



Issuing Date 12/15/2010

Revision date 12/23/2013

Revision Number 1

1. PRODUCT AND COMPANY IDENTIFICATION

Product name MANGANOUS SULFATE SOLUTION

Product Code(s) 4167

Synonyms none

Recommended Use Laboratory chemicals. Industrial (not for food or food contact use). Chemical additive. Swimming pool chemicals.

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

EMERGENCY OVERVIEW
Harmful if swallowed
May irritate eyes and skin
Appearance Clear, pink **Physical state** liquid **Odor** None

OSHA Regulatory Status While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.

Potential health effects
Principle Routes of Exposure Skin Contact, Ingestion.

Acute toxicity
Eyes Irritating to eyes.
Skin Irritating to skin.
Inhalation May cause irritation of respiratory tract.
Ingestion Harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting, and diarrhea.

Chronic effects Chronic manganese poisoning primarily involves the central nervous system. Chronic manganese poisoning can result from excessive inhalation and ingestion. Early symptoms include sluggishness, sleepiness, and weakness in the legs. Kidney effects. Chronic inhalation exposure can cause lung damage.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS-No	Weight %
Manganese sulfate monohydrate	10034-96-5	36
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. If not breathing, give artificial respiration and contact emergency personnel. Call a physician immediately.
Ingestion	DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Consult a physician.
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.			
NFPA	Health hazard 1	flammability 0	Stability 0	Physical and Chemical Hazards -
HMIS	Health hazard 0	flammability 0	Stability 0	

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Refer to Section 8. Avoid contact with skin, eyes, and clothing.
Methods for containment	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).
Methods for cleaning up	Use personal protective equipment. 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). Following product recovery, flush area with water.

7. HANDLING AND STORAGE

Handling Handle in accordance with good industrial hygiene and safety practice. Use only in area provided with appropriate exhaust ventilation. 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 away from heat and incompatibles. Keep out of the reach of children.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Manganese sulfate monohydrate 10034-96-5	TWA: 0.02 mg/m ³ TWA: 0.1 mg/m ³	Ceiling: 5 mg/m ³	IDLH: 500 mg/m ³ TWA: 1 mg/m ³ STEL: 3 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.
Respiratory protection Use only with adequate ventilation. In case of insufficient ventilation wear suitable respiratory equipment.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear pink	Odor	None
Physical state	liquid	pH	3
Flash point	Not Applicable	Autoignition temperature	Not Applicable
Boiling Point/Range	No information available	Freezing Point	No information available
Melting point/range	No information available		

solubility	Soluble	Vapor pressure	<17 mmHg @ 20°C
Vapor density	no data available		

10. STABILITY AND REACTIVITY

Stability Stable under normal conditions of use and storage.

Incompatible Products Strong bases. Metals.

Conditions to avoid Excessive heat.

Hazardous decomposition products Sulfur oxides (SO_x). Manganese oxides.

Hazardous polymerization Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Manganese sulfate monohydrate	2150 mg/kg (Rat)	None known	None known
Water	90 mL/kg (Rat)	None known	None known

Chronic toxicity

Chronic toxicity

Chronic manganese poisoning primarily involves the central nervous system. Chronic manganese poisoning can result from excessive inhalation and ingestion. Early symptoms include sluggishness, sleepiness, and weakness in the legs. Kidney effects. Chronic inhalation exposure can cause lung damage.

Chemical name	ACGIH	IARC	NTP	OSHA
Manganese sulfate monohydrate	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 disrupting potential
Manganese sulfate monohydrate	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)
Manganese sulfate monohydrate	None known	None known	None known	None known
Water	None known	None known	None known	None known
Chemical name	Log Pow			
Manganese sulfate monohydrate	None known			
Water	None known			

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method

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
Manganese sulfate monohydrate - 10034-96-5	None known	None known	None known	None known
Water - 7732-18-5	None known	None known	None known	None known

14. TRANSPORT INFORMATION

DOT

Not regulated

IATA

Not regulated

IMDG/IMO

Not regulated

15. REGULATORY INFORMATION

International Inventories

Component	TSCA	DSL	EINECS/ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Manganese sulfate monohydrate 10034-96-5 (36)	TSCA	DSL	EINECS/ELINCS	Present	X	KECL	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 %
Manganese sulfate monohydrate	10034-96-5	36	1.0
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 does not contain any substances regulated as 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
Manganese sulfate monohydrate 10034-96-5 (36)	None known	None known	None known	None known
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 HAPs:.

Chemical name	CAS-No	Weight %	HAPS data	VOC Chemicals	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Manganese sulfate monohydrate	10034-96-5	36	Present (includes any unique chemical substance that contains Manganese as part of its infrastructure)	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	CERCLA/SARA RQ
Manganese sulfate monohydrate	None known	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
Manganese sulfate monohydrate	10034-96-5	None known
Water	7732-18-5	None known

Chemical name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Manganese sulfate monohydrate	None known	X	X	X	None known
Water	None known	None known	None known	None known	None known

International Regulations**Mexico - Grade**

Chemical name	Carcinogen Status	Exposure Limits

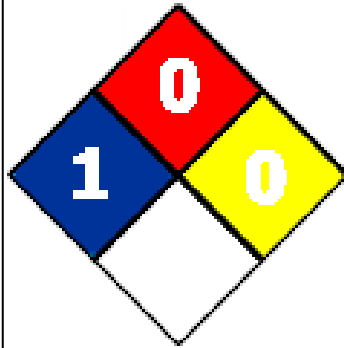

Manganese sulfate monohydrate	None known	Mexico: TWA 0.2 mg/m ³
Water	None known	None known

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
Manganese sulfate monohydrate 10034-96-5 (36)	1 % 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>0</td> </tr> </table>	Health Hazard	2	Fire Hazard	0	Reactivity	0		
Health Hazard	2								
Fire Hazard	0								
Reactivity	0								

Prepared by	Regulatory Affairs Department
Issuing Date	12/15/2010
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Revision note	MSDS was reviewed per Canada request - Canada requires MSDS to be dated within 3 years of the request.

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