

# FLINN SCIENTIFIC, INC.

## Material Safety Data Sheet (MSDS)

MSDS #: 570.00

Revision Date: December 14, 2011

### 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. Pungent chlorine-like odor. Lethal at levels far below the odor threshold.

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

Avoid all body tissue contact. Avoid inhalation. Sublimes at room temperature.

Emits severely toxic fumes under fire conditions.

Not for student use.

#### 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 and 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 or External: Immediately flush with fresh water for at least 15 minutes.

Internal: Do NOT induce vomiting. Rinse mouth. Call a physician or poison control at once.

### SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable 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. Ventilate area. Wearing appropriate personal protective equipment, wet spill with water. Contain spill with sand or other inert inorganic absorbent material, deposit in sealed glass 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. Store in glass, never plastic.

### SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Avoid ALL 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: PEL 0.002 mg/m<sup>3</sup> (OSHA) 0.20 ppb STEL 0.60 ppb (ACGIH)

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**SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES**

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Pale yellow crystal with a pungent odor.  
Solubility: Soluble in water and alcohol and ether.  
Formula: OsO<sub>4</sub>  
Formula weight: 254.20

Boiling point: 130 °C  
Melting point: 40 °C  
Specific gravity: 4.9  
Vapor density: 8.8

Discontinued product

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**SECTION 10 — STABILITY AND REACTIVITY**

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Avoid contact with hydrochloric acid, strong reducers and organic materials.  
Shelf life: Indefinite, if stored properly.

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**SECTION 11 — TOXICOLOGICAL INFORMATION**

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Effects may manifest several hours after exposure.  
Acute effects: Highly toxic, severe irritant, lachrymator, nausea, headache and vomiting.  
Chronic effects: Dermatitis, possible mutagen, possible teratogen  
Target organs: Eyes

ORL-RAT LD<sub>50</sub>: 14 mg/kg  
IHL-RAT LC<sub>50</sub>: N.A.  
SKN-RBT LD<sub>50</sub>: N.A.

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

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**SECTION 12 — ECOLOGICAL INFORMATION**

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Data not yet available.

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**SECTION 13 — DISPOSAL CONSIDERATIONS**

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Please review all federal, state and local regulations that may apply, before proceeding.  
Flinn Suggested Disposal Method #26 is one option.

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**SECTION 14 — TRANSPORT INFORMATION**

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Shipping name: Osmium tetroxide  
Hazard class: 6.1, Poison  
UN number: UN2471  
N/A = Not applicable

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**SECTION 15 — REGULATORY INFORMATION**

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

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**SECTION 16 — OTHER INFORMATION**

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**Consult your copy of the *Flinn Science Catalog/Reference Manual*  
for additional information about laboratory chemicals.**