



Issuing Date 12/15/2010

Revision Number 0

## 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  
**Physical State** Liquid

**Appearance** Clear, Pink**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.

## 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

|                                   |   |
|-----------------------------------|---|
| <b>General Advice</b>             | Do not get in eyes, on skin, or on clothing.  |
| <b>Eye Contact</b>                | Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.  |
| <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. Consult a physician.   |
| <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 unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Consult a physician.  |
| <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 a fire hazard.   |                       |                    |  |
| <b>Flash Point</b>                  | Not applicable   |                       |                    |  |
| <b>Suitable Extinguishing Media</b> | Water spray, dry chemical, carbon dioxide (CO <sub>2</sub> ), or foam. |                       |                    |  |
| <b>Explosion Data</b>               |  |                       |                    |  |
| <b>NFPA</b>                         | <b>Health Hazard 1</b>   | <b>Flammability 0</b> | <b>Stability 0</b> | <b>Physical and Chemical Hazards -</b> |

## 6. ACCIDENTAL RELEASE MEASURES

|                                |   |
|--------------------------------|---|
| <b>Personal Precautions</b>    | Refer to Section 8. Avoid contact with skin, eyes and clothing.   |
| <b>Methods for Containment</b> | 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).   |
| <b>Methods for Cleaning Up</b> | 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

|                 |   |
|-----------------|---|
| <b>Handling</b> | 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. |
| <b>Storage</b>  | 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<br>10034-96-5 | TWA: 0.2 mg/m <sup>3</sup> | None Known | IDLH: 500 mg/m <sup>3</sup><br>TWA: 1 mg/m <sup>3</sup><br>STEL: 3 mg/m <sup>3</sup> |
| Water<br>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 &amp; 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**

|                            |                          |                                 |                          |
|----------------------------|--------------------------|---------------------------------|--------------------------|
| <b>Appearance</b>          | Clear Pink               | <b>Odor</b>                     | None                     |
| <b>Physical State</b>      | Liquid                   | <b>pH</b>                       | 3                        |
| <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>Solubility</b>    | Soluble           | <b>Vapor Pressure</b> | <17 mmHg @ 20°C |
| <b>Vapor Density</b> | 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. 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 | None Known       | 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.

| 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 Disruptor Information |
|-------------------------------|--|--|---|
| 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                              |
|--|
| Manganese sulfate monohydrate - 10034-96-5 |
| Water - 7732-18-5                          |

| 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 | ENCS | 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**

|  |     |
|--|-----|
| <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>                   | 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<br>10034-96-5 ( 36 ) | None Known                  | None Known             | None Known                | None Known                 |
| Water<br>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 | Extremely Hazardous Substances RQs |
|-------------------------------|--------------------------|------------------------------------|
| 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 <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.

## WHMIS Hazard Class

Non-controlled

## 16. OTHER INFORMATION

| NFPA  | HMIS  | PPE           | Transport Symbol |             |   |            |   |  |  |
|---|---|---------------|------------------|-------------|---|------------|---|--|--|
|  | <table><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   |               |                  |             |   |            |   |  |  |

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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**