

# Material Safety Data Sheet

## Section 1 - Chemical Product and Company Identification

**Product Name:** Tungsten Disulfide (WS<sub>2</sub>)

**Manufacturer's Name:** Changsha Huajing Powdery Material Technological Co., Ltd

**Address:** heping building, Central-South university, Changsha, HuNan, China

**Tel:** 0086-731-88879686

**Fax:** 0086-731-88836388

**Website:** <http://www.hjfriction.com>

## Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
12138-09-9	Tungsten Disulfide	99.9	235-243-3

## Section 3 - Hazards Identification

### EMERGENCY OVERVIEW

Appearance: dark gray powder.

**Caution!** May cause eye and skin irritation. May cause respiratory and digestive tract irritation. The toxicological properties of this material have not been fully investigated.

**Target Organs:** No data found.

#### Potential Health Effects

**Eye:** May cause eye irritation.

**Skin:** May cause skin irritation.

**Ingestion:** May cause irritation of the digestive tract. The toxicological properties of this substance have not been fully investigated.

**Inhalation:** May cause respiratory tract irritation. The toxicological properties of

this substance have not been fully investigated.

**Chronic:** No information found.

## Section 4 - First Aid Measures

**Eyes:** Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

**Skin:** Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

**Ingestion:** Never give anything by mouth to an unconscious person. Get medical aid. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

**Inhalation:** Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

**Notes to Physician:** Treat symptomatically and supportively.

## Section 5 - Fire Fighting Measures

**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Runoff from fire control or dilution water may cause pollution.

**Extinguishing Media:** In case of fire, use water, dry chemical, chemical foam, or alcohol-resistant foam. Use agent most appropriate to extinguish fire.

**Flash Point:** Not available.

**Autoignition Temperature:** Not available.

**Explosion Limits, Lower:** Not available.

**Upper:** Not available.

**NFPA Rating:** (estimated) Health: 1; Flammability: 0; Instability: 0

## Section 6 - Accidental Release Measures

**General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:** Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation.

## Section 7 - Handling and Storage

**Handling:** Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation.

**Storage:** Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

## Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels.

### Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Tungsten Disulfide	5 mg/m <sup>3</sup> TWA (listed under Tungsten).10 mg/m <sup>3</sup> STEL (listed under Tungsten).	5 mg/m <sup>3</sup> TWA (listed under Tungsten).5 mg/m <sup>3</sup> TWA (as W) (listed under Tungsten, insoluble compounds).	none listed

**OSHA Vacated PELs:** Tungsten Disulfide: No OSHA Vacated PELs are listed for this chemical.

### Personal Protective Equipment

**Eyes:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin:** Wear appropriate protective gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to minimize contact with skin.

**Respirators:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

## Section 9 - Physical and Chemical Properties

**Physical State:** Powder

**Appearance:** dark gray

**Odor:** Not available.

**pH:** Not available.

**Vapor Pressure:** Not available.

**Vapor Density:** Not available.

**Evaporation Rate:** Not available.

**Viscosity:** Not available.

**Boiling Point:** Not available.

**Freezing/Melting Point:** > 1480 deg C

**Decomposition Temperature:** Not available.

**Solubility:** Not available.

**Specific Gravity/Density:** 7.5000g/cm<sup>3</sup>

**Molecular Formula:** WS<sub>2</sub>

**Molecular Weight:** 247.98

## Section 10 - Stability and Reactivity

**Chemical Stability:** Stable under normal temperatures and pressures.

**Conditions to Avoid:** Incompatible materials, dust generation, excess heat, strong oxidants.

**Incompatibilities with Other Materials:** Oxidizing agents, strong acids.

**Hazardous Decomposition Products:** Irritating and toxic fumes and gases, hydrogen sulfide, sulfur oxides (SO<sub>x</sub>), including sulfur oxide and sulfur dioxide.

**Hazardous Polymerization:** Has not been reported

## Section 11 - Toxicological Information

**RTECS#:**

**CAS#** 12138-09-9 unlisted.

**LD50/LC50:**

Not available.

**Carcinogenicity:**

CAS# 12138-09-9: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

**Epidemiology:** No information found

**Teratogenicity:** No information found

**Reproductive Effects:** No information found

**Mutagenicity:** No information found

**Neurotoxicity:** No information found

**Other Studies:**

## Section 12 - Ecological Information

No information available.

## Section 13 - Transport Information

	US DOT	Canada TDG
<b>Shipping Name:</b>	Not regulated as a hazardous material	No information available.
<b>Hazard Class:</b>		
<b>UN Number:</b>		
<b>Packing Group:</b>		

## Section 14 - Regulatory Information

**US FEDERAL**

## **TSCA**

CAS# 12138-09-9 is listed on the TSCA inventory.

### **Health & Safety Reporting List**

None of the chemicals are on the Health & Safety Reporting List.

### **Chemical Test Rules**

None of the chemicals in this product are under a Chemical Test Rule.

### **Section 12b**

None of the chemicals are listed under TSCA Section 12b.

### **TSCA Significant New Use Rule**

None of the chemicals in this material have a SNUR under TSCA.

### **CERCLA Hazardous Substances and corresponding RQs**

None of the chemicals in this material have an RQ.

### **SARA Section 302 Extremely Hazardous Substances**

None of the chemicals in this product have a TPO.

**Section 313** No chemicals are reportable under Section 313.

### **Clean Air Act:**

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depletors.

This material does not contain any Class 2 Ozone depletors.

### **Clean Water Act:**

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

### **OSHA:**

None of the chemicals in this product are considered highly hazardous by OSHA.

## **STATE**

CAS# 12138-09-9 can be found on the following state right to know lists: California, (listed as Tungsten), New Jersey, (listed as Tungsten), Pennsylvania, (listed as Tungsten), Minnesota, (listed as Tungsten), Massachusetts, (listed as Tungsten).

### **California Prop 65**

California No Significant Risk Level: None of the chemicals in this product are listed.

## **European/International Regulations**

### **European Labeling in Accordance with EC Directives**

#### **Hazard Symbols:**

Not available.

#### **Risk Phrases:**

**WGK (Water Danger/Protection)**

CAS# 12138-09-9: No information available.

**Canada - DSL/NDSL**

CAS# 12138-09-9 is listed on Canada's DSL List.

**Canada - WHMIS**

WHMIS: Not available.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

**Canadian Ingredient Disclosure List**

CAS# 12138-09-9 (listed as Tungsten) is listed on the Canadian Ingredient Disclosure List.