

## Safety Data Sheet

### 29 CFR 1910.1200

#### Section 1: Company and Product Identification

---

**Product Name:** Osmium (III) Chloride/Anhydrous

**Product Code:** 4023

**Company:** Colonial Metals, Inc.  
 Building 20  
 505 Blue Ball Road  
 Elkton, MD 21921 United States  
 Company Contact: EHS Director  
 Telephone Number: 410-398-7200  
 FAX Number: 410-398-2918  
 E-Mail : info@colonialmetals.com  
 Web Site: www.colonialmetals.com



www.colonialmetals.com

**Emergency Response:** Supplier Emergency Contacts & Phone Number

**Response:** Chemtrec: 800-424-9300

World Wide - Call COLLECT to U.S: 703-527-3887

#### Section 2: Hazards Identification

---

**Hazard Pictograms:**



**Signal Word:**

Danger

**Hazard Category:**

Skin corrosion/irritation Cat 1  
 Serious eye damage/eye irritation Cat 1  
 Acute tox, oral Cat 4  
 Specific target organ tox, single exp. Cat 3 (resp irrit)

**Hazard Statements:**

H314: Causes severe skin burns and eye damage  
 H318: Causes serious eye damage  
 H302: Harmful if swallowed  
 H335: May cause respiratory irritation

**Precautionary Statements:**

P202: Do not handle until all safety precautions have been read and understood  
 P210: Keep away from heat/sparks/open flames/hot surfaces – No smoking  
 P264: Wash thoroughly after handling  
 P280: Wear protective gloves/protective clothing/eye protection/face protection  
 P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove  
 P402+404: Store in a dry place. Store in a closed container  
 P501: Dispose of contents/container in accordance with local/national/international rules.

**Hazards not otherwise classified:** **Conditions Aggravated By Exposure**  
 Any respiratory condition such as asthma will be aggravated.

**Conditions Aggravated By Overexposure**

Potential kidney damage.  
 To the best of our knowledge the chemical, physical, and toxicological properties have not been thoroughly investigated. Avoid elevated temperatures. Product incompatible with oxidizers. Can decompose at elevated temperatures to emit Cl<sub>2</sub> and OsO<sub>4</sub> gases.

**Section 3: Composition / Information on Ingredients**

Hazardous substance (name)	Hazard Category	CAS#	Weight %
Osmium (III) Chloride	Irritant - Harmful	13444-93-4	85
<b>Chemical Name:</b> Osmium Trichloride/Osmium (III) <b>Chemical Family:</b> Platinum Group Metal Salts <b>Chemical Formula:</b> OsCl <sub>3</sub> /OsCl <sub>3</sub> .3H <sub>2</sub> O			

**Section 4: First Aid Measures**

**General Info:** Ensure proper ventilation.

**Notable Exposure symptoms:** Irritation to skin, eyes and areas of contact.

**symptoms:**

**If ingested:** Rinse mouth. Seek immediate medical attention. Clear the airway and administer artificial respiration if not breathing.

If swallowed, do not induce vomiting unless directed to do so by medical personnel.

**If inhaled:** Remove the victim from the contaminated area while protecting yourself from exposure by wearing an appropriate respirator. Put a similar respirator on the victim if possible. Get medical attention immediately.

**Eye contact:** Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses if present and easy to do. Get medical attention if irritation develops or persists.

**Skin contact:** Take off immediately all contaminated clothing. Rinse with water thoroughly. Get medical advice if irritation develops or persists.

**Additional Info:** Observe for any symptoms for several hours after exposure. Follow up with medical attention if symptoms develop.

**Section 5: Fire Fighting Measures**

**General Info: Flash Point:** NA °C

**Autoignition Point:** N/A

**Flammability Class:** NA

**Fire And Explosion Hazards**

Emits toxic fumes under fire conditions.

**Extinguishing Method / Equipment:** Water spray or carbon dioxide. Do not use organics.

**Method / Equipment:**

**Hazardous** Constituents associated with burning / combustion are to be considered toxic. Firefighters should wear

**Decomposition Info:** self-contained breathing apparatus and full protective gear.

**Section 6: Accidental Release Measures**

**Personal precautions, protective equipment and procedures:** Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing dust. Ventilate area if easy to do so.

Contact local authorities if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

**Containment Equipment and Procedures:** Large Spills: Contain actively spilling material if safe and easy to do so, avoid generating dust. Soak or sweep up or cover spill with dry sand or vermiculite and mix well. Collect material and dispose

Small Spills: Sweep and collect to waste receptacles.

**Cleanup Procedures:** Collect all contaminated media, or other cleanup materials into a waste receptacle. If cleaning surface is necessary, utilize vacuum cleaner, provided adequate ventilation is available.

**Section 7: Handling and Storage**

**Safe Handling Precautions:** Do not handle until all safety precautions have been read and understood. Keep containers tightly closed. Ensure adequate ventilation. Avoid breathing dust. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Wear appropriate personal protective equipment and wash thoroughly after handling.

**Recommendations for Storage:** Store in cool, dry area in a tightly closed product container away from sources of ignition or flame.

**Incompatibilities:** Strong acids, oxidizers, bases.

**Section 8: Exposure Control / Personal Protection**

---

**General** / Ventilation: Local Exhaust: Required in handling area

**Engineering Controls:** Mechanical: Desirable to insure concentration of material below TLV/TWA levels

**Other:** Handle in a glove box under a dry inert atmosphere to prevent oxidation

**Safety shower and eyewash**

**Work Clothing:** Protective work clothing which covers skin and prevents exposures.

**Eye/face protection:** Wear safety glasses with side shields or goggles or face shield.

**Skin Protection:** Wear chemical resistant gloves.

**Respiratory Protection:** Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Additional Information:** Observe good chemical hygiene practices. Do not smoke or eat while using this product. Wash hands or exposed skin after using the product.

**Section 9: Physical and Chemical Properties**

---

<b>State:</b> Solid powder	<b>Melting Point:</b> N/A	<b>Freezing Point:</b> N/A
<b>Color:</b> Brown to Black	<b>Boiling Point/Range:</b> N/A	<b>pH:</b> N/A
<b>Molecular Wt.:</b> 296.55/350.55	<b>Odor:</b> Odorless to acrid	<b>Water Solubility:</b> Insoluble
<b>Evaporation rate:</b> N/A	<b>Flash Point:</b> N/A	<b>Part. Coeff (n-octanol/water):</b> N/A
<b>Upper Flam Limits:</b> N/A	<b>Lower Flam Limits:</b> N/A	<b>Vapor Density:</b> N/A
<b>VOC Content (lbs/gal):</b> N/A	<b>Viscosity:</b> N/A	<b>Autoignition Temp:</b> N/A

**Section 10: Stability and Reactivity**

---

**General:** This product is stable and non-reactive under normal conditions of use. Product is not subject to hazardous polymerization. Avoid open flame and ignition sources. **Conditions To Avoid (Stability):** Elevated temperatures

**Incompatible materials:** Oxidizers and acids.

**Decomposition products:** Decomposes at elevated temperatures to emit Cl<sub>2</sub> and OsO<sub>4</sub> gases.

**Section 11: Toxicological Information**

---

**General Information:** To the best of our knowledge the chemical, physical, and toxicological properties of this compound have not been thoroughly investigated.

**Section 12: Ecological Information**

---

**General information:** Product not tested.

**Aquatic toxicity:** No specific data available. Do not allow large quantities of product to reach water, ground water, water courses or sewer systems.

**Section 13: Disposal Information**

---

**Product disposal:** Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

**Container disposal:** Treat empty containers with extra care. Consult waste contractor.

**Other considerations:** NOTE: Chemical additions, processing, or otherwise altering this material may make the waste management information presented above incomplete, inaccurate, or otherwise inappropriate.

**Section 14: Transport Information**

---

**DOT:** UN/ID no UN3288  
 Hazard Class 6.1  
 Packing Group II  
 Proper shipping name Toxic solid, inorganic, n.o.s.  
 Description UN3288, Toxic solid, inorganic, n.o.s., 6.1, II, POISON

**IMO/IMDG:** UN/ID no UN3288  
 Hazard Class 6.1  
 Packing Group II  
 Proper shipping name Toxic solid, inorganic, n.o.s.  
 Description UN3288, Toxic solid, inorganic, n.o.s., 6.1, II  
 Special Provisions 274  
 EmS-No F-A, S-A

**IATA:** UN/ID no UN3288  
 Hazard Class 6.1  
 Packing Group II  
 Proper shipping name Toxic solid, inorganic, n.o.s.  
 Description UN3288, Toxic solid, inorganic, n.o.s., 6.1, II

**Section 15: Regulatory Information**

---

**TSCA/RCRA:** OsO4 is a listed EPA Hazardous Waste - P087

**SARA SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute health hazard No  
 Chronic Health Hazard No  
 Fire hazard No  
 Sudden release of pressure hazard No  
 Reactive hazard No

**Canadian DSL:** Listed

**Section 16: Other Information**

---

**NFPA Rating**

Health: 1  
 Fire: 0  
 Reactivity: 0

**HMIS Rating**

Health: 1  
 Fire: 0  
 Reactivity: 0  
 Personal  
 Protection: J

**Precautionary Label**

Irritant

**Disclaimer:** In compliance with the OSHA Hazard communication Standard, 2.9 C.F.R 1910.1200, we are providing you with a Materials Safety Data Sheet (MSDS) for the hazardous material you are purchasing.

*It is your responsibility to educate your employees on the safe use of the hazardous material. With this in mind, a copy should be forwarded to the supervisor of the user or to the user themselves, and copy should be retained in your files for future reference.*

*Colonial Metals, Inc. makes no presentation as to the accuracy of the information in the MSDS. The information is believe to be correct; however, you (the customer), should preform your own investigation and independent verification. If you resell the product, you are responsible to forward the information in the MSDS to your customer.*

Colonial Metals, Inc.

**SDS Author:** John Kerchner

**Version Date:** 6/15/2015