



ALDON CORPORATION

MATERIAL SAFETY DATA SHEET

1533 W. Henrietta Rd.
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MSDS No. WW 20
Effective Date June 2, 1999

SECTION V HEALTH HAZARD DATA

WW 20

Threshold Limited Value None established for this compound. TWA as Manganese: (CAS No. 7439-96-5). Dust and compounds: ceiling limit 5 mg/m³; as fume 1 mg/m³.

Effects of Overexposure **INGESTION:** Because manganese salts are poorly absorbed from alimentary tract, acute systemic intoxication does not occur after ingestion. Systemic poisoning, however, may occur from chronic ingestion or inhalation of manganous sulfate solution as mist. **INHALATION:** Of manganous sulfate as dust or mist may cause headache, nausea, dizziness, fatigue and weakness in arms and legs. Chronic effects of overexposure may include central nervous system depression.

Emergency and First Aid Procedures **INGESTION:** If swallowed, if conscious, give one or two glasses of water to drink, immediately induce vomiting and call 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. If ill effects or discomfort develop, get medical attention. **SKIN:** Flush with water, then wash with 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 and heat.
	Stable	X		

Incompatibility (Materials to Avoid) Reactive metals; Sodium, Potassium, Zinc.

Hazardous Decomposition Products Manganese and manganese oxide dust or fume, oxides of sulfur (SO_x).

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

SECTION VII SPILL OR LEAK PROCEDURES

Steps to be taken in case material is released or spilled Absorb small spills with an inert dry material, sweep up and place in a suitable container for disposal in an approved landfill. 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 agency.

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	None needed.	Special	No.
	Mechanical (General)	None needed.	Other	No.

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

Other Protective Equipment Goggles, lab coat, apron, proper gloves, eye wash station.

SECTION IX SPECIAL PRECAUTIONS

Precautions to be Taken in Handling & Storing Store in a cool, dry place. Suitable for any general chemical storage area. 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 inhalation of mist. Remove and wash contaminated clothing.

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

Revision No. 4	Date 6/2/99	Approved Michael Raszeja	Chemical Safety Coordinator 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

Product	WINKLER'S SOLUTION #1	 CHEMTREC 800-424-9300 Day 716-226-6177 NFPA HAZARD RATING LEAST SLIGHT MODERATE HIGH EXTREME 0 1 2 3 4 HMIS * Health 1 Fire 0 Reactivity 0
Chemical Synonyms	Winkler's Oxygen Determining Solution	
Formula	Mixture.	
Unit Size	up to 3.785 Lt.	
C.A.S. No.	Mixture.	

SECTION II INGREDIENTS OF MIXTURES

Principal Component(s)	%	TLV Units
Manganese Sulfate: (CAS No. 7785-87-7)	35%	See Section V.
Water: (CAS No. 7732-18-5)	65%	None established.

CAUTION! MAY BE HARMFUL IF SWALLOWED.

SECTION III PHYSICAL DATA

Melting Point (°F)	Freezes approx. 0°C (32°F)	Specific Gravity (H₂O = 1)	Approx. 1.27 at 20°C.
Boiling Point (°F)	Approx. 100°C (200°F)	Percent Volatile by Volume (%)	65% (water)
Vapor Pressure (mm Hg)	14 mm (water)	Evaporation Rate (Water = 1)	1 (water)
Vapor Density (Air=1)	0.7 (water)		
Solubility in Water	Complete.		
Appearance & Odor	Clear, pink colored liquid; no odor.		

SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used)	Non-flammable.	Flammable Limits in Air % by Volume	N/A	Lower	Upper
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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.

UNUSUAL FIRE AND EXPLOSION HAZARDS

Fire or excessive heat may produce hazardous decomposition products of manganese and manganese oxide metal dust or fume and oxides of sulfur (SO_x).

D.O.T. NON-REGULATED.

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