



# Super Conductor Materials, Inc.

391 Spook Rock Industrial Park, Suffern, NY 10901 · 845.368.0240 · Fax 845.368.0250 · www.scm-inc.com

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

## SAFETY DATA SHEET

Identity: Tungsten Oxide

Formula: WO<sub>3</sub>

### 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: 231.85

CAS #	OSHA PEL	ACGIH TLV	%
1314-35-8	N/A	5mg/m <sup>3</sup>	0.0-100.0%

### SECTION III - PHYSICAL CHEMICAL CHARACTERISTICS

Physical States: Solid

Boiling Point: N/A	Specific Gravity (H <sub>2</sub> O=1): 7.16 gm/cc
Melting Point: 1473.00°C	Vapor Pressure: (vs. air or mmHg): N/A
Evaporation Rate: N/A	Vapor Density (vs. air=1): N/A
Solubility in water: Insoluble	Flash Point: N/A

*Appearance and odor:* Violet blue or yellow green, heavy powder or pieces, no odor. When heated, turns dark orange.

### SECTION IV - FIRE AND EXPLOSION HAZARD DATA:

Method Used: Unknown      Extinguishing Media: LEL: NA      UEL: NA  
*Extinguishing Method:* In case of fire, use suitable methods for surrounding fires.

#### *Special Fire Fighting Procedures:*

Firefighters must wear full face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. Fumes from fires are hazardous. Isolate runoff to prevent environmental pollution.

#### *Unusual Fire and Explosion Hazards:*

When heated to decomposition, tungsten oxide may emit toxic fumes.  
May have a violent reaction with lithium, ClF<sub>3</sub> and Cl<sub>2</sub>.



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## SECTION V - REACTIVITY DATA

*Stability:* Stable

*Conditions to Avoid:* None

*Incompatibility (Materials to Avoid):* Lithium,  $\text{ClF}_3$ ,  $\text{Cl}_2$

*Hazardous Decomposition 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 oxide 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. (Sax, Dangerous Properties of Industrial Materials eighth edition)

### Sign 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.

*Eye:* 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:* Moderately toxic by ingestion.

*Chronic:* Large overdose may cause nervous system disturbances and diarrhea.

#### *Skin:*

*Acute:* May cause abrasive irritation.

*Chronic:* No chronic health effects recorded.

#### *Eye:*

*Acute:* May cause abrasive irritation.

*Chronic:* No chronic health effects recorded.

*Target Organs:* May effect respiratory and central nervous system.

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

*Medial conditions Generally Aggravated by Exposure:* Pre-existing disorders.

### 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



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*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 – SPECIAL PRECAUTIONS

*Precautions to be taken in Handling and Storage:* Store in cool, dry area and in tightly sealed container. Wash thoroughly after handling.

*Steps to be taken in case material is released or spilled:* Wear appropriate respiratory and protective equipment specified below. Isolate spill area and provide ventilation. Vacuum up spill using 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:* In accordance with Federal, State and Local Regulations.

### SECTION VIII – PROTECTIVE EQUIPMENT

*Protective Equipment Summary (Hazard Label Information):*

NIOSH approved respirator, impervious gloves, safety glasses, and 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