



**CHINATUNGSTEN**

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## **Tungsten Oxide MSDS**

### **I. PRODUCT IDENTIFICATION**

**Trade Name:** Tungsten Oxide

**Formula:** WO<sub>3</sub>

**CAS Number:** 1314-35-8

### **II. HAZARDOUS INGREDIENTS**

**Hazardous Component:** Tungsten Oxide

**Percent (%):** 0-100

**OSHA/PEL:** 10 mg/m<sup>3</sup>

**ACGIH/TLV:** 5 mg/m<sup>3</sup>

**HMIS Ratings:**

**Health:** 2

**Flammability:** 0

**Reactivity:** 0

### **III. PHYSICAL DATA**

**Boiling Point:** N/E

**Melting Point:** 1473 °C

**Specific Gravity:** 7.16 g/cc

**Solubility in H<sub>2</sub>O:** Insoluble

**Appearance and Odor:** Yellow to yellow green powder or pieces, no odor.

### **IV. FIRE AND EXPLOSION HAZARDS DATA**

**Flash Point:** N/A

**Autoignition Temperature:** N/A

**Flammable Limits: Upper:** N/A **Lower:** N/A

**Extinguishing Media:** Use suitable extinguishing agent for surrounding material and type of fire.

**Special Firefighting Procedures:** Firefighters must wear full face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. Fumes from fire 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,  $\text{ClF}_3$  and  $\text{Cl}_2$ .

## **V. HEALTH HAZARD INFORMATION**

### **Effects of Exposure:**

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

Industrially, tungsten oxide 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 scheelite 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).

### **Acute Effects:**

**Inhalation:** May cause irritation to the respiratory tract.

**Ingestion:** Moderately toxic by ingestion.

**Skin:** May cause abrasive irritation.

**Eye:** May cause abrasive irritation.

### **Chronic Effects:**

**Inhalation:** No chronic health effects recorded.

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

**Skin:** No chronic health effects recorded.

**Eye:** No chronic health effects recorded.

**Routes of Entry:** Inhalation, Skin, Eyes, and Ingestion.

**Target Organs:** May affect the respiratory and central nervous systems.

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

**Carcinogenicity:** NTP: No IARC: No OSHA: No

## **EMERGENCY AND FIRST AID PROCEDURES:**

**INHALATION:** Remove to fresh air, keep warm and quiet, give oxygen if breathing is difficult and seek medical attention if symptoms persist.

**INGESTION:** Give 1-2 glasses of milk or water and induce vomiting, seek medical attention if symptoms persist. 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, seek medical attention if symptoms persist.

**EYES:** Flush eyes with lukewarm water, lifting upper and lower eyelids, for at least 15 minutes. Seek medical attention if symptoms persist.

## **VI. REACTIVITY DATA**

**Stability:** Stable

**Conditions to Avoid:** None

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

**Hazardous Decomposition Products:** None

**Hazardous Polymerization:** Will not occur

## **VII. SPILL OR LEAK PROCEDURES**

**Steps to Be Taken in Case Material Is Released or Spilled:** Wear appropriate respiratory and protective equipment specified in section VIII. Isolate spill area and provide ventilation. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for disposal. Take care not to raise dust.

**Waste Disposal Method:** Dispose of in accordance with Local, State And Federal regulations.

## **VIII. SPECIAL PROTECTION INFORMATION**

**Respiratory Protection:** NIOSH approved dust, mist respirator.

**Ventilation:** Use local exhaust to maintain concentration at or below TLV. General exhaust is recommended

**Protective Gloves:** Rubber Gloves

**Eye Protection:** Safety Glasses

**Other Protective Clothing or Equipment:** Protective gear suitable to prevent contamination.

## **IX. SPECIAL PRECAUTIONS**

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

**Work 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 and smoking. Do not blow dust off clothing or skin with compressed air. Maintain eyewash capable of sustained flushing, safety drench shower and facilities for washing.

**TSCA Listed:** Yes

**DOT Regulations:**

**Hazard Class:** None

The above information is believed to be correct, but does not purport to be all inclusive and shall be used only as a guide. ESPI shall not be held liable for any damage resulting from handling or from contact with the above product.