

MATERIAL SAFETY DATA SHEET

Manufacturer: Strem Chemicals, Inc
 7 Mulliken Way
 Newburyport, MA 01950-4098 U.S.A.
 www.strem.com

Strem Customer Service (978) 499-1600
 CHEMTREC (Emergency Only) (800) 424-9300
 Poison Center (800) 562-8236

Section 1: Product Identification	
Chemical Name:	Manganese (III) oxide, 99%
Product Number:	93-2522
CAS Registry Number:	1317-34-6
Formula:	Mn ₂ O ₃
EINECS Number:	215-264-4
Chemical Family:	metal oxide
Synonym:	Manganese trioxide, Manganic oxide

Section 2: Composition and Information on Ingredients				
Ingredient	CAS Number	Percent	ACGIH (TWA)	OSHA (PEL)
Title Compound	1317-34-6	100%	0.2mg/m ³ (as Mn)	5mg/m ³ (as Mn - ceiling limit)

Section 3: Hazards Identification	
Emergency Overview:	Irritating to skin, eyes and respiratory tract. Chronic exposure to dust may cause manganese pneumonitis and manganese poisoning.
Primary Routes of Exposure:	Ingestion, inhalation
Eye Contact:	Causes slight to mild irritation of the eyes
Skin Contact:	Causes slight to mild irritation of the skin.
Inhalation:	Irritating to the nose, mucous membranes and respiratory tract.
Ingestion:	No information available on the effects of ingestion.
Acute Health Affects:	Irritating to skin, eyes and respiratory tract.
Chronic Health Affects:	Prolonged exposure to manganese containing dust may produce manganese pneumonitis and manganese poisoning. Symptoms include sleepiness, weakness and emotional disturbances. Equivocal studies have shown manganese may decrease fertility in men.
NTP:	No
IARC:	No
OSHA:	No

SECTION 4: First Aid Measures	
Eye Exposure:	Immediately flush the eyes with copious amounts of water for at least 10-15 minutes. A victim may need assistance in keeping their eye lids open. Get immediate medical attention.
Skin Exposure:	Wash the affected area with water. Remove contaminated clothes if necessary. Seek medical assistance if irritation persists.
Inhalation:	Remove the victim to fresh air. Closely monitor the victim for signs of respiratory problems, such as difficulty in breathing, coughing, wheezing, or pain. In such cases seek immediate medical assistance.
Ingestion:	Seek medical attention immediately. Keep the victim calm. Give the victim water (only if conscious). Induce vomiting only if directed by medical personnel.

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SECTION 5: Fire Fighting Measures

Flash Point: not applicable
Autoignition Temperature: none
Explosion Limits: none
Extinguishing Medium: material is non-flammable
Special Fire Fighting Procedures: No special fire-fighting procedures. The material is non-flammable.
Hazardous Combustion and Decomposition Products: no hazardous decomposition products.
Unusual Fire or Explosion Hazards: No unusual fire or explosion hazards.

SECTION 6: Accidental Release Measures

Spill and Leak Procedures: Small spills can be mixed with vermiculite or sodium carbonate and swept up.

SECTION 7: Handling and Storage

Handling and Storage: No special storage conditions.

SECTION 8: Exposure Controls and Personal Protection

Eye Protection: Always wear approved safety glasses when handling a chemical substance in the laboratory.
Skin Protection: Wear protective clothing and gloves.
Ventilation: Material may form a fine dust. If possible, handle the material in an efficient fume hood.
Respirator: If ventilation is not available a respirator should be worn. The use of respirators requires a Respirator Protection Program to be in compliance with 29 CFR 1910.134.
Ventilation: Material may form a fine dust. If possible, handle the material in an efficient fume hood.
Additional Protection: No additional protection required.

SECTION 9: Physical and Chemical Properties

Color and Form: black powdr.
Molecular Weight: 157.86
Melting Point: 1080° dec.
Boiling Point: no data
Vapor Pressure: not applicable
Specific Gravity: 4.5
Odor: none
Solubility in Water: Insoluble

SECTION 10: Stability and Reactivity

Stability: air and moisture stable solid
Hazardous Polymerization: no hazardous polymerization
Conditions to Avoid: none
Incompatibility: Active metals, calcium hypochlorite and hydrogen peroxide
Decomposition Products: none

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SECTION 11: Toxicological Information

RTECS Data: Intratracheal (rat); LDLo: 100 mg/kg. Subcutaneous (mouse); LD50: 616 mg/kg.
Carcinogenic Effects: No data available
Mutagenic Effects: No data available
Tetratogenic Effects: No data available

SECTION 12: Ecological Information

Ecological Information: No information available

SECTION 13: Disposal Considerations

Disposal: Dispose of according to local, state and federal regulations.

SECTION 14: Transportation

Shipping Name (CFR): Non-hazardous
Hazard Class (CFR): NA
Additional Hazard Class (CFR): NA
Packaging Group (CFR): NA
UN ID Number (CFR): NA
Shipping Name (IATA): Non-hazardous
Hazard Class (IATA): NA
Additional Hazard Class (IATA): NA
Packaging Group (IATA): NA
UN ID Number (IATA): NA

SECTION 15: Regulatory Information

TSCA: Listed in the TSCA inventory.
SARA (Title 313): Title compound: See Category Code N450 for reporting.
Second Ingredient: none
Third Ingredient: none

SECTION 16: Other Information

Disclaimer: The information herein is believed to be accurate and reliable as of the date compiled. However, Strem Chemicals, Inc. makes no representation, warranty, or guarantee of any kind with respect to the information contained in this document or any use of the product based on this information.
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