

**1. PRODUCT AND COMPANY IDENTIFICATION**

**Product Identity / Trade Name:** Carbide Blades

**Product Use:** Abrasive materials used on metals, concrete, masonry and building materials.

**Manufacturer:** United Abrasives, Inc.  
P.O. Box 75, Route 66  
Willimantic, CT 06226

**Internet:** www.unitedabrasives.com

**Information Phone:** (860) 456-7131

**Emergency Phone:** (860) 456-7131

**MSDS Date of Preparation:** August 2009

**2. HAZARDS IDENTIFICATION**

This product is a gun-metal gray solid with no odor.

**EMERGENCY OVERVIEW**

Dust may cause eye and respiratory irritation. Dust particles or filings may cause abrasive injury to the eyes. Chromium and nickel can cause skin and/or respiratory sensitization. Prolonged inhalation of respirable dust may cause lung damage. Fine dust generated by grinding may be spontaneously combustible or create a fire or explosion hazard.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

<b>Hazardous Component</b>	<b>CAS #</b>	<b>%</b>
Tungsten carbide	12070-12-1	Balance
Tantalum carbide	12070-06-3	0-20
Niobium carbide	12069-94-2	0-20
Titanium carbide	12070-08-5	0-20
Titanium nitride	25583-20-4	0-5
Vanadium carbide	12070-10-9	0-5
Cobalt	7440-48-4	0-30
Nickel	7440-02-0	0-30
Chromium	7440-47-3	0-5

**4. FIRST AID MEASURES**

**Ingestion:** If dust is swallowed, seek medical attention.

**Inhalation:** If overexposed to dust, remove victim to fresh air and get medical attention.

**Eye Contact:** Flush eyes thoroughly with water, holding open eyelids. Get medical attention if irritation persists. Obtain immediate medical attention for foreign body in the eye.

**Skin Contact:** Wash dust from skin with soap and water. Launder contaminated clothing before reuse.

**5. FIRE FIGHTING MEASURES**

**Extinguishing Media:** Use any media that is appropriate for the surrounding fire.

**Special Firefighting Procedures:** None needed.

**Unusual Fire and Explosion Hazards:** Fine dusts created during grinding or processing may be spontaneously combustible or create a fire or dust explosion hazard. Many materials create flammable/explosive dusts or turnings when machined.

**Hazardous Combustion Products:** None known.

## 6. ACCIDENTAL RELEASE MEASURES

Eliminate all sources of ignition. Pick up, sweep up or vacuum and place in a container for disposal. If dust is vacuumed, use explosion-proof equipment. Minimize generation of dust. Notify authorities as required by local, state and federal regulations.

## 7. HANDLING AND STORAGE

**Recommended Work Practices:** Use only with adequate ventilation. Avoid breathing dust. Wash thoroughly after handling and use, especially before eating, drinking or smoking. Consider potential exposure to components of the base materials or coatings being machined. Refer to OSHA's substance specific standards for additional work practice requirements where applicable.

Dust generated during machining or processing may spontaneously combust or create a fire or dust explosion hazard. Use good housekeeping to prevent the accumulation of dusts around the workplace.

**Storage:** Store in a dry location.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Exposure Guidelines:

Hazardous Component	OSHA PEL	ACGIH TLV
Tungsten carbide (as tungsten)	None Established	5 mg/m3 TWA 10 mg/m3 STEL
Tantalum carbide (as tantalum)	5 mg/m3 TWA	5 mg/m3 TWA
Niobium carbide (as niobium)	None Established	None Established
Titanium carbide (as titanium)	None Established	None Established
Titanium nitride (as titanium)	None Established	None Established
Vanadium carbide (as vanadium)	None Established	None Established
Cobalt	0.1 mg/m3 TWA	0.02 mg/m3 TWA
Nickel	1 mg/m3 TWA	0.2 mg/m3 TWA Inhalable
Chromium	0.5 mg/m3 TWA	0.5 mg/m3 TWA

Note: Consider also components of base materials and coatings being machined.

**Ventilation:** Use local exhaust or general ventilation as required to minimize exposure to dust and maintain the concentration of contaminants below the TLVs.

**Respiratory Protection:** Use NIOSH approved respirator if exposure limits are exceeded or where dust exposures are excessive. Consider the potential for exposure to components of the coatings or base material being brushed or machined in selecting proper respiratory protection. Refer to OSHA's specific standards for lead, cadmium, etc. where appropriate. Selection of respiratory protection depends on the contaminant type, form and concentration. Select and use respirators in accordance with OSHA 1910.134 and good industrial hygiene practice.

**Gloves:** Avoid skin contact with dust. Follow facility requirements regarding glove use to avoid safety hazard..

**Eye Protection:** Safety goggles or safety glasses with side shields.

**Other:** Protective clothing as needed to prevent contamination of personal clothing. Hearing protection may be required.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Boiling Point:** Not Applicable  
**Solubility in Water:** Insoluble  
**Specific Gravity:** 11.0-15.5  
**Melting Point:** Not Applicable  
**Appearance and Odor:** Gun-metal-gray solid, no odor.  
**Flash Point:** Non-Combustible

**Vapor Pressure:** (mm Hg) Not Applicable  
**Vapor Density:** (Air = 1) Not Applicable  
**Evaporation Rate:** Not Applicable  
**Flash Point:** Non-Combustible

**Flammable Limits:** LEL: Not Applicable  
UEL: Not Applicable

## 10. STABILITY AND REACTIVITY

**Stability:** Stable  
**Incompatibility:** None known.  
**Hazardous Decomposition Products:** Dust from machining could contain ingredients listed in Section 3 and other, potentially more hazardous components of the base material being machined or coatings applied to the base material.  
**Hazardous Polymerization:** Will not occur.

## 11. TOXICOLOGICAL INFORMATION

### HEALTH HAZARDS:

**Ingestion:** None expected under normal use conditions. Swallowing large pieces may cause obstruction of the gastrointestinal tract.  
**Inhalation:** Dust may cause respiratory irritation.  
**Eye:** Dust may cause eye irritation. Dust particles or filings may cause abrasive injury to the eyes.  
**Skin:** None expected under normal use conditions. Rubbing blades across the skin may cause mechanical irritation or abrasions.  
**Sensitization:** Chromium and nickel can cause skin and/or respiratory sensitization.  
**Chronic:** Long-term overexposure to dust may cause lung damage (fibrosis) with symptoms of coughing, shortness of breath and diminished breathing capacity. Skin and/or respiratory sensitization may also occur. Chronic effects may be aggravated by smoking. Prolonged exposure to elevated noise levels during operations may affect hearing. A greater hazard, in most cases, is the exposure to the dust/fumes from the material or paint/coatings being machined. Most of the dust generated during machining is from the base material being processed and the potential hazard from this exposure must be evaluated.  
**Carcinogenicity:** Nickel is listed as a Category 2B Possible human carcinogen by IARC and a Reasonably Anticipated to be a Human Carcinogen by NTP. None of the other components is listed as a carcinogen or potential carcinogen by OSHA, NTP, ACGIH, or IARC.  
**Medical Conditions Aggravated by Exposure:** Employees with pre-existing respiratory disease may be at risk from exposure.

### Acute Toxicity Values:

This product and its components are not acutely toxic.  
Cobalt: Oral rat LD50 – 6171 mg/kg

## 12. ECOLOGICAL INFORMATION

No ecological data is available for this product. Dust generated may be hazardous to the environment.

## 13. DISPOSAL CONSIDERATIONS

Dispose in accordance with all applicable local, state/provincial and federal regulations. Local regulations may be more stringent than regional and national requirements. It is the responsibility of the waste generator to

determine the toxicity and physical characteristics of the material to determine the proper waste identification and disposal in compliance with applicable regulations.

#### 14. TRANSPORT INFORMATION

**DOT Hazardous Materials Description:**

Proper Shipping Name: Not Regulated  
UN Number: None  
Hazard Class/Packing Group: None  
Labels Required: None

#### 15. REGULATORY INFORMATION

**SARA Section 311/312 Hazard Categories:** Not Applicable in solid form. Dust generated from machining – Acute Health and Chronic Health

**SARA Section 313:** This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372 (Toxic Chemical Release Reporting):

Nickel	7440-02-0	30% max
Chromium	7440-47-3	5% max.

**California Proposition 65:** WARNING You create dust when you machine materials such as metal. This dust often contains chemicals known to cause cancer, birth defects or other reproductive harm.

**Canadian WHMIS Classification:** Not a controlled product. This product meets the definition of a "manufactured article" under the WHMIS regulations. This product has been classified under the CPR and this MSDS discloses information elements required by the CPR.

#### 16. OTHER INFORMATION

**NFPA Hazard Rating:** Health: 1  
Fire: 0  
Reactivity: 0

**Date Previous Revision:** N/A

**Date This Revision:** 08/03/09

**Revision Summary:** New MSDS

**Prepared By:** Denese A. Deeds, CIH IH&SC Inc., Woodbridge, CT 06525

The preceding information is believed to be correct and current as of the date of preparation of this Material Safety Data Sheet. Since the use of this information and the conditions of use of this product are not within the control of United Abrasives, Inc., it is the user's obligation to assure safe use of this product.