

**FOR CHEMICAL EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT, CALL DAY OR NIGHT 1-800-561-8273 or CHEMTREC – DAY OR NIGHT 1 800-424-9300**

**1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER**

**1.1 PRODUCT IDENTIFIER:**

**TRADE NAME:** MANGANESE 22%

**1.2 RECOMMENDED USE:** CORRECTION OF MANGANESE DEFICIENCIES

**1.3 DISTRIBUTED BY:**

LOVELAND PRODUCTS CANADA, INC.  
789 DONNYBROOK DRIVE • Dorchester, Ontario N0L 1G5

**1.4 24 Hour Emergency Phone: (Chemtrec): 1-800-424-9300 (Toll Free) - Additional Emergency Phone 1-800-561-8273**  
Loveland Technical Service: 1-800-328-4678

**2. HAZARDS IDENTIFICATION**

**2.1 Classification of the substance or mixture**

Acute Toxicity - Oral	Category 4	H302
Eye Damage/Irritation	Category 2B	H320
Acute Toxicity - Dermal	Category 5	H313

**2.2 Label elements**



Signal word: WARNING  
 Hazard Statement: H302 – Harmful if swallowed.  
 H320 – Causes eye irritation.  
 H313 – May be harmful in contact with skin.

Precautionary Statement: (Prevention): P264 – Wash hands and face thoroughly after handling.  
 P270 – Do not eat, drink or smoke when using this product.  
 P280 – Wear protective gloves and eye / face protection.  
 Precautionary Statement: (Response): P301+P312: IF SWALLOWED: Call a POISON CENTRE or doctor/physician if you fell unwell.  
 P330 – Rinse mouth.  
 P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P337+P313 – If eye irritation persists: Get medical advice/attention.

Precautionary Statement: (Storage): Not applicable or required.

Precautionary Statement: (Disposal): P501 – Dispose of contents/container in accordance with local, provincial and national regulations.

**2.3 Other hazards**

None known



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### 3. COMPOSITION, INFORMATION ON INGREDIENTS

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#### 3.1 Substances

#### 3.2 Mixtures

Chemical Name:	CAS No.	Concentration [%]
Citric Acid	77-92-9	22.50
Manganese Sulphate	7785-87-7	70.00
Filler	Proprietary	7.50

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### 4. FIRST AID MEASURES

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#### 4.1 Description of First Aid Measures

General Advice: Get medical attention if symptoms occur.

**Eye contact:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control centre or doctor for treatment advice.

**Ingestion:** Call a poison control centre or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person.

**Skin contact:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control centre or doctor for treatment advice.

**Inhalation:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferable by mouth-to-mouth, if possible. Call a poison control centre or doctor for treatment advice.

#### 4.2 Most Important Symptoms and Effects, Acute and Delayed

Symptoms: Causes eye irritation. Harmful if swallowed.

#### 4.3 Immediate Medical Attention and Special Treatment

Treatment: **NOTES TO PHYSICIAN:** There is no specific antidote.

**FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: 1-800-561-8273**

Take container, label or product name and Fertilizers Act Registration Number with you when seeking medical attention.

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### 5. FIRE FIGHTING MEASURES

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#### 5.1 EXTINGUISHING MEDIA:

Suitable Extinguishing Media: Foam, carbon dioxide (CO<sub>2</sub>), dry powder, water spray. Do not use water jet as this will spread the fire.

#### 5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE:

Specific Hazards During Firefighting: During a fire, oxides of carbon and silicon dioxide can be released.

#### 5.3 SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIREFIGHTERS

Special Protective Equipment for Firefighters: Self-contained breathing apparatus and full protective gear should be worn in fighting large fires involving chemicals. Use water spray to keep fire exposed containers cool. Keep people away. Isolate fire and deny unnecessary entry.



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### 6. ACCIDENTAL RELEASE MEASURES

#### 6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Personal Precautions: Avoid inhalation of vapours and dusts and contact with skin and eyes. Ensure adequate ventilation. Wear suitable protective clothing.

#### 6.2 ENVIRONMENTAL PRECAUTIONS

Environmental Precautions: Prevent further leakage or spillage if safe to do so. Do not contaminate water. Do not allow to enter drains, sewers, or watercourses.

#### 6.3 METHODS AND MATERIALS FOR CONTAINMENT AND CLEAN-UP

Methods for Clean-Up: Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. After removal flush contaminated area thoroughly with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to Remove residual contamination. Never return spills to original containers for re-use.

### 7. HANDLING AND STORAGE

#### 7.1 PRECAUTIONS FOR SAFE HANDLING:

Advice on Safe Handling: Mix product in HDPE, fiberglass or stainless steel containers only. Wash thoroughly after handling. Avoid breathing dust. Protect eyes with goggles or a face shield when handling diluted product. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if product gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing. Wash before eating, drinking and/or smoking.

#### 7.2 CONDITIONS FOR SAFE STORAGE:

Requirements for Storage Areas and Containers: Carefully fold and secure open bags and store in a cool dry place away from children, feed and food products, pesticides, and seed. Do not contaminate water, food, or feed by storage or disposal.

### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

#### 8.1 CONTROL PARAMETERS:

##### OCCUPATIONAL EXPOSURE LIMITS

##### U.S. Workplace Exposure Level (ACGIH) TLVs

Components	Type	Value
No listings	TWA	

##### U.S. Workplace Exposure Level (OSHA) PELs

Components	Type	Value
No listings	TWA	

##### Biological limit values

##### ACGIH Biological Exposure Indices

Components	Value	Specimen
No listings		

#### 8.2 EXPOSURE CONTROLS:

##### Engineering Measures

Provide adequate general and local exhaust ventilation. Observe Occupational Exposure Limits and minimize the risk of inhalation of vapors and spray mists. Provide eyewash station and safety shower.

##### Individual Protection Measures:

Eye / Face Protection: Goggles or shielded safety glasses are recommended.  
Skin Protection: Long sleeved shirt and long pants, chemical-resistant gloves, such as barrier laminate or viton. Socks and chemical-resistant footwear.  
Respiratory Protection: In case of inadequate ventilation or risk of inhalation of mists, vapours or dusts, use suitable respiratory equipment approved by MSHA/NIOSH. Wear respiratory protection during operations where spraying or misting occurs. If respirators are used, a program should be in place to assure compliance with national or provincial standards. Wear air supplied respiratory protection if exposure concentrations are unknown.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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9.1 APPEARANCE :	Granular powder.
ODOUR:	Odourless.
ODOUR THRESHOLD:	No data available.
COLOUR:	Off white.
pH:	2.0 (1% solution).
MELTING POINT / FREEZING POINT:	No data available.
BOILING POINT:	No data available.
FLASH POINT:	No data available.
FLAMMABILITY (solid, gas):	No data available.
UPPER / LOWER FLAMMABILITY OR EXPLOSIVE LIMITS:	No data available.
VAPOUR PRESSURE:	No data available.
SOLUBILITY:	Complete.
PARTITION CO-EFFICIENT, n-OCTANOL / WATER:	No data available.
AUTO-IGNITION TEMPERATURE:	No data available.
DECOMPOSITION TEMPERATURE:	No data available.
VISCOSITY:	No data available.
SPECIFIC GRAVITY (Water = 1):	1.28 g/ml.
BULK DENSITY:	1280 kg/m <sup>3</sup> .

Note: These physical data are typical values based on material tested but may vary from sample to sample.  
Typical values should not be construed as a guaranteed analysis of any specific lot or as specification items.

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## 10. STABILITY AND REACTIVITY

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### 10.1 REACTIVITY

Stable

### 10.2 CHEMICAL STABILITY

Stable under normal temperature conditions

### 10.3 POSSIBILITY OF HAZARDOUS REACTIONS

No reactions known under normal use conditions. Will not polymerize.

### 10.4 CONDITIONS TO AVOID

None known.

### 10.5 INCOMPATIBLE MATERIALS

None known.

### 10.6 HAZARDOUS DECOMPOSITION PRODUCTS

None known.

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## 11 TOXICOLOGICAL INFORMATION

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### 11.3 LIKELY ROUTES OF EXPOSURE

Eye contact, ingestion, skin contact.

**LC<sub>50</sub> (rat):** No data available.

**LD<sub>50</sub> Oral (rat):** 2,150 mg/kg (Manganese Sulphate).

**LD<sub>50</sub> Dermal (rabbit):** No data available.

**Acute Toxicity Estimates:** No data available.

**Eye Irritation (rabbit):** No data available.

**Skin Irritation (rabbit):** No data available.

**Inhalation:** No data available.

**Ingestion:** No data available.

**Specific Target Organ Toxicity:** No data available.

**Aspiration:** No data available.

**Skin Sensitization (guinea pig):** Not a sensitizer

**Carcinogenicity:** None listed.

**Germ Cell Mutagenicity:** No data available.

**Interactive Effects:** None known.



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### 12 ECOLOGICAL INFORMATION

#### 12.3 ECOTOXICITY

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment. This product is not intended for use in aquatic settings.

##### Ecotoxicological Data

Species	Test Results
No data available.	

Drift or runoff may adversely affect non-target plants.  
Do not apply directly to water.  
Do not contaminate water when disposing of equipment wash water.  
Do not apply when weather conditions favor drift from target area.

#### 12.2 PERSISTENCE AND DEGRADABILITY

Biodegradability: Not rapidly biodegradable.

#### 12.3 BIOACCUMULATIVE POTENTIAL

Bioaccumulation: No data available.

#### 12.4 MOBILITY IN SOIL

No data available.

#### 12.5 OTHER ADVERSE EFFECTS

Assessment: No data available.

### 13 DISPOSAL CONSIDERATIONS

#### 13.1 WASTE TREATMENT METHODS

Do not reuse containers for any purpose. Completely empty bag by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application equipment. For disposal, empty container may be returned to the point of purchase (distributor/dealer). Follow provincial instructions for any required additional cleaning of container. Make the empty container unsuitable for further use. Dispose of the container in accordance with provincial requirements. For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Do not contaminate water, food, or feed by storage or disposal.

### 14 TRANSPORT INFORMATION

#### 14.3 LAND TRANSPORT

TDG Shipping Description: NOT REGULATED.

### 15 REGULATORY INFORMATION

#### 15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS

##### NFPA & HMIS Hazard Ratings:

##### NFPA

1	Health	0	Least
0	Flammability	1	Slight
0	Instability	2	Moderate
		3	High
		4	Severe

##### HMIS

1	Health
0	Flammability
0	Reactivity
B	PPE

##### SARA Hazard Notification/Reporting

##### SARA Title III Hazard Category:

Immediate	<u>Y</u>	Fire	<u>N</u>	Sudden Release of Pressure	<u>N</u>
Delayed	<u>N</u>	Reactive	<u>N</u>		

Reportable Quantity (RQ) under U.S. CERCLA: Not listed.

SARA, Title III, Section 313: Manganese compounds

RCRA Waste Code: Not applicable.

CA Proposition 65: Not applicable.

WHMIS [Canada]: Not controlled under WHMIS.



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## 16 OTHER INFORMATION

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**SDS STATUS:** Format and section 1 revised.

**PREPARED BY:** Registrations and Regulatory Affairs

**REVIEWED BY:** Environmental Health and Safety

**FERTILIZERS ACT REG. NO.:** 2001036B

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