing Media: Dry chemical or CO₂, not water

Special Fire Fighting Procedures: Wear protective equipment and self-contained breathing apparatus.

Hazardous Combustion and/or Decomposition Products: SO_x, hydrogen gas

Unusual Fire & Explosion Hazard: Violent exothermic reaction occurs with water. Can react with metals to produce hydrogen gas, which can form an explosive mixture with air.

6. Accidental Release Measures

Wear gloves & eye protection. Cover spill with sodium bicarbonate or sodium carbonate/calcium hydroxide. Mix & add water to form slurry, avoiding spattering and fumes. Small amount--Scoop up & flush to drain with water. Large amount--Send to disposal as hazardous waste

7. Handling & Storage

Store in cool, dry, area away from heat and incompatible materials such as bases, metals, combustibles.

8. Exposure Controls/Personal Protection

Ventilation

Use with adequate ventilation.

Protection When Handling

Gloves Eye Protection Lab Coat

Work/Hygienic Practices: Avoid contact with skin, eyes or clothing.

9. Physical & Chemical Properties

Appearance:	Clear yellow liquid	Boiling Point:	>100 deg C
		Melting Point:	N/A
		pH:	< 1
Odor:	None	Vapor Density:	>1 (Air=1)
Solubility in Water:	Soluble	Vapor Pressure:	Unknown

10. Stability & Reactivity

Stable: Yes

Conditions to Avoid: Heat, moisture

Materials to Avoid: Strong bases, reducing agents, metals, cyanides, sulfides, combustibles

Hazardous Decomposition Products: SO_x; Contact with metal powders can release flammable hydrogen gas.

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11. Toxicological Information

Oral rat LD50: 2140 mg/kg for sulfuric acid

Oral rat LD50: 333 mg/kg for ammonium molybdate anhydrous; investigated as a mutagen.

Oral rat LD50: 58 mg/kg for ammonium meta-vanadate; investigated as a mutagen, reproductive effector.

Target Organs: Corrosive to all body parts

12. Ecological InformationInformation not Available

13. Disposal Considerations

Add slowly to a large volume of soda ash/calcium hydroxide. Small amounts of this neutralized solution may be flushed to drain. Large amounts of #4410 waste should be handled as hazardous waste and sent to an approved facility. The ammonium meta-vanadate component is a toxic, EPA-regulated waste (code P119).

14. Transport Information**Domestic (Land, D.O.T.)**

Proper Shipping Name: Sulfuric Acid (<51% ACID)

Hazard Class/Div: 8

UN2796

Packing Group: II

International (Air, I.C.A.O.)

Proper Shipping Name: Sulphuric Acid (<51% ACID)

Hazard Class/Div: 8

UN2796

Packing Group: II

15. Regulatory Information**Chemical Inventory Status**

Ingredient	USA	Europe	---Canada---		Australia	Japan
	TSCA	EC	DSL	NDSL		
Sulfuric Acid (7664-93-9)	YES	YES	YES	NO	YES	YES
Hexammonium Molybdate (anhydrous) 12027-67-7	YES	YES	YES	NO	YES	YES
Ammonium metavanadate (7803-55-6)	YES	YES	YES	NO	YES	YES

Water to 100%

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Federal, State, & International Regulations

Ingredient	---SARA 302---		----- SARA 313 -----			RCRA 261.33	TSCA 8(D)
	RQ	TPQ	Listed	Chemical Category	CERCLA		
Sulfuric Acid (7664-93-9)	1000	1000	YES	1000	NO	NO	NO
Hexammonium Molybdate (anhydrous) 12027-67-7	NO	NO	NO	NO	NO	NO	NO
Ammonium metavanadate (7803-55-6)	NO	NO	NO	NO	1000	P119	NO
Water to 100%							

----- Australia -----

Ingredient	----- SARA 311/312 -----			Hazchem Code	Poison Schedule	This MSDS is WHMIS Compliant
	Hazard Categories					
Sulfuric Acid (7664-93-9)	Acute: Yes Pressure: No	Chronic: Yes Reactivity: Yes (Pure/Liquid)	Fire: No	2P	None allocated	
Hexammonium Molybdate (anhydrous) 12027-67-7	Acute: Yes Pressure: No	Chronic: Yes Reactivity: No (Pure/Solid)	Fire: No	None allocated	None allocated	
Ammonium metavanadate (7803-55-6)	Acute: Yes Pressure: No	Chronic: Yes Reactivity: No (Pure/Solid)	Fire: No	1Z	None allocated	
For product #4410 liquid mixture, as a whole	Acute: Yes Pressure: No	Chronic: Yes Reactivity: Yes	Fire: No	2P	None allocated	Yes

16. Other Information**Prepared By: IP****Revised:4/22/2005**