

FLINN SCIENTIFIC INC.

"Your Safer Source for Science Supplies"

Material Safety Data Sheet (MSDS)

MSDS #: 570.00

Revision Date: November 25, 2002

Section 1 — Chemical Product and Company Identification

Osmic Acid

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

Osmic Acid

Synonym: osmium tetroxide

CAS#: 20816-12-0

Section 3 — Hazards Identification

Pale yellow crystal with a stench odor.

Highly toxic by ingestion and inhalation. Severely irritating to body tissues. Lachrymator.

Avoid all body tissue contact. Avoid inhalation.

Emits severely toxic fumes under fire conditions.

FLINN AT-A-GLANCE

Health-3

Flammability-0

Reactivity-0

Exposure-3

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 1 to 2 cups of water or milk, followed by a gastric antacid, such as milk of magnesia. Do not induce vomiting. Call a physician or poison control at once.

Section 5 — Fire Fighting Measures

Non flammable solid.

Emits severely toxic fumes under fire conditions.

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. Remove all ignition sources and ventilate area. Contain spill with sand and absorbent material; deposit in sealed bag or container. 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.

Use and dispense in a hood. Refrigerate.

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 0.0002 ppm STEL 0.0006 ppm (OSHA, NIOSH)

Section 9 — Physical and Chemical Properties

Pale yellow crystal with a pungent odor.
Solubility: Soluble in water and alcohol and ether.
Formula: OsO₄
Formula Weight: 254.20

Specific Gravity: 4.9
Melting Point: 40 C
Boiling Point: 130 C
Vapor Pressure: 7mm (20 C)
Vapor Density: 8.8

Section 10 — Stability and Reactivity

Avoid contact with strong reducers and organic materials.
Shelf Life: Indefinite.

Section 11 — Toxicological Information

Acute effects: Highly toxic, severe irritant, lachrymator, nausea, headache and vomiting.
Chronic effects: Dermatitis, possible mutagen
Target organs: Eyes

ORL-RAT LD50: 162 mg/kg
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 #26 is one option.

Section 14 — Transport Information

Shipping Name: Osmium tetroxide
Hazard Class: 6.1, Poison
UN Number: UN2471

N/A = Not applicable

Section 15 — Regulatory Information

TSCA-listed, EINECS-listed (244-058-7), RCRA code P087.

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.

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*Questions on Chemical Disposal
or Storage?--Call Flinn*

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