



## MATERIAL SAFETY DATA SHEET

Chemical Name: Cemented Carbide Product with Cobalt Binder.  
Products Addressed: All Ultra Tool International, Inc. Solid Carbide Cutting Tool Products.  
Trade Names: UltraCarb, UltraGrain I, UltraGrain II, Tungsten Carbide  
Chemical Family: Refractory Metal Carbide  
Molecular Weight: N/A

---

### PHYSICAL DATA

Appearance & Odor: Dark Gray/No Odor	Boiling Point: N/A
Vapor Pressure (mm Hg): N/A	Vapor Density (Air=1): N/A
Solubility in Water: Insoluble	Specific Gravity (H <sub>2</sub> O=1): 11.0 to 15.5
Percent Volatile by Volume: 0	Evaporation Rate: N/A
How Best Monitored: Air Sample	

---

HAZARDOUS INGREDIENTS	Pct. by Weight	OSHA PEL	ACGIH TLV
Tungsten Carbide (limits for Tungsten dust)	84-97%*	5mg/m <sup>3</sup>	5mg/m <sup>3</sup>
Tantalum Carbide (limits for Tantalum dust)	0-2%*	5mg/m <sup>3</sup>	5mg/m <sup>3</sup>
Cobalt	3-16%*	0.1 mg/m <sup>3</sup>	0.05mg/m <sup>3</sup>

\*Depends upon various grade specifications

---

### HEALTH HAZARD DATA

*Routes of Exposure:* Grinding cemented carbide product or handling of grinding sludge will produce dust of potentially hazardous ingredients which can be inhaled, swallowed, or come in contact with the skin or eyes.

*Effects of Overexposure:* Inhalation; Dust from grinding can cause irritation of the nose and throat. It also has the potential for causing transitory or permanent respiratory disease, including occupational asthma and interstitial fibrosis in a small percentage of exposed individuals. It is reported that cobalt dust is the most probable cause of such respiratory diseases. Symptoms include coughing, wheezing, shortness of breath, chest-tightness and weight loss. Interstitial fibrosis (lung scarring) can lead to permanent disability or death. Certain pulmonary conditions may be aggravated by exposure. Skin Contact; Can cause irritation or an allergic skin rash due to cobalt sensitization. Certain skin conditions, such as dry skin, may be aggravated by exposure

Eye Contact; Can cause irritation. Ingestion; Reports outside the industry suggest that ingestion of significant amounts of cobalt has the potential for causing blood, heart, and organ problems.

*Emergency And First Aid Procedures:* Applicable for dusts and mists.

Inhalation; If symptoms of pulmonary involvement develop remove from exposure and seek medical attention. Skin Contact; If irritation or rash occurs, thoroughly wash affected area with soap and water and isolate from exposure. If irritation or rash persists, seek medical attention.

Eye Contact; If irritation occurs, flush with copious amounts of water. If irritation persists, seek medical attention. Ingestion; If substantial quantities are swallowed, dilute with a large amount of water, induce vomiting, and seek medical attention.

*Carcinogenic Assessment*: The IARC found there was inadequate evidence that metallic cobalt is carcinogenic to humans but that there is sufficient evidence that it is carcinogenic to animals. IARC concluded that metallic cobalt is possibly carcinogenic to humans (Substance Group 2B). Cobalt has not been classified as a known or suspected carcinogen by OSHA or the National Toxicology Program. However, for State of California regulations under Proposition 65 (California Health and Safety Code Section 25249.5 et seq.) this product contains or produces a chemical(s) known to the State of California to cause cancer.

---

#### FIRE AND EXPLOSION HAZARD DATA

Flash Point: N/A

Extinguishing Media: For powder fires, smother with dry sand, dry dolomite, ABC type fire extinguisher, or flood with water.

Specific Fire Fighting Procedures: For a powder fire confined to a small area, use a respirator approved for toxic dusts and fumes. For a large fire, fire fighters should use self-contained breathing apparatus.

Unusual Fire and Explosion Hazards: Hard Cemented carbide product is not a fire hazard. Dusts generated in grinding operations may present a fire 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 and use.

---

#### REACTIVITY DATA

Stability: Stable

Incompatibility: Contact of dust with strong oxidizers may cause fires or explosions.

Hazardous Decomposition Products: None

Hazardous Polymerization: Will not occur.

Conditions to Avoid: Contact with incompatible materials.

Materials to Avoid: Strong Acids, Strong Oxidizers.

---

#### SPILL OR LEAK PROCEDURES

Steps To Be Taken In Case Material Is Released Or Spilled: Ventilate area of spill. Clean up using methods which avoid dust generation such as vacuum (with appropriate filter to prevent airborne dust levels exceeding the PEL or TLV) or wet clean-up. If airborne dust is generated, use an appropriate NIOSH approved respirator.

Waste Disposal Method: Dispose of in accordance with applicable government regulations. May be sold as scrap for reclamation.

---

#### SPECIAL PROTECTION INFORMATION

Respiratory Protection: Use an appropriate NIOSH approved respirator if airborne dust concentrations exceed the applicable PEL or TLV. All requirements set forth in 29 CFR 1910.134 should be met.

Ventilation: Use adequate local exhaust ventilation to limit personal exposure to airborne dust to levels below the PEL or TLV. If such equipment is not available, use respirators as specified.

Protection Gloves: Protective gloves or barrier cream are recommended when contact with dust or mist is likely. Prior to applying the barrier cream or use of protective gloves, wash thoroughly.

Eye Protection: Safety glasses with side shields or goggles are recommended. Eyewash equipment should be available and accessible at the workplace.

Other Protective Equipment: N/A

---

## SPECIAL PRECAUTIONS

Precautions To Be Taken In Handling And Storage: Maintain good housekeeping procedures to prevent dust accumulation during grinding. Avoid dust inhalation and direct skin contact.

Other Precautions: Clean up using methods which avoid dust generation such as vacuum or wet clean-up. If airborne dust is generated, use an appropriate NIOSH approved respirator. Wash hands thoroughly after handling, before eating or smoking. Wash exposed skin at the end of the work shift. Do not shake clothing, rags, or other items to remove dust. Dust should be removed by washing or vacuuming (with filters) the clothing, rags, or other items.

---

## FOR MORE INFORMATION

Contact Ultra Tool International, Inc., 5451 McFadden Avenue, Huntington Beach, CA 92649. Phone (714) 898-9224. Although Ultra Tool has attempted to provide current and accurate information herein, Ultra makes no representations regarding the accuracy or completeness of the information and assumes no liability for any loss, damage, or injury of any kind which may result from or arise out of the use or reliance on the information by any person.

It shall be the responsibility of the customer purchasing this product to ensure that all employees/users of said product be familiar with and trained in the handling, use, and hazards associated with this product as contained herein. This responsibility shall also extend directly to the user.

N/A means Not Applicable.

REVISION: 4

ISSUE DATE: OCTOBER 1, 1999

SUPERSEDES: FEBRUARY 8, 1994