

**1. PRODUCT AND COMPANY IDENTIFICATION**

**Product Identity / Trade Name:** Tungsten Carbide Burs - All Types

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

**Manufacturer:** United Abrasives, Inc.  
P.O. Box 75, 185 Boston Post Road  
Willimantic, CT 06226

**Internet:** www.unitedabrasives.com

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

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

**MSDS Date of Preparation:** December 2006

**2. HAZARDS IDENTIFICATION**

This product is a gray metal with no odor.

**EMERGENCY OVERVIEW**

Dust particles or filings may cause irritation or abrasive injury to the eyes. Inhalation of dust may cause respiratory irritation. Nickel, chromium and cobalt can cause skin irritation and skin and/or respiratory sensitization.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Hazardous Component	CAS #	%
Titanium Carbide	12070-08-5	45-65
Titanium Nitride	25583-20-4	45-65
Nickel	7440-02-0	8-20
Molybdenum	7439-98-7	15-35
Cobalt	7440-48-4	0-20

**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**

**Flash Point:** Non-Combustible

**Flammable Limits:** LEL: Not Applicable

**UEL:** Not Applicable

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

**Special Firefighting Procedures:** None needed.

**Unusual Fire and Explosion Hazards:** This product is not combustible, however, consideration must be given to the potential fire/explosion hazards from the base material being processed. Many materials create flammable/explosive dusts or turnings when machined or ground.

**Hazardous Combustion Products:** None known.

## 6. ACCIDENTAL RELEASE MEASURES

Pick up, sweep up or vacuum and place in a container for disposal. 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 or ground. Refer to OSHA's substance specific standards for additional work practice requirements where applicable.

In normal power machining operations, the material being removed will fly off the cutting tool with considerable force. The potential for serious injury exists for both the operator and others in the work area (possibly 50 feet or more from the cutting tool). To protect against this hazard, before rotating the cutting tool, during rotation and until the rotation stops, all persons in the area must wear safety goggles or full face shields over safety glasses with side shields, along with appropriate protective clothing.

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

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Exposure Guidelines:

Hazardous Component	OSHA PEL	ACGIH TLV
Titanium Carbide	None Established	None Established
Titanium Nitride	None Established	None Established
Nickel	1 mg/m <sup>3</sup>	1.5 mg/m <sup>3</sup> (inhalable fraction)
Molybdenum	None Established	10 mg/m <sup>3</sup> (inhalable fraction)
Cobalt	0.1 mg/m <sup>3</sup>	0.02 mg/m <sup>3</sup>

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

**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 machined or ground 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:** Cloth or leather gloves recommended.

**Eye Protection:** Safety goggles or face shield over 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:** Not Applicable

**Melting Point:** Not Applicable

**Appearance and Odor:** Gray metal, no odor.

**Vapor Pressure:** (mm Hg) Not Applicable

**Vapor Density:** (Air = 1) Not Applicable

**Evaporation Rate:** Not Applicable

**Flash Point:** Non-Combustible

## 10. STABILITY AND REACTIVITY

**Stability:** Stable

**Incompatibility:** Strong oxidizers.

**Hazardous Decomposition Products:** Dust from machining could contain ingredients listed in Section 3 and other, potentially more hazardous components of the base material being processes 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 may cause abrasive injury to the eyes.

**Skin:** Rubbing product across the skin may cause mechanical irritation or abrasions. Nickel exposure can cause an allergic dermatitis called "nickel itch". Chromium and cobalt exposure can cause skin irritation and skin sensitization.

**Sensitization:** Nickel, chromium and cobalt can cause skin and/or respiratory sensitization.

**Chronic:** Long-term overexposure to respirable 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 affects hearing. A greater hazard, in most cases, is the exposure to the dust/fumes from the material or paint/coatings being processed. Most of the dust generated during machining is from the base material being machined and the potential hazard from this exposure must be evaluated.

**Carcinogenicity:** Nickel and cobalt are classified as group 2B carcinogens by IARC. Nickel is listed by NTP as reasonably anticipated to be a carcinogen.

**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. The only acute toxicity data available for the components are listed below.

Cobalt: LD50 oral rat: 6,171 mg/kg

## 12. ECOLOGICAL INFORMATION

No ecological data is available for this product. No hazards to the environment are expected from this product. However, consideration must be given to potential environment effects of the base material being processed.

## 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

**SARA Section 313:** Some products contain 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):

Cobalt	7440-48-7	20% max.
Nickel	7440-02-0	20% max.

**California Proposition 65:** WARNING You create dust when you cut, sand, drill or grind materials such as wood, paint, cement, masonry or 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:** 11/2003

**Date This Revision:** 12/13/06

**Revision Summary:** Switched Sections 2 and 3, Comprehensive Review

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

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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.