OXFORD LAB FINE CHEM LLP

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Oxford
Range of
Laboratory Chemicals

MATERIAL SAFETY DATA SHEET

OSMIC ACID 99.9%
(Extra Pure)
MSDS CAS: - 20816-12-0

Section 1: Chemical Product and Company Identification

Section 1: Chemical Product
Product Name: OSMIC ACID
CAS#: - 20816-12-0
Synonym:
Chemical Name: Not applicable.
Chemical Formula: OsO_4

Brand: OXFORD

Details Of The Supplier Of The Safety Data Sheet:

Company identification: OXFORD LAB FINE CHEM LLP
Unit. No. 12, 1st Floor, Neminath Industrial Estate No. 6,
Navghar, Vasai (East). Palghar - 401 210.
Mumbai, Maharashtra, INDIA.
Tel: 91-250-2390989
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Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
OSMIC ACID	20816-12-0	100

Toxicological Data on Ingredients: Osmium tetroxide: ORAL (LD50): Acute: 162 mg/kg [Mouse].

Section 3: Hazards Identification

Potential Acute Health Effects: **Extremely hazardous in case of ingestion. Very hazardous in case of inhalation. Hazardous in case of skin contact (irritant), of eye contact (irritant). Slightly hazardous in case of skin contact (permeator). Prolonged exposure may result in skin burns and ulcerations. Over-exposure by inhalation may cause respiratory irritation. Severe over-exposure can result in death.**

Potential Chronic Health Effects: **CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance is toxic to lungs, the nervous system. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure to an highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.**

Section 4: First Aid Measures

Eye Contact: **Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Do not use an eye ointment. Seek medical attention.**

Skin Contact: **After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cold water may be used. Cover the irritated skin with an emollient. If irritation persists, seek medical attention.**

Serious Skin Contact: **Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.**

Inhalation: **Allow the victim to rest in a well ventilated area. Seek immediate medical attention.**

Serious Inhalation: **Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.**

Ingestion: **Do not induce vomiting. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.**

Serious Ingestion: **Not available.**

Section 5: Fire and Explosion Data

Flammability of the Product: **Non-flammable.**

Auto-Ignition Temperature: **Not available.**

Flash Points: **Not available.**

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Section 5: Fire and Explosion Data (Continued)

Flammable Limits: Not available.
Products of Combustion: Not available.
Fire Hazards in Presence of Various Substances: Not applicable.
Explosion Hazards in Presence of Various Substances: Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.
Fire Fighting Media and Instructions: Not applicable.
Special Remarks on Fire Hazards: Not available.
Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill:
Use appropriate tools to put the spilled solid in a convenient waste disposal container.

Large Spill:
Oxidizing material. Stop leak if without risk. Avoid contact with a combustible material (wood, paper, oil, clothing...). Keep substance damp using water spray. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Keep locked up Keep away from heat. Keep away from sources of ignition. Keep away from combustible material Do not ingest. Do not breathe dust. Wear suitable protective clothing In case of insufficient ventilation, wear suitable respiratory equipment If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes

Storage:
Keep container tightly closed. Keep in a cool, well-ventilated place. Highly toxic or infectious materials should be stored in a separate locked safety storage cabinet or room.

Section 8: Exposure Controls/Personal Protection

Engineering Controls: Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection: Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill: Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits: TWA: 0.0002 STEL: 0.0006 CEIL: 0.0006 (ppm) from ACGIH (TLV) [1995] TWA: 0.0016 STEL: 0.0047 CEIL: 0.006 (mg/m3) from ACGIH [1995] Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance	: Solid
Odour	: Not available.
Taste	: Not available.
Molecular Weight	: 254.2 g/mole
Colour	: Not available.
pH (1% soln/water)	: Not available.
Boiling Point	: 130°C (266°F)
Melting Point	: 40.25°C (104.5°F)
Critical Temperature	: Not available.
Specific Gravity	: 4.9 (Water = 1)
Vapour Pressure	: Not applicable.
Vapour Density	: 8.8 (Air = 1)
Volatility	: Not available.
Odour Threshold	: 0.00019 ppm
Water/Oil Dist. Coeff.	: Not available.
Iconicity (in Water)	: Not available.
Dispersion Properties	: See solubility in water.
Solubility	: Partially soluble in cold water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.
Instability Temperature: Not available.
Conditions of Instability: Not available.
Incompatibility with various substances: Not available.
Corrosivity: Non-corrosive in presence of glass.
Special Remarks on Reactivity: Not available.
Special Remarks on Corrosivity: Not available.
Polymerization: No

Section 11: Toxicological Information

Routes of Entry: Eye contact. Inhalation. Ingestion.
Toxicity to Animals: Acute oral toxicity (LD50): 162 mg/kg [Mouse].
Chronic Effects on Humans: The substance is toxic to lungs, the nervous system.
Other Toxic Effects on Humans: Extremely hazardous in case of ingestion. Very hazardous in case of inhalation. Hazardous in case of skin contact (irritant). Slightly hazardous in case of skin contact (permeator).
Special Remarks on Toxicity to Animals: Not available.
Special Remarks on Chronic Effects on Humans: Not available.
Special Remarks on other Toxic Effects on Humans: Not available.

Section 12: Ecological Information

Eco toxicity: Not available.
BOD5 and COD: Not available.
Products of Biodegradation: Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.
Toxicity of the Products of Biodegradation: The products of degradation are as toxic as the original product.
Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Section 14: Transport Information

Land transport (ADR-RID)

Proper shipping name : **OSMIUM TETROXIDE**
UN N° : **2471**
H.I. nr : **66**
ADR – Class : **6.1**
Labelling – Transport : **6.1 : Toxic substances.**
ADR – Group : **I**

Sea transport (IMDG) [English only]

Proper shipping name : **OSMIUM TETROXIDE**
UN N° : **2471**
IMO-IMDG - Class or division : **6.1 : Toxic substances.**
IMO-IMDG - Packing group : **I**

Air transport (ICAO-IATA) [English only]

Proper shipping name : **OSMIUM TETROXIDE**
UN N° : **2471**
IATA - Class or division : **6.1 : Toxic substances.**
IATA - Packing group : **I**

Section 15: Other Regulatory Information

Federal and State Regulations: **Pennsylvania RTK: Osmium tetroxide Massachusetts RTK: Osmium tetroxide TSCA 8(b) inventory: Osmium tetroxide SARA 313 toxic chemical notification and release reporting: Osmium tetroxide CERCLA: Hazardous substances.: Osmium tetroxide**
Other Regulations: **OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).**
Other Classifications:
WHMIS (Canada): **CLASS C: Oxidizing material. CLASS D-1A: Material causing immediate and serious toxic effects (VERY TOXIC). CLASS D-2B: Material causing other toxic effects (TOXIC).**
DSCL (EEC): **R36/38- Irritating to eyes and skin.**
Health Hazard: **3**
Fire Hazard: **0**

Section 15: Other Regulatory Information (Continued)

Reactivity: 0
Personal Protection: E
National Fire Protection Association (U.S.A.):
Health: 3
Flammability: 0
Reactivity: 0
Specific hazard:
Protective Equipment: Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

Section 16 - Additional Information

References: Not available.

Other Special Considerations: Not available.

Disclaimer:

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