

Safety Data Sheet

Section 1: Identification

Product Identifier:

- Tungsten

Manufacturer:

- Inweld Corporation
- Address: 3962 Portland St, Coplay, PA 18037, UNITED STATES
- Phone Number: (800) 346-5368

Emergency Phone Number:

- CHEMTREC: (800) 424-9300

Recommended Use:

- Welding, Brazing, and other metal fabrication processes

Restrictions on Use:

- For industrial use only.

Section 2: Hazard(s) Identification

Classification (GHS):

- Carcinogenicity, Category 2 (H351)
- Specific target organ toxicity – repeated exposure (STOT RE), Category 2 (H373)
- Hazardous to the aquatic environment – Chronic Hazard, Category 3 (H412)

Signal Word:

- **Danger**

Hazard Statements:

- H351: Suspected of causing cancer.

- H373: May cause damage to organs through prolonged or repeated exposure.
- H412: Harmful to aquatic life with long lasting effects.

Precautionary Statements:

- P201: Obtain special instructions before use.
- P260: Do not breathe dust/fume/gas/mist/vapors/spray.
- P264: Wash thoroughly after handling.
- P270: Do not eat, drink or smoke when using this product.
- P308 + P313: IF exposed or concerned: Get medical advice/attention.
- P405: Store locked up.
- P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

GHS Pictograms:



Section 3: Composition/Information on Ingredients

Product Type	Chemical Name	CAS Number	Typical Composition (% w/w)
Pure Tungsten (WP)	Tungsten	7440-33-7	≥ 99.9%
Tungsten-Thorium (WT)	Tungsten	7440-33-7	Tungsten ≥ 97%, Thorium Oxide (ThO ₂) 1.5 – 2.0%
Tungsten-Cerium (WCe)	Tungsten	7440-33-7	Tungsten ≥ 97%, Cerium Oxide (CeO ₂) 1.5 – 2.0%
Tungsten-Lanthanum (WLan)	Tungsten	7440-33-7	Tungsten ≥ 97%, Lanthanum Oxide (La ₂ O ₃) 1.5 – 2.0%

Product Type	Chemical Name	CAS Number	Typical Composition (% w/w)
Tungsten-Zirconium (WZr)	Tungsten	7440-33-7	Tungsten $\geq 97\%$, Zirconium Oxide (ZrO_2) 0.15 – 0.40%

Section 4: First-Aid Measures

Inhalation:

- Move to fresh air. If breathing is difficult, give oxygen. Get medical attention if symptoms persist.

Skin Contact:

- Wash skin thoroughly with soap and water. Remove contaminated clothing. Seek medical attention if irritation develops.

Eye Contact:

- Rinse immediately with plenty of water for at least 15 minutes. Seek medical attention if irritation persists.

Ingestion:

- Rinse mouth. Do NOT induce vomiting. Seek medical attention.

Section 5: Fire-Fighting Measures

Suitable Extinguishing Media:

- Use dry chemical, CO₂, or foam.

Specific Hazards:

- Tungsten metal dust may ignite if finely divided and exposed to flame or spark. Avoid creating dust clouds.

Protective Equipment:

- Firefighters should wear self-contained breathing apparatus and protective clothing.

Section 6: Accidental Release Measures

Personal Precautions:

- Avoid dust formation. Use personal protective equipment.

Environmental Precautions:

- Prevent entry into waterways.

Methods for Cleanup:

- Sweep or vacuum dust carefully to avoid dust generation. Place in suitable container for disposal.

Section 7: Handling and Storage

Handling:

- Avoid inhalation of dust/fumes. Use adequate ventilation. Avoid contact with skin and eyes.

Storage:

- Store in a cool, dry place. Keep container tightly closed. Store away from incompatible materials.

Section 8: Exposure Controls/Personal Protection

Exposure Limits:

- Tungsten (as dust): OSHA PEL: 5 mg/m³ (respirable), ACGIH TLV: 5 mg/m³ (inhalable fraction)

Engineering Controls:

- Use local exhaust ventilation to maintain exposure below limits.

Personal Protective Equipment:

- Respiratory protection: NIOSH-approved dust respirator if ventilation is inadequate.
- Eye protection: Safety goggles.
- Skin protection: Gloves and protective clothing.

Section 9: Physical and Chemical Properties

Property	Value
Appearance	Gray metallic solid
Odor	Odorless
Melting Point	3422 °C
Boiling Point	5555 °C
Density	19.25 g/cm ³
Solubility	Insoluble in water
Vapor Pressure	Negligible

Section 10: Stability and Reactivity

Stability:

- Stable under normal conditions.

Conditions to Avoid:

- Avoid generating dust and exposure to ignition sources.

Incompatible Materials:

- Strong acids, strong oxidizers.

Hazardous Decomposition Products:

- None under normal conditions.

Section 11: Toxicological Information

Routes of Exposure:

- Inhalation, skin contact, eye contact.

Acute Toxicity:

- Low toxicity by ingestion or dermal exposure.

Chronic Effects:

- Prolonged inhalation of dust/fumes may cause lung effects. Suspected carcinogen.

Section 12: Ecological Information

- Harmful to aquatic life with long-lasting effects. Avoid release to environment.

Section 13: Disposal Considerations

- Dispose in accordance with local, state, and federal regulations. Do not dispose of in the environment.

Section 14: Transport Information

- Not regulated under DOT for transport in solid metal form.

Section 15: Regulatory Information

- OSHA Hazard Communication Standard compliant.
- Listed as a suspected carcinogen by IARC (Group 2B).

Section 16: Other Information

Prepared by: Inweld Corporation

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