

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name	PHOSPHORUS REAGENT 2
Product Code(s)	5156
Synonyms	none / ninguno / aucun
Recommended Use	Test kit reagent. Laboratory chemicals. Industrial (not for food or food contact use).
Company	LaMotte Company, Inc. 802 Washington Avenue P.O. Box 329 Chestertown, MD 21620 USA
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
DANGER!
Emergency Overview

May cause burns to eyes, skin, and mucous membranes

May be harmful if swallowed

May be harmful if inhaled

Appearance Clear, colorless

Physical State Liquid

Odor Vinegar

Potential Health Effects
Principle Routes of Exposure Eye contact, Skin contact, and, Ingestion.

Acute Toxicity
Eyes

Irritating to eyes. May cause burns. May cause redness, itching, and pain.

Skin

Irritating to skin. May cause burns. Symptoms can include redness, itching, and pain.

Substance may cause slight skin irritation.

Inhalation

May be harmful if inhaled. Irritating to mucous membranes. Vapors are irritating and can cause burns.

Ingestion

May be harmful if swallowed. Ingestion may cause burns of mouth, throat, and stomach.

Chronic Effects
Aggravated Medical Conditions None known.

Environmental Hazard No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %
Sodium molybdate dihydrate	10102-40-6	2.5
Acetic acid	64-19-7	10
Water	7732-18-5	to 100%

4. FIRST AID MEASURES

General Advice	Do not get in eyes, on skin, or on clothing. Show this safety data sheet to the doctor in attendance.
Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Call a physician immediately.
Skin Contact	Wash off immediately with soap and plenty of water for at least 15 minutes while removing all contaminated clothing and shoes. Consult a physician.
Inhalation	Move to fresh air in case of accidental inhalation of vapors. If breathing is difficult, give oxygen. If symptoms persist, call a physician.
Ingestion	DO NOT INDUCE VOMITING. Drink plenty of water. Clean mouth with water. Call a physician immediately.
Protection of First-aiders	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

Flammable Properties	Not a fire hazard.			
Flash Point	Not applicable			
Suitable Extinguishing Media	Water spray, dry chemical, carbon dioxide (CO ₂), or foam.			
Explosion Data				
Protective Equipment and Precautions for Firefighters	As in any fire, wear self-contained breathing apparatus and full protective gear.			
NFPA	Health Hazard 2	Flammability 0	Stability 0	Physical and Chemical Hazards N/A
HMIS	Health Hazard 2	Flammability 0	Stability 1	

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Avoid contact with the skin and the eyes. Refer to Section 8.
Methods for Containment	Absorb/Cover spill with sodium bicarbonate or sodium carbonate to neutralize, then place in a chemical waste container for later disposal. Dispose according to federal, state, and local regulations.
Methods for Cleaning Up	Containerize spill material and hold for later disposal. If local regulations permit, dissolve with large volume of water, neutralize with alkaline material (sodium bicarbonate), then rinse to drain with excess water. After cleaning, flush away traces with water.

7. HANDLING AND STORAGE

Handling	Handle in accordance with good industrial hygiene and safety practice. Provide appropriate exhaust ventilation at places where dust is formed. 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. Protect from moisture. Keep out of the reach of children.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sodium molybdate dihydrate 10102-40-6	TWA: 3 mg/m ³ TWA: 10 mg/m ³ TWA: 0.5 mg/m ³	TWA: 15 mg/m ³ TWA: 5 mg/m ³	IDLH: 1000 mg/m ³
Acetic acid 64-19-7	= 15 ppm STEL TWA: 10 ppm	TWA: 10 ppm TWA: 25 mg/m ³	IDLH: 50 ppm TWA: 25 mg/m ³ TWA: 10 ppm STEL: 15 ppm STEL: 37 mg/m ³
Water 7732-18-5	None Known	None Known	None Known

Engineering Measures Provide appropriate exhaust ventilation at places where dust is formed. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protective Equipment

Eye/Face Protection

Safety glasses with side-shields. Avoid contact with eyes.

Skin and Body Protection

Gloves & Lab Coat.

Respiratory Protection

Maintain adequate ventilation.

Hygiene Measures

Avoid contact with skin, eyes and clothing. Handle in accordance with good industrial hygiene and safety practice. Wash hands and face before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear, colorless	Odor	Vinegar
Physical State	Liquid	pH	3
Flash Point	Not applicable	Autoignition Temperature	Not applicable
Boiling Point/Range	No information available	Flammability Limits in Air	No data available
Explosion Limits	No data available		
Specific Gravity	No data available	Molecular Weight	No data available
Water Solubility	Soluble in water	Solubility	Soluble
Vapor Pressure	No information available	Vapor Density	No information available

10. STABILITY AND REACTIVITY

Stability	Stable.
Incompatible Products	Strong oxidizing agents. Metals. Alcohols. Amines.
Conditions to Avoid	Excessive heat. Direct sunlight.
Hazardous Decomposition Products	Hazardous decomposition products formed under fire conditions -. Carbon oxides (COx). Sodium oxides.
Hazardous Reactions	Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product Information Product does not present an acute toxicity hazard based on known or supplied information.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Sodium molybdate dihydrate	None Known	None Known	None Known
Acetic acid	3310 mg/kg (Rat)	1060 mg/kg (Rabbit)	11.4 mg/L (Rat) 1 h

Water	90 mL/kg (Rat)	None Known	None Known
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Chronic Toxicity

Chemical Name	ACGIH	IARC	NTP	OSHA
Sodium molybdate dihydrate	A3	None Known	None Known	None Known
Acetic acid	None Known	None Known	None Known	None Known
Water	None Known	None Known	None Known	None Known

ACGIH: (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

Endocrine Disruptor Information

Chemical Name	EU - Endocrine Disruptors Candidate List	EU - Endocrine Disruptors - Evaluated Substances	Japan - Endocrine Disruptor Information
Sodium molybdate dihydrate	None Known	None Known	None Known
Acetic acid	None Known	None Known	None Known
Water	None Known	None Known	None Known

12. ECOLOGICAL INFORMATION**Ecotoxicity**

Chemical Name	Toxicity to Algae	Toxicity to Fish	Microtox	Daphnia Magna (Water Flea)
Sodium molybdate dihydrate	None Known	None Known	None Known	None Known
Acetic acid	None Known	LC50= 75 mg/L Lepomis macrochirus 96 h LC50= 88 mg/L Pimephales promelas 96 h	EC50 = 8.8 mg/L 15 min EC50 = 8.8 mg/L 25 min EC50 = 8.8 mg/L 5 min	EC50 = 95 mg/L 24 h
Water	None Known	None Known	None Known	None Known

Persistence and Degradability No information available.**Bioaccumulation/Accumulation** No information available.

Chemical Name	Log Pow
Sodium molybdate dihydrate	None Known
Acetic acid	= -0.31 20 °C
Water	None Known

13. DISPOSAL CONSIDERATIONS**Waste Disposal Method** Dispose according to federal, state, and local regulations.**Contaminated Packaging** Dispose of in accordance with local regulations.

Chemical Name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Sodium molybdate dihydrate - 10102-40-6	None Known	None Known	None Known	None Known
Acetic acid - 64-19-7	None Known	None Known	None Known	None Known
Water - 7732-18-5	None Known	None Known	None Known	None Known

14. TRANSPORT INFORMATION**DOT**

Proper Shipping Name ACETIC ACID SOLUTION (>10%, <50%)
Hazard Class 8
UN-No 2790

Packing Group	III
IATA	Not regulated
UN-No	2790
Proper Shipping Name	ACETIC ACID SOLUTION (>10%, <50%)
Hazard Class	8
Packing Group	III
IMDG/IMO	Not regulated
Proper Shipping Name	ACETIC ACID SOLUTION (>10%, <50%)
Hazard Class	8
UN-No	2790
Packing Group	III

15. REGULATORY INFORMATION

International Inventories

Component	TSCA	DSL	EINECS/ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Sodium molybdate dihydrate 10102-40-6 (2.5)	TSCA	DSL	EINECS/ELINCS	ENCS	X	KECL	X	X
Acetic acid 64-19-7 (10)	Present	X	X	2-688	X	KE-00013	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 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	CAS-No	Weight %	SARA 313 - Threshold Values %
Sodium molybdate dihydrate	10102-40-6	2.5	None Known
Acetic acid	64-19-7	10	None Known
Water	7732-18-5	to 100%	None Known

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

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
Sodium molybdate dihydrate 10102-40-6 (2.5)	None Known	None Known	None Known	None Known
Acetic acid 64-19-7 (10)	5000 lb	None Known	None Known	X
Water 7732-18-5 (to 100%)	None Known	None Known	None Known	None Known

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product contains the following substances which are listed hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act:

Chemical Name	CAS-No	Weight %	HAPS data	VOC Chemicals	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Sodium molybdate dihydrate	10102-40-6	2.5	None Known	None Known	None Known	None Known
Acetic acid	64-19-7	10	None Known	Group II	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
Sodium molybdate dihydrate	None Known	None Known
Acetic acid	5000 lb	None Known
Water	None Known	None Known

U.S. State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

Chemical Name	CAS-No	California Prop. 65
Sodium molybdate dihydrate	10102-40-6	None Known
Acetic acid	64-19-7	None Known
Water	7732-18-5	None Known

U.S. State Right-to-Know Regulations

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Sodium molybdate dihydrate	None Known	None Known	None Known	None Known	None Known
Acetic acid	X	X	X	None Known	X
Water	None Known	None Known	None Known	None Known	None Known

International Regulations

Mexico - Grade

Chemical Name	Carcinogen Status	Exposure Limits
Sodium molybdate dihydrate	None Known	Mexico: TWA= 10 mg/m ³ Mexico: TWA= 5 mg/m ³
Acetic acid	None Known	Mexico: TWA= 25 mg/m ³ Mexico: TWA= 10 ppm
Water	None Known	None Known

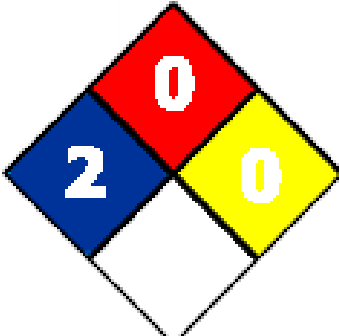

Canada

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 information downloaded from <http://ccinfoweb.ccohs.ca/whmis/search.html>

Component	WHMIS Hazard Class
Sodium molybdate dihydrate 10102-40-6 (2.5)	1 % Uncontrolled product according to WHMIS classification criteria
Acetic acid 64-19-7 (10)	1 % B3 E D2B
Water 7732-18-5 (to 100%)	Uncontrolled product according to WHMIS classification criteria



16. OTHER INFORMATION

NFPA	HMIS	PPE	Transport Symbol						
	<table border="1"> <tr> <td>Health Hazard</td> <td>2</td> </tr> <tr> <td>Fire Hazard</td> <td>0</td> </tr> <tr> <td>Reactivity</td> <td>1</td> </tr> </table>	Health Hazard	2	Fire Hazard	0	Reactivity	1		
Health Hazard	2								
Fire Hazard	0								
Reactivity	1								

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 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