



Canadian Agri Products(USA) Corp.

Chemicals to Trade, Experience to Remember

Material Safety Data Sheet (MSDS)

MAPLE MANGANESE SULFATE MONOHYDRATE

| | |
|---|---|
| 1. Identification of the substance | Product Name: Manganese sulphate monohydrate Synonyms: Manganese (II) sulfate, monohydrate, manganous sulfate monohydrate Molecular Formula: $MnSO_4 \cdot H_2O$ |
| 2. Composition /information on ingredients | Product Name: Manganese sulphate monohydrate CAS No: 10034-96-5 EINECS/ELINCS: 2320899 Hazard Symbols: Xn |
| 3. Hazards identification | <i>Emergency overview:</i> Harmful if swallowed, Hygroscopic, Central nervous system effects. May cause eye and skin irritation, May cause respiratory and digestive tract irritation. <i>Target Organs:</i> Central nervous system. <i>HMIS rating:</i> Health: 1 Flammability: 0 Reactivity: 0 <i>NFPA rating:</i> Health Flammability Reactivity: 0 For additional information on toxicity, please refer to Section 11. |
| 4. First aid measures | <i>Oral exposure:</i> If swallowed, wash out mouth with water provided person is conscious. Call a physician. <i>Inhalation exposure:</i> If inhaled, remove to fresh air. If breathing becomes difficult, call a physician. <i>Dermal exposure:</i> In case of contact, immediately wash skin with soap and copious amounts of water. Call a physician. <i>Eye exposure:</i> In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician. |
| 5. Fire fighting measures | <i>Flash point:</i> N/A <i>Auto ignition temp:</i> N/A <i>Flammability:</i> N/A <i>Extinguishing media:</i> Suitable: Water spray, carbon dioxide, dry chemical. Powder or appropriate foam. Fire fighting |



Canadian Agri Products(USA) Corp.

Chemicals to Trade, Experience to Remember

| | <p>Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.</p> <p>Specific Hazard(s): Emits toxic fumes under fire conditions.</p> | | | | | | | | |
|---|--|--|-----------------------------|-------|-------------------|--------------------|-----------------------------------|--|-----------------------------|
| 6. Accidental release measures | <p>Procedure in case of leak/spill: Evacuate area.</p> <p>Procedure(s) of personal: Exercise appropriate precautions to minimize precaution(s) direct contact with skin or eyes and prevent inhalation of dust.</p> <p>Methods for cleaning up: Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.</p> | | | | | | | | |
| 7. Handling and storage | <p>User Exposure: Do not breathe dust. Avoid contact with eyes, skin and clothing. Avoid prolonged or repeated exposure</p> <p>Suitable: Keep tightly closed.</p> | | | | | | | | |
| 8. Exposure controls/personal protection | <p>Engineering controls: Safety shower and eye bath required. Mechanical exhaust required. Personal protective equipment</p> <p>Respiratory: Wear dust mask.</p> <p>Hand: Protective gloves.</p> <p>Eye: Chemical safety goggles.</p> <p>Other: General hygiene measures. Wash thoroughly after handling</p> <p><u>Exposure Limits</u></p> <table border="1"> <thead> <tr> <th>Chemical Name</th> <th>ACGIH</th> <th>NIOSH</th> <th>OSHA - Final PELs</th> </tr> </thead> <tbody> <tr> <td>Manganese chloride</td> <td>0.2 mg/m³ TWA (as Mn)</td> <td>1 mg/m³ TWA (as Mn).500 mg/m³ IDLH (as Mn)</td> <td>5 mg/m³ Ceiling</td> </tr> </tbody> </table> | Chemical Name | ACGIH | NIOSH | OSHA - Final PELs | Manganese chloride | 0.2 mg/m ³ TWA (as Mn) | 1 mg/m ³ TWA (as Mn).500 mg/m ³ IDLH (as Mn) | 5 mg/m ³ Ceiling |
| Chemical Name | ACGIH | NIOSH | OSHA - Final PELs | | | | | | |
| Manganese chloride | 0.2 mg/m ³ TWA (as Mn) | 1 mg/m ³ TWA (as Mn).500 mg/m ³ IDLH (as Mn) | 5 mg/m ³ Ceiling | | | | | | |
| 9. Physical and chemical properties | <p>Physical State: Solid</p> <p>Colour: White or slightly pink powder or granule</p> <p>Odour: Odourless</p> <p>pH Value: 5.0-7.0</p> <p>Melting Point: 700°C (1292°F)</p> <p>Boiling Point: 850°C (1562°F) (decomposes)</p> <p>Decomposition: 850°C (1562°F) (decomposes)</p> <p>Temperature:</p> <p>Flash Point: N/A</p> <p>Auto ignition Temperature: N/A</p> <p>Explosion Properties: No explosion property</p> <p>Vapour Pressure: N/A</p> <p>Vapour Density (Air=1): N/A</p> <p>Density / Specific Gravity: 2.95</p> | | | | | | | | |



Canadian Agri Products(USA) Corp.

Chemicals to Trade, Experience to Remember

| | |
|--------------------------------------|---|
| | (water=1): Solubility: Easily soluble in water, Insoluble in ethanol Octanol / Water |
| | Partition Coefficient: N/A |
| 10. Stability and reactivity | Stability: Stable Conditions to Avoid: Moisture. Materials to Avoid: Strong acid, strong oxidizing agents, powdered metals, hydrogen peroxide. Hazardous Decomposition Products: Hazardous Polymerization: Sulfur oxides, oxides of manganese. Will not occur. |
| 11. Toxicological information | Skin Contact: May causes skin irritation. Skin Absorption: May be harmful if absorbed through the skin. Eye Contact: May causes eye irritation. Inhalation: May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract. Ingestion: Harmful if swallowed. Target organ(s) or system(s): Central nervous system. Signs and symptoms of exposure: To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. |
| 12. Ecological information | No data available. |
| 13. Disposal considerations | Contact a licensed professional waste disposal service to dispose of this material. Observe all federal, state, and local environmental regulations. |
| 14. Transport information | DOT Proper Shipping Name: None Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport. IATA Non-Hazardous for Air Transport: Non-hazardous for air transport |
| 15. Regulatory information | EU additional classification Symbol of Danger: Xn Indication of Danger: Harmful. |



Canadian Agri Products(USA) Corp.

Chemicals to Trade, Experience to Remember

| | | |
|-------|---|--|
| | R: | 40/20/22 |
| | Risk Statements: | Harmful. Possible risk of irreversible effects through inhalation if swallowed |
| | <u>US regulatory information</u> | |
| | SARA listed: | Yes |
| | DEMINIMIS: | 1 % |
| | Notes: | This product is subject to SARA section 313 reporting requirements |
| | TSCA inventory item: | No |
| | <u>Canada regulatory information</u> | |
| | WHMIS classification: | This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR. |
| | DSL: | No |
| NDSL: | No | |

THE INFORMATION IN THIS MSDS RELATES TO THIS SPECIFIC MATERIAL. IT MAY NOT BE VALID FOR THIS MATERIAL IF USED IN COMBINATION WITH ANY OTHER MATERIALS OR IN ANY PROCESS. IT IS THE USERS' RESPONSIBILITY TO SATISFY THEMSELVES AS TO THE SUITABILITY AND COMPLETENESS OF THIS INFORMATION FOR THEIR OWN PARTICULAR USE.

All non-emergency questions should be
Directed to Customer Service at

972-403-7444

24 hour emergency Telephone: Chemtrec 800-424-9300
National response in Canada: Canutec 613-996-6666
Outside US & Canada: Chemtrec: 202-483-7616

Note: Chemtrec and Canutec emergency numbers to be used only in the event of chemical emergencies involving a spill, leak, exposure or accident involving chemicals.