



# Carbide Tools for Industry

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## MATERIAL SAFETY DATA SHEET

### Section I – Product Identification

**CHEMICAL NAME:** Cemented Carbide Product with Cobalt binder

**TRADE NAME AND SYNONYMS:** All Carbide Grades

**CHEMICAL FAMILY:** Refractory Metal Carbide

**MOLECULAR WEIGHT:** N/A



3 HEALTH HAZARD  
0 FLAMMABILITY HAZARD  
0 REACTIVITY HAZARD

NFPA 704 Identification Information

### Section II – Hazardous Ingredients

Material	CAS Number	Percent By Weight	OSHA PEL	ACGIH TLV
Tungsten Carbide (limits for Tungsten dust)	12070-12-1	80-97% *	---	5 mg/m <sup>3</sup>
Cobalt	7440-48-4	3-20% *	0.10 mg/m <sup>3</sup>	0.02 mg/m <sup>3</sup>
Tantalum Carbide (limits for Tantalum dust)	12070-06-3	0-15% *	5 mg/m <sup>3</sup>	5 mg/m <sup>3</sup>
Vanadium Carbide (limits for Vanadium dust)	11130-21-5	0.1-2% *	0.5 mg/m <sup>3</sup>	0.5 mg/m <sup>3</sup>

Our carbide product contains between 3.0% and 20.0% cobalt (Chemical Abstract Service (CAS) Number 7440-48-4) which is subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments of the Reauthorization Act of 1986 40 CFR 372.

\* Depends on grade specifications

### Section III – Physical Data

**Appearance and Odor:** Dark Gray Metal/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

### Section IV – Health Hazard Data

Grinding cemented carbide product will produce dust of potentially hazardous ingredients that can be inhaled, swallowed or come in contact with the skin or eyes.

Primary Routes of Exposure	Effects of Overexposure	Emergency First Aid Applicable for dusts or mists
<b>Inhalation</b>	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, in a small percentage of exposed individuals. 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 (lung scarring) can lead to permanent disability or death. Certain pulmonary conditions may be aggravated by exposure.	If symptoms of pulmonary involvement develop (coughing, wheezing, shortness of breath, etc.) remove from exposure and seek medical attention.
<b>Skin Contact</b>	Can cause irritation or an allergic skin rash due to cobalt sensitization. Certain skin conditions, such as dry skin, may be aggravated by exposure.	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.
<b>Eye Contact</b>	Can cause irritation.	If irritation occurs, flush with copious amounts of water. If irritation persists, seek medical attention.
<b>Ingestion</b>	Reports outside the industry suggest that ingestion of significant amounts of cobalt has the potential for causing blood, heart and other organ problems.	If substantial quantities are swallowed, dilute with a large amount of water, induce vomiting and seek medical attention.

California Proposition 65 Compliance – WARNING: This product contains a chemical known to the state of California to cause cancer.