

W A R N I N G

This information must be transmitted to all persons who may come into contact with dust generated from the enclosed product.

CEMENTED CARBIDE PRODUCT WITH COBALT BINDER

All Carbide carbide grades except CD-6N, CD-10N, CD-16N.

The above grades contain Tungsten Carbide and Cobalt, with some grades containing Tantalum Carbide.

Read Material Safety Data Sheet for applicable Carbide grade before grinding product.

WARNING: GRINDING OF THIS PRODUCT WILL PRODUCE DUST OF POTENTIALLY HAZARDOUS INGREDIENTS.

Dust from grinding this product can cause nose, throat, skin and eye irritation and temporary or permanent respiratory disease in a small percentage of exposed individuals. Permanent respiratory disease can lead to disability or death. Coolant mist from wet grinding may contain dust.

Avoid breathing dust or mist.

Avoid prolonged skin contact with dust or mist.

Use adequate ventilation when grinding.

Maintain dust level below OSHA and ACGIH levels.

Use protective devices.

Wash hands thoroughly after handling, before eating or smoking.

Dispose of materials according to local, state and/or federal regulations.

Carbidie
P.O. Box 509
Irwin, PA 15642

Telephone: (412) 864-5900

MATERIAL SAFETY
DATA SHEET

CARBIDIE
P.O. Box 509
Irwin, PA 15642

Telephone No. (412) 864-5900

Chemical Name: Cemented Carbide Product with Cobalt binder.

Trade Name and Synonyms: All Carbidie Carbide Grades except CD-6N, CD-10N, CD-16N

Chemical Family: Refractory Metal Carbide
Molecular Weight: N/A

PHYSICAL DATA

Appearance and Odor:	Dark Gray Metal/No Odor		
Boiling Point:	N/A	Specific Gravity (H ₂ O=1):	12.5 to 15.5
Vapor Pressure (mm Hg):	N/A	Percent Volatile by Volume:	0
Vapor Density (Air=1):	N/A	Evaporation rate:	N/A
Solubility in Water:	Insoluble	How Best Monitored:	Air sample

HAZARDOUS INGREDIENTS

Material	Percent by Weight	OSHA PEL	ACGIH TLV
Tungsten Carbide (limits for Tungsten dust)	70-97%*	----	5mg/m ³
Cobalt	3-30%*	0.1mg/m ³	0.1mg/m ³
Tantalum Carbide (limits for Tantalum dust)	0-5%*	5mg/m ³	5mg/m ³

*Depends on grade specifications

HEALTH HAZARD DATA

Routes of Exposure:

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

Effects of Overexposure:

- 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, 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, 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.
- Ingestion - Reports suggest that ingestion of significant amounts of cobalt has the potential for causing blood, heart and other organ problems.

Emergency and First Aid Procedures: Applicable for dusts or mists

Inhalation - If symptoms of pulmonary involvement develop (coughing, wheezing, shortness of breath, etc.), remove from exposure and seek medical attention.

CHEMICAL NAME: Cemented Carbide Product with Cobalt binder.

Health Hazard Data - Emergency and First Aid Procedures, Cont.

- 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 (NTP Annual Report, IARC Monographs, other):

None of the components of this material have been identified as known or suspected carcinogens by NTP, IARC or OSHA.

FIRE AND EXPLOSION HAZARD DATA

Flash Point: N/A Test Method Used: --- Flammable Limits: N/A LEL: --- UEL: ---

Hard Cemented 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, smother with 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 should not be a problem with proper handling.

REACTIVITY DATA

Stability: Conditions to Avoid: N/A

Unstable

Stable X

Incompatibility: Contact of dust with strong oxidizers may cause fire or explosions.

Materials to Avoid: Strong acids

Hazardous Decomposition Products: None

Conditions to Avoid: N/A

Hazardous Polymerization:

May Occur

Will Not Occur X

SPILL OR LEAK PROCEDURES

Steps to be Taken in Case Material is Released or Spilled: Ventilate area of spill. 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.

Waste Disposal Method: Dispose of in accordance with appropriate government regulations. May be sold as scrap for reclaim.

CHEMICAL NAME: Cemented Carbide Product with Cobalt binder.

SPECIAL PROTECTION INFORMATION

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 should be met.

Ventilation: Use local exhaust ventilation which is adequate to limit personal exposure to airborne dust to levels which do not exceed 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 Equipment: N/A

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 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 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.

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

In case of questions please call
Carbidie (Safety Director)
(412) 864-5900

Issue Date: November 15, 1985

Supersedes: N/A

This information is being furnished in compliance with OSHA Regulation - 1910.1200. Although Carbidie has attempted to provide current and accurate information herein, Carbidie makes no representations regarding the accuracy or completeness of the information and assumes no liability for any loss, damage, injury of any kind which may result from or arise out of the use of or reliance on the information by any person.