



Super Conductor Materials, Inc.

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Chemtrec: (800) 424-9300
Poison Center: (800) 562-8236
Revision Date: January 8th, 2019

SAFETY DATA SHEET

Identity: Tungsten

Formula: W

SECTION I - GENERAL INFORMATION

Manufacturer: Super Conductor Materials, Inc.

The information below is believed to be accurate and represents the best information available to Super Conductor Materials, Inc. However, SCM makes no warranty, expressed or implied with respect to such information and assumes no liability resulting from its use.

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Molecular Weight: 183.85

CAS #	OSHA PEL	ACGIH TLV	%
7440-33-7	5 mg/m ³	5 mg/m ³	0.0-100.0%

SECTION III - PHYSICAL CHEMICAL CHARACTERISTICS

Physical States: Powder/Solid

Boiling Point: 5900°C	Specific Gravity (H ₂ O=1): 19.3 gm/cm ³
Melting Point: 3410°C	Vapor Pressure: essentially 0 at 20°C
Evaporation Rate: N/A	Vapor Density: N/A
Solubility in water: Insoluble	Flash Point: N/A

Appearance and odor: Gray-white powder and pieces, odorless

SECTION IV - FIRE AND EXPLOSION HAZARD DATA:

Method Used: Unknown *Explosive Limits:* LEL: NA UEL: NA
Extinguishing media: Use suitable extinguishing agent for surrounding material and type of fire.

Special Fire Fighting Procedures:

Tungsten powder may present a fire or explosion hazard under favoring conditions of particle size, dispersion and strong ignition source. Cover burning material with an inert substance, such as dry sand, salt, or limestone to exclude oxygen. Use dry chemical to fight fire.

Unusual Fire and Explosion Hazards: Not attacked by water, but oxidized by steam.

SECTION V - REACTIVITY DATA

Stability: Stable
Conditions to Avoid (Instability): None



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Incompatibility: Bromine pentafluoride; bromine; chlorine trifluoride; potassium perchlorate; potassium dichromate; nitryl fluoride; fluorine; oxygen difluoride; iodine pentafluoride; hydrogen sulfide; sodium peroxide; lead (IV) oxide; air

Hazardous Decomposition or Byproducts: None recorded

Hazardous Polymerization: Will not occur

Conditions to avoid (Hazardous Polymerization): None

SECTION VI - HEALTH HAZARD DATA

Routes of entry: Inhalation? Yes Ingestion? Yes Eyes? Yes Skin? Yes Other? No

To the best of our knowledge the chemical, physical and toxicological properties of tungsten metal have not been thoroughly investigated and recorded.

TUNGSTEN COMPOUNDS: Industrially, this element does not constitute an important health hazard. Exposure is related chiefly to the dust arising from the crushing and milling of the two chief ores of tungsten, namely sheelite and wolframite. Large overdoses cause central nervous system disturbances, diarrhea, respiratory failure and death in experimental animals. (Sax, Dangerous Properties of Industrial Materials eighth edition)

Signs and Symptoms of Overexposure:

Inhalation: May cause a red, dry throat, coughing and shortness of breath.

Ingestion: May cause diarrhea.

Skin: May cause redness and itching.

Eyes: May cause redness, itching and watering.

Health Hazards (Acute and Chronic):

Inhalation:

Acute: May cause irritation to the respiratory tract.

Chronic: No chronic health effects recorded.

Ingestion:

Acute: No acute health effects recorded.

Chronic: Large overdoses may cause nervous system disturbances, and diarrhea.

Skin:

Acute: May cause abrasive irritation.

Chronic: No chronic health effects recorded.

Eyes:

Acute: May cause abrasive irritation.

Chronic: No chronic health effects recorded.

Target Organs: May affect the respiratory and central nervous system.

Carcinogenicity: NTP? Yes IARC Monographs? Yes OSHA Regulated? Yes

Medical Conditions Generally Aggravated by Exposure: Pre-existing respiratory disorders.



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Emergency and First Aid Procedures:

- Inhalation:** Remove victim to fresh air, keep warm and quiet, and give oxygen if breathing is difficult; seek medical attention
- Ingestion:** Give 1-2 glasses of milk or water and induce vomiting, seek medical attention. Never induce vomiting or give anything by mouth to an unconscious person
- Skin:** Remove contaminated clothing, brush material off skin, wash affected area with mild soap and water, and seek medical attention if symptoms persist
- Eye:** Flush eyes with lukewarm water, lifting upper and lower eyelids for at least 15 minutes and seek medical attention

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to be taken in case material is released or spilled:

Wear appropriate respiratory and protective equipment specified in section VIII. Isolate spill area, provide ventilation and extinguish sources of ignition. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for proper disposal. Take care not to raise dust.

Waste disposal method:

Dispose of in accordance with state, local, and federal regulations.

Hazard Label Information:

Store in cool, dry area and in tightly sealed container. Wash thoroughly after handling.

SECTION VIII - CONTROL MEASURES

Protective Equipment Summary (Hazard Label Information):

NIOSH approved respirator, impervious gloves, safety glasses, clothes to prevent contact.

Ventilation:

Local Exhaust: To maintain concentration at low exposure levels.

Mechanical (General): Recommended.

Work/Hygienic/Maintenance Practices:

Implement engineering and work practice controls to reduce and maintain concentration of exposure at low levels. Use good housekeeping and sanitation practices. Do not use tobacco or food in work area. Wash thoroughly before eating or smoking. Do not blow dust off clothing or skin with compressed air.

Please be advised that N/A can either mean Not Applicable or No Data Has Been Established