

FLINN SCIENTIFIC INC.

"Your Safer Source for Science Supplies"

Material Safety Data Sheet (MSDS)

MSDS #: 489.00

Revision Date: November 25, 2002

Section 1 — Chemical Product and Company Identification

Manganese Dioxide

Flinn Scientific, Inc. P.O. Box 219 Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Section 2 — Composition, Information on Ingredients

Manganese Dioxide

CAS#: 1313-13-9

Section 3 — Hazards Identification

Black or silver crystals or powder. Odorless.

Dust is irritant to eyes and respiratory tract. Avoid inhalation of dust.

Strong oxidizer; fire hazard.

Chronic exposure to manganese dust through inhalation can lead to respiratory problems and disorders of the central nervous system.

FLINN AT-A-GLANCE

Health-0

Flammability-0

Reactivity-2

Exposure-1

Storage-0

0 is low hazard, 3 is high hazard

Section 4 — First Aid Measures

Call a physician, seek medical attention for further treatment, observation and support after first aid.

Inhalation: Remove to fresh air at once. If breathing has stopped give artificial respiration immediately.

Eye: Immediately flush with fresh water for 15 minutes.

External: Wash continuously with fresh water for 15 minutes.

Internal: Give no more than 1-2 cups of water for dilution. Do not induce vomiting. Call a physician or poison control at once.

Section 5 — Fire Fighting Measures

Non flammable, non combustible solid.

Strong oxidizer, fire hazard when in contact with combustible materials.

Fire Fighting Instructions: Use triclass, dry chemical fire extinguisher. Firefighters should wear PPE and SCBA with full facepiece operated in positive pressure mode.

NFPA CODE

None Established

Section 6 — Accidental Release Measures

Restrict unprotected personnel from area. Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

Section 7 — Handling and Storage

Flinn Suggested Chemical Storage Pattern: Inorganic #4. Store with hydroxides, oxides, silicates and carbonates.

Store in a cool dry place. Use and dispense in a hood.

Section 8 — Exposure Controls, Personal Protection

Avoid contact with eyes, skin and clothing. Wear chemical splash goggles, chemical-resistant gloves and chemical-resistant apron.

Use ventilation to keep airborne concentrations below exposure limits. Always wear a NIOSH-approved respirator with proper cartridges or a positive pressure, air-supplied respirator when handling this material in emergency situations (spill or fire).

Exposure guidelines: TWA 1 mg/m³ (Mn), STEL 3 mg/m³ (Mn) (NIOSH, NIOSH)

Section 9 — Physical and Chemical Properties

Black or silver crystals or powder. Odorless.

Solubility: Soluble in hydrochloric acid. Insoluble in water.

Formula: MnO₂

Formula Weight: 86.94

Specific Gravity: 5.026

Melting Point: 535 C (dec.)

Section 10 — Stability and Reactivity

May ignite organic materials; strong oxidant; reacts violently with combustible and reducing agents. Avoid contact with other oxidizing agents.

Shelf life: Indefinite.

Section 11 — Toxicological Information

Acute effects: Irritating dust

Chronic effects: N.A.

Target organs: Nerves, lungs

ORL-RAT LD50: 9000 mg/kg as manganese dust

IHL-RAT LC50: N.A.

SKN-RBT LD50: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

Section 12 — Ecological Information

Data not yet available.

Section 13 — Disposal Considerations

Please consult with state and local regulations.

Flinn Suggested Disposal Method #26a is one option.

Section 14 — Transport Information

Shipping Name: Not regulated

Hazard Class: N/A

UN Number: N/A

N/A = Not applicable

Section 15 — Regulatory Information

TSCA-listed, EINECS-listed (215-202-6), RCRA code D001.

Section 16 — Other Information

Consult your copy of the Flinn Scientific Catalog/Reference Manual for additional information about laboratory chemicals. This Material Safety Data Sheet (MSDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. Flinn Scientific Inc. assumes no legal responsibility for use or reliance upon this data.

FLINN SCIENTIFIC INC.

"Your Safer Source for Science Supplies"

Flinn Chemicals--Your Best Choice

flinn@flinnsci.com www.flinnsci.com
P.O. Box 219 Batavia IL 60510
(800) 452-1261 Fax (866) 452-1436