# MATERIAL SAFETY DATA SHEET

## I PRODUCT IDENTIFICATION

	FungstenCarbic WC	de		Chemical Fam CAS# :		fractory Metal Alloy 070-12-1		
II HAZARDOUS INGREDIENTS								
<u>Haz ardous C omponents</u>	%	OSHA/PEL	ACGIH/TLV	Sec. 302	Sec. 304	Sec. 313		
TungstenCarbide	0-100	N/E	N/E	No	No	No		
Tungstencompounds	0-100	5 mg/m <sup>3</sup>	C - 1 0 mg/m <sup>3</sup>	No	No	No		
HM IS Ratings (0-4): Health: 3 Flammability: 0 Reactivity : 0 HM IS Prote ctive Equipment: H: glasses, gloves, clothing, combo respirator								

# III PHYSICAL DATA

Boiling Point:	6000 °C	Melting Point:	2820 - 2940 °C
Evap oration Rate:	N/A	% Volatiles:	N/A
Solubility in H <sub>2</sub> O:	Insoluble	Vapor Pressure :	N/A
Vapo r Density :	N/E	Specific Gravity :	13.6 gm/ccat 18 °C
Appearance and Odor :	Grey to black powder, odorless	Molecular Weight:	195.86

#### IV FIRE AND EXPLOSION HAZARDS DATA

Flash Point: N/A Explosive Lim its: Lower: N/A Upper: N/A Flam mability: No n-flam mable

Extinguishing Media : Use suitable extinguishing media for surrounding materials and type of fire. Special Fire Fighting Procedures : Fire fighters must wear full face, self-contained breathing apparatus with full protective clothing to prevent contactwith skin and eyes. Fumes from fire are hazardous I solate runoff to prevent environmental pollution.

Unusual Hazard : Dusts may present afire or explosion hazard under rare favoring conditions of particle size, dispersion, and strong ignition source. However, this is not expected to be a problem under normal handling conditions.

## V HEALTH HAZARD INFORMATION

Routes of Entry : Inhalation, ingestion, skin or eye contact (for dusts, mistspowder and fume).

Effects of Overexposure : Industrially tungsten does not constitute an important health hazard. Expo sure is related chiefly to the dust arising out of the dushing and milling operations. Chronic inhalation of the dustmay cause lung damage in humans. Heavy exposure to the dustor the large amounts of the soluble compounds produces changes in body weight, behavior, blood cells, choline esterase activity and sperm in experimental animals.

Inhalation: Toxi c by inhalation. May cause irritation to the mucousmembranes, coughing,dyspnea,soreness in the chest, weight loss, hemoptysis, bronchitis, asthma, pulmonary fibrosis and radiological changes in the lungs. Ingestion: May cause irritation to the gastrointestinal tract and diarrhea. Skin : May cause irritation. Eye: May cause irritation.

Chro nic Effects :

Inhalation: May cause damage to thelungs. Ingestion: No chronic health effects recorded. Skin : May cause dermatitis, sensitization and eczema. Eye: May cause conjunctivitis.

Medical Conditions Generally Aggravated by Exposure : Pre-existing respiratory and skin disorders. Target Organs : May affect the respiratory system. Carcino genicity: NTP : No IARC : No OSHA : No

## EMERG ENCY AND FIRST AID PROCEDURES

INHAL ATI ON: Remove victim to fresh air. Keep warm and quiet, give oxygen if breathing is difficult and seek medical attention. INGES TI ON: If conscious, give 1-2 glasses of milk or water and induce vomiting (Never induce vomiting or give anything by mouth to an unconscious person). Seek medical attention.

SKIN : Remove contaminated clothing from affected area, brush material off skin. Wash affected area with mild soap and water. Seek medical attention if sym ptoms persist.

EYE : 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): Chlorine, fluorine, nitrogen dioxide, nitrous oxide, iodine pentafluoride and lead oxide.

Haz ardous D ecomposition Produc ts: None recorded. Hazardous Polymeri zation: Wil I notoccur

### VII SPILL OR LEAK PROCEDURES

Steps to Be Taken in Case Material I s Released or Spilled: We ar appropriate respiratory and protective equipment specified in Section VIII. Is olate spill area and provide ventilation. Vacuum up spill using a high efficiency particulate absolute(HEPA) air filter and place in a closed container for proper disposal. Tak e care not to raise dust.

Waste Disposal Method: Dispose of in accordance with all local, state, and federal regulations.

### VIII SPECIAL PROTECTION INFORMATION

Respir atory Protection: NIOSH approveddust, mist, vapor cartridge respirator.

Ventilation: Use local exhaustventilation which is adequate to limit personal exposure to airborne dust levels which do not exceed the appropriate PEL or TLV. If such equipment is not available, use respiratory protection as specified above.

Protective Gloves: Rubb er gloves. Eye Protect ion: 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 tightly sealed container in a cool, dry, well-ve ntilated area. Wash thoroughly after handling.

Other Precaut ions: Implement engineering and work practice controls to reduce and maintain concentration of exposureat low levels. Use good housekeeping and sanitation practices. Do not usetobacco or food in work area. Wash thoroughly before eating or smoking. Do not blow dust off clothing or skin with compressed air.

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