



**ALDON CORPORATION**

# MATERIAL SAFETY DATA SHEET

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(716) 226-6177

MSDS No. MM 225  
Effective Date November 10, 1998

## SECTION V HEALTH HAZARD DATA

MM 225

**Threshold Limited Value** None established for this solution by ACGIH 1992-93. As Manganese TLV is 5 mg/m<sup>3</sup> (ceiling) (applicable to dust or mist) (ACGIH 1992-93). As Nitric Acid: OSHA PEL: 5 mg/m<sup>3</sup>, ACGIH TLV: 5 mg/m<sup>3</sup>.

**Effects of Overexposure** **INHALATION:** Of mist may cause CNS (central nervous system) effects, such as languor, sleepiness and weakness in legs. High exposure may cause pneumonia, upper respiratory tract irritation. **INGESTION:** Some of the same symptoms as for inhalation would be expected. Also may cause gastrointestinal disturbances, tissue damage. **SKIN:** Liquid or mist contact can irritate or may burn. **EYES:** Liquid or mist contact causes irritation or may burn.

**Emergency and First Aid Procedures** **EYES:** Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention. **INHALATION:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call physician. **SKIN:** Flush with water, then wash with mild soap and water while removing contaminated clothing and shoes. **INGESTION:** If swallowed, do NOT induce vomiting. If conscious, give large quantities of milk or water to drink and call physician or poison control center immediately. Never give anything by mouth to an unconscious person.

## SECTION VI REACTIVITY DATA

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

**Incompatibility (Materials to Avoid)** Water-reactive materials. Oxidizable materials, reducing agents, including sulfur and organic materials, active metals, including zinc and aluminum.

**Hazardous Decomposition Products** We have no studies on this product, but we would expect nitrogen oxide gases to be evolved on heating residue from evaporation.

<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** Wearing suitable protective clothing, absorb spill in vermiculite. Scoop up and place in a suitable container for disposal.

## 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 needed in normal laboratory handling. If dusty conditions prevail, work in ventilation hood or wear a NIOSH/MSHA-approved respirator approved for acid gas/vapor.

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

<b>Protective Gloves</b>	Rubber.	<b>Eye Protection</b>	Chemical safety glasses.
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**Other Protective Equipment** Goggles, lab coat, apron, ventilation hood, proper gloves, eye wash station.

## SECTION IX SPECIAL PRECAUTIONS

**Precautions to be Taken in Handling & Storing** Store at temperature above freezing. Separate from combustible, organic or other oxidizable materials. Avoid storing on wood floors. Wash thoroughly after handling. Keep container tightly closed when not in use.

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

Avoid contact with eyes, skin and clothing. Avoid breathing vapors. 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> 11/10/98	<b>Approved</b> Michael Raszeja	<b>Chemical Safety Coordinator</b> MR
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The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. \* Hazardous Materials Industrial Standards. Printed on recycled paper.

## SECTION I NAME 24 HOUR EMERGENCY ASSISTANCE

<b>Product</b>	MANGANESE NITRATE 50% SOLUTION	 <p>CHEMTREC 800-424-9300 Day 716-226-6177</p> <p>NFPA HAZARD RATING</p> <table border="1"> <tr> <td>LEAST</td> <td>SLIGHT</td> <td>MODERATE</td> <td>HIGH</td> <td>EXTREME</td> </tr> <tr> <td>0</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> </table> <p>HMIS *</p> <table border="1"> <tr> <td>Health</td> <td>2</td> </tr> <tr> <td>Fire</td> <td>0</td> </tr> <tr> <td>Reactivity</td> <td>3</td> </tr> </table>	LEAST	SLIGHT	MODERATE	HIGH	EXTREME	0	1	2	3	4	Health	2	Fire	0	Reactivity	3
LEAST	SLIGHT		MODERATE	HIGH	EXTREME													
0	1		2	3	4													
Health	2																	
Fire	0																	
Reactivity	3																	
<b>Chemical Synonyms</b>	Manganous Nitrate Solution																	
<b>Formula</b>	Mixture. See Section II.																	
<b>Unit Size</b>	up to 4 Lt.																	
<b>C.A.S. No.</b>	Mixture. See Section II.																	

## SECTION II INGREDIENTS OF MIXTURES

Principal Component(s)	%	TLV Units
Manganese Nitrate: (CAS No. 10377-66-9)	50%	See Section V.
Nitric Acid: (CAS No. 7697-37-2)	5%	See Section V.
Water: (CAS No. 7732-18-5)	45%	None established.

**DANGER! CORROSIVE! CAUSES BURNS. HARMFUL IF SWALLOWED OR INHALED.**

## SECTION III PHYSICAL DATA

Melting Point (°F)	10°C (50°F)	Specific Gravity (H <sub>2</sub> O = 1)	1.54 at 20°C
Boiling Point (°F)	Greater than 115°C (240°F)	Percent Volatile by Volume (%)	45% (water).
Vapor Pressure (mm Hg)	14 mm (water)	Evaporation Rate (Ether = 1)	Greater than 1 for water.
Vapor Density (Air=1)	0.7 (water).		
Solubility in Water	Complete.		
Appearance & Odor	Clear reddish-orange liquid; no odor.		

## SECTION IV FIRE AND EXPLOSION HAZARD DATA

<b>Flash Point (Method Used)</b>	Non-flammable (NA).	<b>Flammable Limits in Air % by Volume</b>	NA	<b>Lower</b>	<b>Upper</b>
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**Extinguisher Media** Use any media suitable for extinguishing supporting fire.

## SPECIAL FIREFIGHTING PROCEDURES

In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

(1996 EMERGENCY RESPONSE GUIDEBOOK, DOT P 5800.7, GUIDE PAGE NO. 157)

## UNUSUAL FIRE AND EXPLOSION HAZARDS

Fire or excessive heat may produce hazardous decomposition products such as manganese metal dust, oxides of nitrogen (NO<sub>x</sub>); may react with combustible materials.

D.O.T. NITRIC ACID, SOLUTION, 8, UN 2031, PG II

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