STANFORD
ADVANCED MATERIALS

SAFETY DATA SHEET

TUNGSTEN CARBIDE POWDER

C.A.S. Number: 12070-12-1

SECTION 1 – IDENTIFICATION

Product/Material:	**WP-300/301/302/304/305**
Product Name:	Tungsten Carbide Powder
CAS No.:	12070-12-1
Supplier's Details: **Address:**	Stanford Advanced Materials Address : 23661 Birtcher Dr., Lake Forest, CA 92630 U.S.A.
Telephone/Fax Numbers:	Tel: (949) 407-8904 Fax: (949) 812-6690
Emergency Contact: **CHEMTREC**	(949) 407-8904 (This telephone number is available 24 hours per day, 7 days per week.)

SECTION 2 – HAZARDS IDENTIFICATION

Emergency Overview: In the form of a powder, this odorless gray material may cause respiratory and/or skin irritation.

Signal Word: Warning

Pictogram:

Hazard Statement(s)

Causes respiratory tract, eye and skin irritation.

Precautionary Statement(s)

Avoid contact with eyes, skin and clothing.

Do not eat, drink or smoke when using this product.

Keep container closed, use protective equipment as required and wash thoroughly after handling.

Potential Health Effects (for powder exposure only)

Eyes:	May cause irritation-redness, pain or itching.
Skin:	May cause skin irritation.
Inhalation:	May cause coughing, dyspnea, soreness in the chest, weight loss, hemoptysis, bronchitis and asthma.
Ingestion:	May cause gastrointestinal irritation.
Medical Conditions Aggravated:	Certain pulmonary and skin conditions may be aggravated by exposure.
Chronic Overexposure:	May cause 'hard metal lung' with symptoms as described above for inhalation. Previously exposed individuals may be at increased risk.
Acute Overexposure:	See eyes, skin and inhalation.
Carcinogenicity:	None

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS No	EINECS No	OSHA/TLV (mg/m^3)	ACGIH TWA (mg/m^3)	Typical Weight %
Tungsten Carbide	12070-12-1	235-123-0		10	>99

SECTION 4 – FIRST-AID MEASURES

Eyes:	Flush with large amounts of water for 15 minutes. If irritation occurs, seek medical attention.
Skin:	Wash with soap and water. If irritation occurs, seek medical attention.
Inhalation:	If symptoms of coughing, wheezing, shortness of breath are persistent remove from exposure area to fresh air immediately.
Ingestion:	If large amounts are ingested, consume large quantities of water and induce vomiting. Seek medical attention.

SECTION 5 – FIRE-FIGHTING MEASURES

Flammable Properties:	Non-flammable
Flash Point:	None
Flammable Limits (% Vol in Air):	
Lower:	None
Upper:	None
Auto-Ignition Temperature:	N/A
Hazardous Combustion Products:	Acrid smoke and irritating fumes.
Extinguishing Media:	Dry extinguishing powder.
Fire-Fighting Instructions:	Fine tungsten carbide powder (less than 1 micron) can be a fire and explosive hazard when exposed to high temperatures or ignition sources. Cool containers exposed to flame with water from the side until well after fire is out.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Small/Large Spill: Sweep up with a minimum of dust generation and place into suitable clean dry containers for later disposal or reclamation. Residue should be cleaned up using a high efficiency particulate filter vacuum or wet cleanup. Use appropriate respiratory protection.

SECTION 7 – HANDLING AND STORAGE

Handling: Avoid dispersion of dust in air. Finely divided particles, dust or fumes may be flammable or explosive. Keep away from sparks or ignition sources.

Storage: Keep away from sparks or ignition. Contents should be stored in a clean, dry, cool area. Keep container closed and wash thoroughly after handling.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Provide exhaust ventilation or general dilution ventilation to maintain exposure levels below TLV/TWA.

Respiratory Protection: A NIOSH-approved respirator is required if TLV is exceeded.

Skin and Hand Protection: Appropriate protective gloves and clothing.

Eye and Face Protection: Safety glasses with side shields or goggles are recommended. An eyewash fountain should be provided in the immediate work area.

Other Protective Equipment: Employees must wear appropriate clothing and equipment to prevent repeated or prolonged skin contact.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Dark gray powder

Boiling Point: 6,000°C (10,832°F)

Melting Point: 2,870°C (5,198°F)

Vapor Pressure: N/A

Vapor Density: N/A

Solubility in Water: Insoluble

Specific Gravity: 15.7 g/cc

pH: N/A

Odor: None

Percent Volatiles: <0.1%

Evaporation Rate: N/A

SECTION 10 – STABILITY AND REACTIVITY

Chemical Stability: Stable

Incompatibility: Oxidizing agents

Hazardous Decomposition Products: Carbon monoxide and carbon dioxide

SECTION 11 – TOXICOLOGICAL INFORMATION

Overexposure to this material in the form of metallurgical powder may cause eye, skin and mucous membrane irritation. Toxicity has not been quantified.

SECTION 12 – ECOLOGICAL INFORMATION

None

SECTION 13 – DISPOSAL CONSIDERATIONS

Material can be reclaimed, if not dispose of the material in accordance with all government regulations.

SECTION 14 – TRANSPORT INFORMATION

Hazard Class: None

Not hazardous; not regulated by IATA, not restricted for transport by air by IATA.

SECTION 15 – REGULATORY INFORMATION

U.S. Federal Regulations

TSCA Status: Listed on Toxic Substance Control Inventory.

CERCLA Reportable Quantity: None

SARA TITLE III: Section 311/312 Hazardous Categories – Acute, Chronic

RCRA Status: Not regulated

International Regulations

Canadian WHMIS: Not regulated

Risk/Safety Phrases

22 - Do not breathe dust

33 - Take precautionary measures against static discharges

SECTION 16 – OTHER INFORMATION

HMIS Hazard Rating

Heath:	1
Fire:	0
Reactivity:	0

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