

<a href="#">Osmium Balls</a>	<a href="#">Pricing &gt;</a>
<a href="#">Osmium Band</a>	<a href="#">Pricing &gt;</a>
<a href="#">Osmium Bars</a>	<a href="#">Pricing &gt;</a>
<a href="#">Osmium Blocks</a>	<a href="#">Pricing &gt;</a>
<a href="#">Osmium Chunk</a>	<a href="#">Pricing &gt;</a>
<a href="#">Osmium Coil</a>	<a href="#">Pricing &gt;</a>
<a href="#">Osmium Concentrate</a>	<a href="#">Pricing &gt;</a>
<a href="#">Osmium Crucibles</a>	<a href="#">Pricing &gt;</a>
<a href="#">Osmium Cubes</a>	<a href="#">Pricing &gt;</a>
<a href="#">Osmium Cylinder</a>	<a href="#">Pricing &gt;</a>
<a href="#">Osmium Disc</a>	<a href="#">Pricing &gt;</a>
<a href="#">Osmium Flake</a>	<a href="#">Pricing &gt;</a>
<a href="#">Osmium Flange</a>	<a href="#">Pricing &gt;</a>
<a href="#">Osmium Foil</a>	<a href="#">Pricing &gt;</a>
<a href="#">Osmium Granules</a>	<a href="#">Pricing &gt;</a>
<a href="#">Osmium Ingot</a>	<a href="#">Pricing &gt;</a>
<a href="#">Osmium Lump</a>	<a href="#">Pricing &gt;</a>
<a href="#">Osmium Mesh</a>	<a href="#">Pricing &gt;</a>
<a href="#">Osmium Metal</a>	<a href="#">Pricing &gt;</a>
<a href="#">Osmium Microfoil</a>	<a href="#">Pricing &gt;</a>
<a href="#">Osmium Microleaf</a>	<a href="#">Pricing &gt;</a>
<a href="#">Osmium Nanoparticles</a>	<a href="#">Pricing &gt;</a>
<a href="#">Osmium Nanorods</a>	<a href="#">Pricing &gt;</a>
<a href="#">Osmium Particles</a>	<a href="#">Pricing &gt;</a>
<a href="#">Osmium Parts</a>	<a href="#">Pricing &gt;</a>
<a href="#">Osmium Pellet</a>	<a href="#">Pricing &gt;</a>
<a href="#">Osmium Pieces</a>	<a href="#">Pricing &gt;</a>
<a href="#">Osmium Plate</a>	<a href="#">Pricing &gt;</a>
<a href="#">Osmium Powder</a>	<a href="#">Pricing &gt;</a>
<a href="#">Osmium Puck</a>	<a href="#">Pricing &gt;</a>



<a href="#">Osmium Ribbon</a>	<a href="#">Pricing &gt;</a>
<a href="#">Osmium Ring</a>	<a href="#">Pricing &gt;</a>
<a href="#">Osmium Rod</a>	<a href="#">Pricing &gt;</a>
<a href="#">Osmium Rotatable Sputtering Target</a>	<a href="#">Pricing &gt;</a>
<a href="#">Osmium Samples</a>	<a href="#">Pricing &gt;</a>
<a href="#">Osmium Shavings</a>	<a href="#">Pricing &gt;</a>
<a href="#">Osmium Sheet</a>	<a href="#">Pricing &gt;</a>
<a href="#">Osmium Shot</a>	<a href="#">Pricing &gt;</a>
<a href="#">Osmium Single Crystal</a>	<a href="#">Pricing &gt;</a>
<a href="#">Osmium Sleeve</a>	<a href="#">Pricing &gt;</a>
<a href="#">Osmium Slugs</a>	<a href="#">Pricing &gt;</a>
<a href="#">Osmium Specimen</a>	<a href="#">Pricing &gt;</a>
<a href="#">Osmium Spheres</a>	<a href="#">Pricing &gt;</a>
<a href="#">Osmium Spring</a>	<a href="#">Pricing &gt;</a>
<a href="#">Osmium Sputtering Target</a>	<a href="#">Pricing &gt;</a>
<a href="#">Osmium Strip</a>	<a href="#">Pricing &gt;</a>
<a href="#">Osmium Tape</a>	<a href="#">Pricing &gt;</a>
<a href="#">Osmium Tube</a>	<a href="#">Pricing &gt;</a>
<a href="#">Osmium Wafer</a>	<a href="#">Pricing &gt;</a>
<a href="#">Osmium Wire</a>	<a href="#">Pricing &gt;</a>

<b>Linear Formula</b>	Os
<b>Pubchem CID</b>	23937
<b>MDL Number</b>	MFCD00011147
<b>EC No.</b>	231-114-0
<b>Beilstein/Reaxys No.</b>	N/A
<b>SMILES</b>	[Os]
<b>Inchl Identifier</b>	InChI=1S/Os
<b>Inchl Key</b>	SYQBFIAQQZEGI-UHFFFAOYSA-N

<b>Signal Word</b>	N/A
<b>Hazard Statements</b>	N/A
<b>Hazard Codes</b>	N/A
<b>Precautionary Statements</b>	N/A
<b>Flash Point</b>	Not applicable
<b>Risk Codes</b>	N/A



<b>Safety Statements</b>	N/A
<b>RTECS Number</b>	N/A
<b>Transport Information</b>	NONH
<b>WGK Germany</b>	NONH

[Create Printable PDF](#)

## SAFETY DATA SHEET

Date Accessed: 04/18/2024

Date Revised: 01/15/2022

### SECTION 1. IDENTIFICATION

**Product Identifiers:** All applicable American Elements product codes for CAS #7440-04-2

**Relevant identified uses of the substance:**  
Scientific research and development

Supplier details:  
American Elements  
10884 Weyburn Ave.  
Los Angeles, CA 90024  
Tel: +1 310-208-0551  
Fax: +1 310-208-0351

Emergency telephone number:  
Domestic, North America +1 800-424-9300  
International +1 703-527-3887

### SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture  
Classification according to Directive 67/548/EEC or Directive 1999/45/EC  
Information concerning particular hazards for human and environment: N/A  
Label elements  
Labelling according to EU guidelines:  
Code letter and hazard designation of product:  
Risk phrases:  
Hazard description:  
WHMIS classification  
Classification system  
HMIS ratings (scale 0-4)  
(Hazardous Materials Identification System)  
Health (acute effects) = 0  
Flammability = 0  
Reactivity = 0  
Other hazards



Results of PBT and vPvB assessment

PBT: N/A

vPvB: N/A

---

### **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substances

CAS No. / Substance Name:

7440-04-2 Osmium

Identification number(s):

EC number: 231-114-0

---

### **SECTION 4. FIRST AID MEASURES**

Description of first aid measures

If inhaled:

Supply patient with fresh air. If not breathing, provide artificial respiration. Keep patient warm.

Seek immediate medical advice.

In case of skin contact:

Immediately wash with soap and water; rinse thoroughly.

Seek immediate medical advice.

In case of eye contact:

Rinse opened eye for several minutes under running water. Consult a physician.

If swallowed:

Seek medical treatment.

Information for doctor

Most important symptoms and effects, both acute and delayed

No data available

Indication of any immediate medical attention and special treatment needed

No data available

---

### **SECTION 5. FIREFIGHTING MEASURES**

Extinguishing media

Suitable extinguishing agents Special powder for metal fires. Do not use water.

For safety reasons unsuitable extinguishing agents

Water

Special hazards arising from the substance or mixture

In case of fire, the following can be released:

Toxic metal oxide fume

Advice for firefighters

Protective equipment:

Wear self-contained respirator.



Wear fully protective impervious suit.

---

## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Keep away from ignition sources

Environmental precautions:

Do not allow material to be released to the environment without official permits.

Methods and materials for containment and cleanup:

Ensure adequate ventilation.

Keep away from ignition sources.

Reference to other sections

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

---

## **SECTION 7. HANDLING AND STORAGE**

Handling

Precautions for safe handling

Handle under dry protective gas.

Keep container tightly sealed.

Store in cool, dry place in tightly closed containers.

Ensure good ventilation at the workplace.

Information about protection against explosions and fires:

Protect against electrostatic charges.

Conditions for safe storage, including any incompatibilities

Requirements to be met by storerooms and receptacles: Store in a cool location.

Information about storage in one common storage facility:

Store away from oxidizing agents.

Store away from halogens.

Do not store with interhalogens.

Store away from phosphorus.

Store away from air.

Further information about storage conditions:

Store under dry inert gas.

Keep container tightly sealed.

Store in cool, dry conditions in well-sealed containers.

This product is air sensitive.

Specific end use(s) No data available



---

## **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Additional information about design of technical systems:

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Control parameters

Components with limit values that require monitoring at the workplace:

Additional information: No data

Exposure controls

Personal protective equipment

Follow typical protective and hygienic practices for handling chemicals.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

Maintain an ergonomically appropriate working environment.

Breathing equipment: Use suitable respirator when high concentrations are present.

Protection of hands:

Impervious gloves

Inspect gloves prior to use.

Material of gloves

The selection of suitable gloves not only depends on the material, but also on quality.

Quality will vary from manufacturer to manufacturer.

Eye protection: Safety glasses

Body protection: Protective work clothing.

---

## **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Information on basic physical and chemical properties

Appearance:

Form: Disc/Target

Color: grey

pH: N/A

Melting point/Melting range: 3045°C (5513 °F)

Boiling point/Boiling range: 5027°C (9081 °F)

Sublimation temperature / start: No data available

Flammability (solid, gas) Highly flammable.

Ignition temperature: No data available

Decomposition temperature: No data available

Autoignition: No data available.

Explosion limits:

Lower: No data available



Upper: No data available  
Vapor pressure at 2450°C (4442 °F): 0.0013 hPa  
Density at 20°C (68 °F): 22.61 g/cm<sup>3</sup> (188.68 lbs/gal)  
Relative density No data available.  
Vapor density N/A  
Evaporation rate N/A  
Solubility in / Miscibility with  
Water: Insoluble  
Segregation coefficient (n-octanol/water): No data available.  
Viscosity:  
Dynamic: N/A  
Kinematic: N/A  
Other information No data available

---

## **SECTION 10. STABILITY AND REACTIVITY**

Reactivity  
Chemical stability  
Thermal decomposition / conditions to be avoided:  
Decomposition will not occur if used and stored according to specifications.  
Possibility of hazardous reactions  
Osmium powder forms toxic osmium tetroxide when exposed to air.  
Incompatible materials:  
Air  
Oxidizing agents  
Halogens  
Interhalogens  
Phosphorus  
Hazardous decomposition products: Toxic metal oxide fume

---

## **SECTION 11. TOXICOLOGICAL INFORMATION**

Information on toxicological effects  
Acute toxicity:  
Primary irritant effect:  
on the skin: May cause irritation  
on the eye: May cause irritation  
Sensitization: No sensitizing effects known.  
Additional toxicological information:  
To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.  
No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.  
The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute and/or other multiple dose



toxicity data for components in this product.

---

## **SECTION 12. ECOLOGICAL INFORMATION**

Toxicity

Aquatic toxicity: No data available

Persistence and degradability No data available

Behavior in environmental systems:

Bioaccumulative potential No data available

Mobility in soil No data available

Additional ecological information:

Do not allow material to be released to the environment without official permits.

Results of PBT and vPvB assessment

PBT: N/A

vPvB: N/A

Other adverse effects No data available

---

## **SECTION 13. DISPOSAL CONSIDERATIONS**

Waste treatment methods

Recommendation Consult official regulations to ensure proper disposal.

Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

---

## **SECTION 14. TRANSPORT INFORMATION**

UN-Number

DOT, ADR, ADN, IMDG, IATA N/A

UN proper shipping name

DOT, ADR, ADN, IMDG, IATA N/A

Transport hazard class(es)

DOT, ADR, ADN, IMDG, IATA

Class N/A

Packing group

DOT, ADR, IMDG, IATA N/A

Environmental hazards:

Marine pollutant: Yes (PP)

Special precautions for user N/A

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code N/A

---

## **SECTION 15. REGULATORY**



## INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

Product related hazard informations:

Hazard symbols:

F Highly flammable

Risk phrases:

11 Highly flammable.

National regulations

All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.

All components of this product are listed on the Canadian Domestic Substances List (DSL).

Information about limitation of use: For use only by technically qualified individuals.

Other regulations, limitations and prohibitive regulations

REACH - Pre-registered substances Substance is listed.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

---

## 16. OTHER INFORMATION

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. American Elements shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. COPYRIGHT 1997-2022 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.