

# SAFETY DATA SHEET

BERKSHIRE PRECISION TOOL LLC  
9 BETNR INDUSTRIAL DRIVE  
PITTSFIELD, MA 01201

TELEPHONE NO. (413) 499-3875

ISSUE DATE: 05/29/15

## SECTION I: IDENTIFICATION

CHEMICAL NAME: Cemented Tungsten Carbide Product with Cobalt Binder  
TRADE NAME: All BERKSHIRE PRECISION Cutting Tools  
CHEMICAL FAMILY: Refractory Metal Carbide  
EMERGENCY CONTACT: Telephone (413) 499-3875

## SECTION II: HAZARDS IDENTIFICATION

GHS CLASSIFICATIONS: Health – Not Classified  
Environmental – Not Classified  
Physical – Not Classified

Emergency Overview: The products, in the form sold, do not constitute an environmental, physical or health hazard. However their use in drilling, grinding, melting, cutting or any other purpose may produce potentially hazardous dust or fumes that can be inhaled, swallowed or come in contact with the skin or eyes.

## SECTION III: REGULATED/HAZARDOUS COMPOSITIONS

	MAX PERCENT BY WEIGHT	CAS NUMBER	OSHA PEL	ACGIH TLV
Aluminum Oxide	<2 %	1344-81-1	N/A	N/A
Boron	<2 %	1303-86-2	N/A	N/A
Chromium	<3 %	7440-47-3	1 mg/m <sup>3</sup>	0.5 mg/m <sup>3</sup>
Chromium Carbide	<10 %	12012-35-0	N/A	N/A
Cobalt	<30 %	7440-48-4	0.1 mg/m <sup>3</sup>	0.02 mg/m <sup>3</sup>
Molybdenum	< 2 %	7439-98-7	N/A	N/A
Nickel	<25 %	7440-02-0	1 mg/m <sup>3</sup>	1.5 mg/m <sup>3</sup>
Niobium Carbide	<10%	12011-99-3	N/A	N/A
Tantalum Carbide	<15 %	12070-06-3	5 mg/m <sup>3</sup>	5 mg/m <sup>3</sup>
Titanium Carbide	<53 %	12070-08-5	N/A	N/A
Tungsten Carbide *	<97 %	12070-12-1	N/A	5 mg/m <sup>3</sup>
Zirconium Carbide	<2 %	11130-21-5	N/A	N/A

Berkshire Precision cutting tools may or may not be coated with a thin chemical film to extend part life. These coatings are not defined as hazardous chemicals and are generally accepted as being non-toxic. We do not consider the coatings to constitute a physical or health hazard. The information contained in this material safety data sheet reflects that of both coated and uncoated cemented tungsten carbide product.

## SAFETY DATA SHEET

COMPANY NAME: Berkshire Precision Tool, LLC  
CHEMICAL NAME: Cemented Tungsten Carbide Product with Cobalt Binder

ISSUE DATE: 05/29/15

---

### SECTION IV: FIRST AID MEASURES

---

Applicable for dust or fume:

- Inhalation — If symptoms of pulmonary involvement develop (coughing, wheezing, shortness of breath, etc.), remove from exposure and seek medical attention.
- Skin Contact — If irritation or rash occurs, thoroughly wash the 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.
- Ingestion — If substantial quantities are swallowed, dilute with a large amount of water, induce vomiting, and seek medical attention.

---

### SECTION V: FIRE FIGHTING MEASURES

---

Hard Cemented Tungsten Carbide Product is not a fire hazard. Dusts generated in grinding operations may ignite if allowed to accumulate and subjected to an ignition source.

#### EXTINGUISHING MEDIA:

For powder fires use dry sand, dry dolomite, ABC type fire extinguisher, or flood with water.

#### SPECIAL 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:

Dusts 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 conditions.

---

### SECTION VI: ACCIDENTAL RELEASE MEASURES

---

Hard Cemented Tungsten Carbide Products do not present a spill or accidental release hazard as shipped. However, dusts produced from drilling and cutting may contain hazardous constituents and should be collected and disposed in accordance with applicable regulations.

---

### SECTION VII: HANDLING AND STORAGE

---

#### 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 with dust.

#### OTHER PRECAUTIONS:

Clean up using methods which avoid dust generation, such as vacuum (with appropriate filter to prevent airborne dust levels which exceed the PEL or TLV), wet dust mop, 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 appropriate filters) the clothing, rags, or other items.

## SAFETY DATA SHEET

COMPANY NAME: Berkshire Precision Tool, LLC

ISSUE DATE: 05/29/15

CHEMICAL NAME: Cemented Tungsten Carbide Product with Cobalt Binder

Periodic medical examinations are recommended for individuals regularly exposed to dust or mist.

---

### SECTION VIII: EXPOSURE CONTROLS/PERSONAL PROTECTION

---

#### ROUTES OF EXPOSURE:

Grinding of cemented carbide products with cobalt binder may produce potentially hazardous ingredients, which can be inhaled, swallowed, or come in contact with the skin or eyes.

- Inhalation — Dust from grinding can cause irritation of the nose and throat. It also has the potential for causing transient or permanent respiratory disease including occupational asthma and interstitial fibrosis (or lung scarring), in certain individuals who are exposed over a period of time. It is reported that cobalt dust is the most probable cause of such respiratory diseases. Symptoms include productive cough, wheezing, and shortness of breath, chest tightness and weight loss. Interstitial fibrosis can lead to permanent disability or death. Coolant mist from wet grinding may contain dust.
- Skin Contact — Can cause irritation or an allergic skin rash due to cobalt sensitization. Certain conditions, such as dry skin, may be aggravated by exposure.
- Eye Contact — Can cause irritation.
- Ingestion — Certain reports outside the tungsten carbide industry suggest that ingestion or significant amounts of cobalt have the potential for causing blood, heart, and other organ problems.

#### RESPIRATORY PROTECTION:

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

#### VENTILATION:

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

#### PROTECTIVE 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.

#### OTHER PROTECTIVE MEASURES:

Before using as a cutting tool, make sure the tool is properly seated and safely clamped. Always use machine guards and wear safety glasses and protective clothing to prevent injury in the event of tool breakage.

## SAFETY DATA SHEET

COMPANY NAME: Berkshire Precision Tool, LLC  
CHEMICAL NAME: Cemented Tungsten Carbide Product with Cobalt Binder

ISSUE DATE: 05/29/15

---

### SECTION IX: PHYSICAL AND CHEMICAL PROPERTIES

---

APPEARANCE:	Grey Metal	SOLUBILITY IN WATER:	Insoluble
ODOR:	No Odor	SPECIFIC GRAVITY:	11 to 15.5
BOILING POINT:	N/A	% VOLATILE BY VOLUME:	0
MELTING POINT:	N/A	EVAPORATION RATE:	N/A
VAPOR PRESSURE:	N/A	MOLECULAR WEIGHT:	N/A
VAPOR DENSITY:	N/A	HOW BEST MONITORED:	Air Samples
FLASH POINT:	N/A	FLAMMABLE LIMITS	N/A

---

### SECTION X: STABILITY AND REACTIVITY

---

Stability:	Stable
Conditions to Avoid:	N/A
Incompatibility:	Contact of dust with strong oxidizers may cause fire or explosions
Materials to Avoid:	Strong Acids
Hazardous Decomposition Products:	NONE
Hazardous Polymerization:	NONE
Conditions to Avoid:	N/A

---

### SECTION XI: TOXICOLOGICAL INFORMATION

---

"Warning: The product contains, and when used, produces chemicals known to the State of California to cause cancer." (Proposition 65, California Health and Safety Code Section 25249.6)

Routes of exposure: The product does not present a health hazard; however dust or fumes from cutting, drilling, or heating this product can be inhaled, swallowed, or come into contact with the skin or eyes. The health hazard data listed in *italics* text address exposure to these dusts and fumes.

*COBALT: Workers who were exposed to very high levels of cobalt in dust have exhibited skin rashes and serious effects on the lungs, including asthma, pneumonia, and wheezing. Animal studies suggest exposure to cobalt may cause weight loss, dermatitis (inflammation of the skin) and respiratory hypersensitivity. Based on the animal data, the IARC has determined that cobalt is possibly carcinogenic to humans.*

*Carcinogenicity: N/A      NTP: No      IARC: A3      OSHA Regulated: No*

*TUNGSTEN: Chronic exposure to tungsten dust has been reported to cause pulmonary fibrosis, characterized by cough, labored breathing, and wheezing. Dermatitis (inflammation of the skin), primarily on the sides of the neck, inner forearm, and the backs of the hands, was also reported. Dusts of tungsten pose a hazard considered to be somewhat greater than that of nuisance dust. Carcinogenicity: N/A      NTP: No*  
*IARC: No      OSHA Regulated: No*

## SAFETY DATA SHEET

COMPANY NAME: Berkshire Precision Tool, LLC  
CHEMICAL NAME: Cemented Tungsten Carbide Product with Cobalt Binder

ISSUE DATE: 05/29/15

---

### SECTION XII: ECOLOGICAL INFORMATION

---

**General Comment:** The product is not classified as environmentally hazardous.

**Persistence and degradability:** No data available.

**Bio accumulative potential:** No data available.

**Mobility in soil:** No data available.

**Other adverse effects:** None known.

---

### SECTION XIII: DISPOSAL CONSIDERATIONS

---

Recycle scrap materials through scrap dealers and brokers. Dispose of non-recyclable materials in accordance with local, state/provincial, and federal regulations.

---

### SECTION XIV: TRANSPORT INFORMATION

---

**Shipping Information:** No special Department of Transportation (DOT) regulations pertaining to this product.

---

### SECTION XV: REGULATORY INFORMATION

---

**WHMIS 2015 Classification:** This Safety Data Sheet has been prepared to comply with this requirement.

**OSHA:** This Safety Data Sheet has been prepared to comply with the Hazard Communication Standard, 29 CFR 1910.1200.

**SARA:** Chromium, Cobalt and Nickel are SARA Title III, Section 313, Toxic Chemicals and are subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and 40 CFR 372.

**TSCA:** All components of this product are listed on the Toxic Substance Control Act inventory.

---

### SECTION XVI: OTHER INFORMATION

---

Prepared By Mark C. Mummert, Ph.D., PE, CIH (#8415 CP)

While the information set forth on this material safety data sheet is believed to be accurate, as of the issue date, Berkshire Precision Tool 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.

**HMIS CODING:**

HEALTH: 3                      FIRE: 0                      REACTIVITY: 0                      PPE: B

*WARNING: Contains Cobalt which has been shown to cause cancer in laboratory animals.*

---