



**ALDON CORPORATION**

# MATERIAL SAFETY DATA SHEET

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MSDS No. MM 230  
Effective Date March 26, 1999

## SECTION V HEALTH HAZARD DATA

MM 230

**Threshold Limited Value** TWA: 5 mg/m<sup>3</sup> as manganese dust and compounds: (ACGIH 1992-93).

**Effects of Overexposure** **TARGET ORGANS AFFECTED:** Liver kidneys, central nervous system. **EYES AND SKIN:** May cause irritation. **INHALATION:** May cause irritation to nasal passage. Long term exposure to Manganese compounds can cause Manganese poisoning. Symptoms include headache, apathy and spasms. **INGESTION:** Mild irritation.

**Emergency and First Aid Procedures** **INGESTION:** If swallowed, if conscious, give one or two glasses of water to drink, induce vomiting and call a physician. Never give anything by mouth to an unconscious person. **INHALATION:** Remove to fresh air. If irritation or illness develops, get medical attention. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. **SKIN:** Flush thoroughly with water, then wash with mild soap and water. **EYES:** Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention.

## SECTION VI REACTIVITY DATA

<b>Stability</b>	<b>Unstable</b>		<b>Conditions to Avoid</b>	Excessive heat and fire.
	<b>Stable</b>	X		

**Incompatibility (Materials to Avoid)** Strong reducing agents.

**Hazardous Decomposition Products** Oxides of sulfur.

<b>Hazardous Polymerization</b>	<b>Conditions to Avoid</b>		Not applicable.
	<b>May Occur</b>	<b>Will Not Occur</b>	
		X	

## SECTION VII SPILL OR LEAK PROCEDURES

**Steps to be taken in case material is released or spilled** Those involved in clean-up should use protection against skin contact or inhalation of dust or mist. Scoop up solid and place in suitable container for recovery or disposal. Wash spill area with soap and water.

**Waste Disposal Method** Discharge, treatment, or disposal may be subject to Federal, State or Local laws. These disposal guidelines are intended for the disposal of catalog-size quantities only. Dispose of in an approved chemical landfill or contract with a licensed waste disposal service.

## SECTION VIII SPECIAL PROTECTION INFORMATION

**Respiration Protection (Specify Type)** None should be needed in normal laboratory handling. If dusty conditions prevail, wear a NIOSH/MSHA-approved dust mask or respirator for fumes.

<b>Ventilation</b>	<b>Local Exhaust</b>	Recommended.	<b>Special</b>	No.
	<b>Mechanical (General)</b>	Recommended.	<b>Other</b>	No.

**Protective Gloves** Rubber. **Eye Protection** Chemical safety glasses.

**Other Protective Equipment** Goggles, lab coat, eye wash station, ventilation hood, proper gloves.

## SECTION IX SPECIAL PRECAUTIONS

**Precautions to be Taken in Handling & Storing** Keep container tightly closed when not in use. Store in a cool, dry, well-ventilated area. Wash thoroughly after handling.

**Other Precautions** Read label on container before using. Do not wear contact lenses when working with chemicals.

Do not get in eyes, on skin, or on clothing. Avoid breathing dust. Use with adequate ventilation. Remove and wash contaminated clothing.

For laboratory use only. Not for drug, food or household use. Keep out of reach of children.

<b>Revision</b> No. 4	<b>Date</b> 3/26/99	<b>Approved</b> Michael Raszeja	<b>Chemical Safety Coordinator</b> MR
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## SECTION I NAME 24 HOUR EMERGENCY ASSISTANCE

<b>Product</b>	MANGANOUS SULFATE	 <b>CHEMTREC</b> <b>800-424-9300</b> Day 716-226-6177  <b>NFPA HAZARD RATING</b> LEAST SLIGHT MODERATE HIGH EXTREME 0 1 2 3 4  <b>HMIS *</b> HEALTH FIRE REACTIVITY 1 0 0
<b>Chemical Synonyms</b>	Manganese (II) Sulfate, Monohydrate	
<b>Formula</b>	MnSO <sub>4</sub> •H <sub>2</sub> O	
<b>Unit Size</b>	up to 2.5 Kg.	
<b>C.A.S. No.</b>	10034-96-5	

## SECTION II INGREDIENTS OF MIXTURES

Principal Component(s)	%	TLV Units
Manganous Sulfate	100%	See Section V.

**WARNING! HARMFUL IF SWALLOWED**

**OR INHALED. HARMFUL DUST.**

## SECTION III PHYSICAL DATA

<b>Melting Point (°F)</b>	Stable 57-117°C (134-242°F)	<b>Specific Gravity (H<sub>2</sub>O = 1)</b>	2.95
<b>Boiling Point (°F)</b>	N/A	<b>Percent Volatile by Volume (%)</b>	48%
<b>Vapor Pressure (mm Hg)</b>	N/A	<b>Evaporation Rate (Butyl acetate = 1)</b>	N/A
<b>Vapor Density (Air=1)</b>	N/A		
<b>Solubility in Water</b>	98.47 @ 48°C (118°F)		
<b>Appearance &amp; Odor</b>	Pale red, slightly efflorescent powder; no odor.		

## SECTION IV FIRE AND EXPLOSION HAZARD DATA

<b>Flash Point (Method Used)</b>	Non-flammable.	<b>Flammable Limits in Air % by Volume</b>	N/A	<b>Lower</b>	<b>Upper</b>
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**Extinguisher Media** Water or dry chemical is suitable.

### SPECIAL FIREFIGHTING PROCEDURES

In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective clothing.

### UNUSUAL FIRE AND EXPLOSION HAZARDS

Fire or excessive heat may produce hazardous decomposition products of oxides of sulfur.

D.O.T. NON-REGULATED.

Approved by U.S. Department of Labor "essentially similar" to form OSHA-20