

Issuing Date 4/12/2011

Revision Number 0

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name Manganese Reagent 1
Product Code(s) 5262
Synonyms none
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
WARNING!
Emergency Overview

 Severe skin irritant
 Severe eye irritation
 Harmful if swallowed

Appearance Clear, colorless

Physical State Liquid

Odor Odorless

OSHA Regulatory Status 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 Skin contact, and, Ingestion.

Acute Toxicity
Eyes

Severely irritating to eyes.

Skin

Contact causes severe skin irritation. Symptoms can include redness, itching, and pain.

Inhalation

Not an expected route of exposure.

Ingestion

Harmful if swallowed.

Chronic Effects

Prolonged skin contact may defat the skin and produce dermatitis

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 %
Periodic acid (HIO ₄), potassium salt	7790-21-8	9
Potassium hydroxide	1310-58-3	2
Water	7732-18-5	to 100%

4. FIRST AID MEASURES

General Advice	Do not get in eyes, on skin, or on clothing.
Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
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. If breathing is difficult, give oxygen.
Ingestion	DO NOT INDUCE VOMITING. Clean mouth with water and afterwards drink plenty of water. Call a physician immediately. Never give anything by mouth to an unconscious person.
Protection of First-aiders	Use personal protective equipment. 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				Physical and Chemical Hazards -
NFPA	Health Hazard 2	Flammability 0	Stability 0	
HMIS	Health Hazard 2	Flammability 0	Stability 1	

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Refer to Section 8.
Methods for Containment	Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container.
Methods for Cleaning Up	Neutralize spills with acid such as acetic, hydrochloric or sulfuric, absorb with vermiculite or other inert substance, and package in a suitable container for disposal. . If local regulations permit, 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. 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. Keep out of the reach of children.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
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Periodic acid (HIO ₄), potassium salt 7790-21-8	None Known	None Known	None Known
Potassium hydroxide 1310-58-3	None Known	None Known	Ceiling: 2 mg/m ³
Water 7732-18-5	None Known	None Known	None Known

Personal Protective Equipment**Eye/Face Protection**

Safety glasses with side-shields.

Skin and Body Protection

Gloves & Lab Coat.

Hygiene Measures

Do not eat, drink or smoke when using this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear, colorless	Odor	Odorless
Physical State	Liquid	pH	13
Flash Point	Not applicable	Boiling Point/Range	No information available

Vapor Pressure	<17 mmHg @ 20°C	Vapor Density	<1(Air = 1)
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10. STABILITY AND REACTIVITY

Stability Stable under normal conditions of use and storage.

Incompatible Products Strong acids.

Conditions to Avoid None known based on information supplied.

Hazardous Decomposition Products None known.

Hazardous Reactions None under normal processing.

Hazardous Polymerization Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Periodic acid (HIO ₄), potassium salt	None Known	None Known	None Known
Potassium hydroxide	214 mg/kg (Rat)	None Known	85 mg/L Gambusia affinis 24 hr
Water	90 mL/kg (Rat)	None Known	None Known

Chronic Toxicity

Chronic Toxicity Prolonged skin contact may defat the skin and produce dermatitis.

Chemical Name	ACGIH	IARC	NTP	OSHA
Periodic acid (HIO ₄), potassium salt	None Known	None Known	None Known	None Known
Potassium hydroxide	None Known	None Known	None Known	None Known
Water	None Known	None Known	None Known	None Known

Chemical Name	EU - Endocrine Disruptors Candidate List	EU - Endocrine Disruptors - Evaluated Substances	Japan - Endocrine Disruptor Information
Periodic acid (HIO ₄), potassium salt	None Known	None Known	None Known
Potassium hydroxide	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)
Periodic acid (HIO ₄), potassium salt	None Known	None Known	None Known	None Known
Potassium hydroxide	None Known	None Known	None Known	None Known
Water	None Known	None Known	None Known	None Known

Persistence and Degradability No information available.

Bioaccumulation/Accumulation No information available.

Chemical Name	Log Pow
Periodic acid (HIO ₄), potassium salt	None Known
Potassium hydroxide	= 0.65 = 0.83
Water	None Known

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method Dispose according to federal, state, and local regulations. If permitted, neutralize reagent with acid, add to large volume of water to dilute, rinse to drain with excess water.

Chemical Name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Periodic acid (HIO ₄), potassium salt - 7790-21-8	None Known	None Known	None Known	None Known
Potassium hydroxide - 1310-58-3	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	POTASSIUM HYDROXIDE SOLUTION
Hazard Class	8
UN-No	1814
Packing Group	II

IATA

UN-No	1814
Proper Shipping Name	POTASSIUM HYDROXIDE SOLUTION
Hazard Class	8
Packing Group	III

IMDG/IMO

Proper Shipping Name	POTASSIUM HYDROXIDE SOLUTION
Hazard Class	8
UN-No	1814
Packing Group	II

15. REGULATORY INFORMATION

International Inventories

Component	TSCA	DSL	EINECS/ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Periodic acid (HIO ₄), potassium salt 7790-21-8 (9)	Present	X	X	1-441	X	KE-29179	X	X
Potassium hydroxide 1310-58-3 (2)	Present	X	X	1-369	X	KE-29139	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 %
Periodic acid (HIO ₄), potassium salt	7790-21-8	9	None Known
Potassium hydroxide	1310-58-3	2	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
Periodic acid (HIO ₄), potassium salt 7790-21-8 (9)	None Known	None Known	None Known	None Known
Potassium hydroxide 1310-58-3 (2)	1000 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 does not contain any substances regulated as hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act Amendments of 1990.

Chemical Name	CAS-No	Weight %	HAPS data	VOC Chemicals	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Periodic acid (HIO ₄), potassium salt	7790-21-8	9	None Known	None Known	None Known	None Known
Potassium hydroxide	1310-58-3	2	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
Periodic acid (HIO ₄), potassium salt	None Known	None Known
Potassium hydroxide	1000 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
Periodic acid (HIO ₄), potassium salt	7790-21-8	None Known
Potassium hydroxide	1310-58-3	None Known
Water	7732-18-5	None Known

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Periodic acid (HIO ₄), potassium salt	None Known	None Known	None Known	None Known	None Known
Potassium hydroxide	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
Periodic acid (HIO ₄), potassium salt	None Known	None Known
Potassium hydroxide	None Known	None Known
Water	None Known	None Known

Canada

Component	WHMIS Hazard Class
Periodic acid (HIO ₄), potassium salt 7790-21-8 (9)	Not determined
Potassium hydroxide 1310-58-3 (2)	1 % D1B E
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								

Prepared By Regulatory Affairs Department

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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