

15117 Washington Highway
P. O. Box 1055 Ashland VA

Phone: (804) 227-3381
Fax: (804) 227-3404

CHEMTREC: (800) 424-9300
Poison Center: (800) 562-8236

Safety Data Sheet

Section 1: Product and Company Information

Product Name: Tungsten
Company: Fine Metals Corporation
15117 Washington Hwy
Ashland, VA 23005

For more information call: 1-804-227-3381
(Monday - Friday 9-4:30)

In case of emergency: Transportation (Chemtrec) 1-800-424-9300
Poison Center: 1-800-562-8236
(24 hours/day, 7 days/week)

Section 2: HAZARD IDENTIFICATION

This material is not considered hazardous and is not classified under GHS

Emergency Overview

Emergency Negligible fire or explosion hazard in bulk form. Powdered material may form explosive dust-air mixtures.

Hazard Statements: Not a hazardous substance or mixture.

Precautionary Statements:

Prevention: None.

Response: None.

Appearance/Form:

Form: Solid

Color: Steel gray

Odor: None

Hazard Summary: Dusts may present a fire or explosion hazard under rare favoring conditions of particle size, dispersion, and strong ignition source. However, this is not expected to be a problem under normal handling conditions. Metal oxide fumes may be released in a fire.

Acute Health Effects

Skin: May cause mechanical irritation.

Eyes: Dust may cause mechanical irritation of the eyes.

Ingestion: Ingestion may cause gastrointestinal irritation, nausea and vomiting.

Inhalation: May cause irritation.

Chronic Exposure: Chronic inhalation of the dust may cause lung damage in humans.

Aggravated Medical Conditions: None known

Carcinogenicity: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP, IARC, or OSHA.

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Section 3: Composition/Information on Ingredients

| Chemical Name | CAS-No. | | Reach # | |
|---------------|-----------|---------------|-----------|---------|
| Tungsten | 7440-33-7 | Not available | 231-143-9 | >99 wt% |

Eye Contact: If irritation occurs, flush with large amounts of water for at least 15 minutes. If irritation persists, seek medical attention.

Skin Contact: Wash with soap and water. If irritation or rash occurs, isolate from exposure. If rash persists, seek medical attention

Inhalation: If large amounts of dust are inhaled, move the exposed person to fresh air. If necessary, perform artificial respiration and seek medical attention.

Ingestion: Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. If victim is fully conscious, give a cupful of water. Call a physician.

Section 5: FIRE FIGHTING MEASURES

Suitable extinguishing Media: Use class D fire extinguishing agents (dry powder)

Unsuitable extinguishing media: Do not use water.

Specific hazards during firefighting: Dusts at a sufficient concentrations can form explosive mixtures with air. Toxic metal fumes may form in fire.

Special protective equipment for firefighters: As in any fire, wear self contained breathing apparatus pressure-demand, (MSHA/NIOSH approved or equivalent) and full protective gear.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions: Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Avoid breathing dust. Practice good chemical hygiene.

Environmental Precautions: Do not allow material to be released to the environment without proper governmental permits.

Methods for Cleaning Up: If material is released or spilled, ventilate the area of the spill. Clean up using methods which avoid the generation of dusts. Such methods include wet mopping or vacuuming (assuring that the vacuum is equipped with the proper filter to prevent airborne dust levels which exceed the PEL or TLV).

Section 7: HANDLING AND STORAGE

Handling: Tungsten is, in general, a safe material to handle and use under almost all commonly encountered environments. Special precautions should be observed in order to minimize the dust created. The generation of dust or mists may present a health hazard if the exposure limits, as described above, are exceeded. Maintain good housekeeping procedures to prevent the accumulation of dust and the generation of airborne dust particles. Avoid dust inhalation and direct skin contact with the dust. Wash hands thoroughly before eating or smoking. Wash exposed skin at the end of the work shift.

Storage: Store away from incompatible materials in a cool dry location.

Section 8: EXPOSURE CONTROL/PERSONAL PROTECTION

Engineering Controls: Use process enclosures, local exhaust ventilation or other means to maintain employee exposure as far below limits as possible

Component Exposure Limits

| Component | Location | Value |
|-----------|-------------------------|-------|
| Tungsten | ACGIH TLV TWA | 5 |
| | OSHA OEL TWA | 5 |
| | OSHA OEL STEL | 10 |
| | NIOSH REL TWA | 5 |
| | NIOSH REL STEL | 10 |
| | Canada - AB, BC, ON, PQ | 5 |
| | Canada - AB, BC, ON, PQ | 10 |

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| | |
|--------------------------|----|
| Europe TWA | 5 |
| Europe STEL | 10 |
| Australia, NZ, Singapore | 5 |
| Australia, NZ, Singapore | 10 |
| UK WEL TWA | 5 |
| UK WEL STEL | 10 |

Engineering Controls: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Respiratory Protection: Not normally needed. If ventilation is inadequate and this material is handled at elevated temperatures or dust/fumes/mists are generated a NIOSH/MSHA approved air purifying respirator with a manufacturers approved cartridge or canister may be permissible under certain circumstances.

Eye/Face: Wear safety glasses or goggles as appropriate to the task performed.

Skin Protection: Protective gloves or barrier creams are recommended when contact with dust or mist is likely. Wash thoroughly prior to applying barrier creams or using protective gloves.

Work Hygienic Practices: Practice good chemical hygiene.

Comments:

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Solid

Odor: None

Color: Steel grey

Melting Point: 3410° C

Boiling Point: 5900° C

Vapor Pressure: 0 @ 250° C

Vapor Density (air = 1): N/A

Evaporation Rate: N/A

Solubility In Water: Insoluble

Specific Gravity (water = 1): 19.3

Atomic Weight: 183.85

% Volatility By Volume: No information available

Density: 19.3

Section 10: STABILITY AND REACTIVITY

Stability: Stable under normal conditions and usage.

Incompatible Materials: Oxidizing agents

Hazardous Decomposition Products: Metal oxide fumes

Products:

Possibility of Hazardous Reactions: No information available

Reactions:

Section 11: TOXICOLOGICAL INFORMATION

Acute Toxicity: Tungsten itself does not constitute an important health hazard. Exposure is related chiefly to any dust created. Heavy exposure to the dust or the ingestion of large amounts of the soluble compounds produces changes in body weight, behavior, blood cells, choline esterase activity and sperm in experimental animals.

Chronic Toxicity: No known effect.

Reproductive Toxicity: No known effect.

Mutagenicity: No known effect.

Carcinogenicity: No known effect.

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

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Section 12: ECOLOGICAL INFORMATION

Ecotoxicity: No data available

Persistence/Degradability: No data available

Bioaccumulation/Accumulation: No data available

Mobility in Environment: No data available

Section 13: DISPOSAL CONSIDERATIONS

Waste Classification: Recycling is best option for disposal.

All disposal activities must comply with federal, state, provincial and local regulations.

Section 14: TRANSPORT INFORMATION

US DOT (ground): Not regulated.

ICAO/IATA (air): Not regulated.

IMO/IMDG (water): Not regulated.

Special Provisions:

Section 15: REGULATORY INFORMATION

UNITED STATES

SARA Title III (Superfund Amendments and Reauthorization Act) 313 Reportable Ingredients: No

TSCA (Toxic Substance Control Act) status: All components of this product are included in inventory, exempt, or notified.

STATE REGULATIONS

The following components appear in one or more of the following states hazardous substances

| Component | CAS # | CA | MA | MN | NJ |
|-----------|-----------|----|----|-----|-----|
| Tungsten | 7440-33-7 | No | No | Yes | Yes |

California Proposition 65: This product is not known to contain any components for which the State of California has found to cause cancer, birth defects or other reproductive harm.

CANADA

WHMIS (Workplace Hazardous Materials Information System): All components of this product are included in inventory, exempt, or notified.

Domestic Substance List (Inventory): All components of this product are included in inventory, exempt, or notified.

GENERAL COMMENTS

None

Section 16: OTHER INFORMATION

Information Contact: sds@finemetalscorp.com

Issue Date: 7/9/1999

Revision Date: 1/1/2015

Section 4: FIRST AID MEASURES

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| HMIS® (II) | | NFPA | |
|---------------|---|------|---|
| Health: | 0 | | |
| Flammability: | 0 | 0 | |
| Reactivity: | 0 | 0 | 0 |

PPE:

Ratings range from 0 (no hazard) to 4 (severe hazard)

The information contained in this SDS is believed to be correct, but is not all inclusive and shall be used only as a guide. Fine Metals Corporation shall not be liable for any damage resulting from handling or from contact with the product listed in the SDS. Any comments or questions should be directed to:

Safety Manager
Fine Metals Corporation
15117 Washington Highway
P O Box 1055
Ashland VA 23005
(804) 227-3381

