



ALDON CORPORATION

MATERIAL SAFETY DATA SHEET

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MSDS No. MM191
Effective Date June 26, 1998

SECTION V HEALTH HAZARD DATA

Threshold Limited Value None established for this mixture.

Effects of Overexposure
INHALATION AS MIST: May cause headache, nausea, dizziness, fatigue, and weakness in arms and legs. Chronic effects of overexposure may include central nervous system depression. Exercise appropriate procedures to minimize potential hazards.

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 AS MIST:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention. **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 immediate medical attention.

SECTION VI REACTIVITY DATA

Stability
Unstable **Conditions to Avoid** Excessive temperature to cause evaporation.
Stable X

Incompatibility (Materials to Avoid) None known.

Hazardous Decomposition Products Chloride and manganese fumes will result in excess heating.

Hazardous Polymerization **Conditions to Avoid**
May Occur **Will Not Occur** Not applicable.
X

SECTION VII SPILL OR LEAK PROCEDURES

Steps to be taken in case material is released or spilled
Flush the aqueous solution down drain with plenty of 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.

Flush the aqueous solution down drain with plenty of water.

SECTION VIII SPECIAL PROTECTION INFORMATION

Respiration Protection (Specify Type) None needed in normal laboratory handling. If misty conditions prevail, work in ventilation hood or wear a NIOSH/MSHA-approved respirator.

Ventilation
Local Exhaust If Misty **Special** No.
Mechanical (General) None required. **Other** No.

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

Other Protective Equipment Lab coat, apron, eye wash station, proper gloves, ventilation hood.

SECTION IX SPECIAL PRECAUTIONS

Precautions to be Taken in Handling & Storing Store in a cool place. 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.

Remove and wash contaminated clothing.

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

Revision No. 1 **Date** 6/26/98 **Approved** Michael Raszeja **Chemical Safety Coordinator** MR

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

Product	MANGANESE CHLORIDE, 0.5 MOLAR SOLUTION
Chemical Synonyms	Manganous Chloride Water Solution
Formula	Mixture
Unit Size	1 Liter (For Soil Nutrient Kit)
C.A.S. No.	Mixture

NFPA HAZARD RATING
LEAST SLIGHT MODERATE HIGH EXTREME
0 1 2 3 4

HEALTH 1
FIRE 0
REACTIVITY 0
HMIS *

CHEMTREC
800-424-9300
Day 716-226-6177

SECTION II INGREDIENTS OF MIXTURES

Principal Component(s)	%	TLV Units
Manganese Chloride (CAS No.13446-34-9)	9.9%	See Section V.
Water: (CAS No. 7732-18-5)	90.1%	None established.

CAUTION! MAY CAUSE IRRITATION TO SKIN, EYES AND MUCOUS MEMBRANES. HARMFUL IF SWALLOWED.

SECTION III PHYSICAL DATA

Melting Point (°F)	Freezes approx. 0°C (32°F)	Specific Gravity (H₂O = 1)	Approx. 1.1
Boiling Point (°F)	Approx. 100°C (212°F)	Percent Volatile by Volume (%)	90.1%
Vapor Pressure (mm Hg)	14 (water).	Evaporation Rate (Water =1)	Less than 1.
Vapor Density (Air=1)	0.7 (water).		
Solubility in Water	Complete.		
Appearance & Odor	Clear, water white, water like liquid; no odor.		

SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used)	Non-flammable (NA).	Flammable Limits in Air % by Volume	NA	Lower	Upper
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Extinguisher Media Use extinguishing media appropriate for surrounding fire.

SPECIAL FIREFIGHTING PROCEDURES

Firefighters should wear proper protection equipment and NIOSH/MSHA-approved self-contained breathing apparatus with full facepiece operated in positive pressure mode.

UNUSUAL FIRE AND EXPLOSION HAZARDS

Fire or excessive heat may produce hazardous decomposition products such as toxic fumes of chlorides and manganese.

D.O.T. **NON-REGULATED.**

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