

Murks / JCT REC'D APR 07 2005

Material Safety Data Sheet

Carbide Burr Set

Chemical Name: Cemented Carbide Product with Cobalt Binder.
Products Addressed: Mastercut Tool Corporation Solid Carbide Cutting Tool Products.
Chemical Family: Refractory Metal Carbide
Molecular Weight: N/A

PHYSICAL DATA

Appearance & Odor: Dark Gray / No Odor
Vapor Pressure (mm Hg): N/A
Solubility in Water: Insoluble
Percent Volatile by Volume: 0
How Best Monitored: Air Sample
Boiling Point: N/A
Vapor Density (Air = 1): N/A
Specific Gravity (H₂O = 1): 11.0 to 15.5
Evaporation Rate: N/A

HAZARDOUS INGREDIENTS

	Pct. By Weight	OSHA PEL	ACGIH TLV
Tungsten Carbide (limits of Tungsten dust)	84-97%*	5mg/m ³	5mg/m ³
Tantalum Carbide (limits of Tungsten dust)	0-2%*	5mg/m ³	5mg/m ³
Cobalt	3-16%*	0.1mg/3	0.05mg/m ³

*Depends upon various grade specifications

HEALTH HAZARD DATA

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

Effects of Overexposure: Applicable for carbide dusts and mists.

Inhalation: Carbide dust or mist can cause irritation of the nose and throat. It also has the potential for causing transitory or permanent respiratory disease, including occupational asthma and intestinal 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.

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

Inhalation: If symptoms of pulmonary involvement develop, remove the 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. Cobalt has not been classified as a known or suspected carcinogen by OSHA or the National Toxicology Program.

FIRE AND EXPLOSION HAZARD DATA

Flashpoint: N/A

Extinguishing Media: For a powder 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

N/A

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

SPECIAL PROTECTION INFORMATION

Respiratory Protection: For carbide dusts or mist, use an appropriate NIOSH approved respirator if airborne dust concentrations exceed the applicable PEL or TLV. If such equipment is unavailable, use respirators as specified.

Protection Gloves: For carbide dust or mist, protective gloves or barrier cream are recommended. Prior to applying the barrier cream or use of the protective gloves, wash thoroughly.

Eye protection Equipment: Always wear OSHA approved safety glasses when operating high RPM cutting equipment.

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 that 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. 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.

FOR MORE INFORMATION

Contact: Mastercut Tool Corp. 965 Harbor Lake Drive, Safety Harbor, FL 34695-4137. Phone 1-727-726-5336.

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