



INTERNATIONAL CARBIDE
 Post Office Box 5639
 Statesville, North Carolina 28687
 USA
 Phone 704-878-9583
 Fax 704-878-9585

CHEMICAL NAME: Cemented Tungsten Carbide Product with Cobalt binder (Optional additions of Tantalum and/or Titanium Carbides)

TRADE NAME AND SYNONYMS: All Eagle **Cemented Carbide** grades except RKN1, RKN2, RKN3

CHEMICAL FAMILY: Refractory Metal Carbide MOLECULAR WEIGHT: N/A

PHYSICAL DATA

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

HAZARDOUS INGREDIENTS

<u>Material</u>	<u>CAS Number</u>	<u>Percentage by Weight*</u>	<u>OSHA PEL</u>	<u>ACGIH TVL</u>
Tungsten Carbide	12070-12-1	60-97%	5mg/m3	5mg/m3 (w)
Tantalum Carbide	12070-06-3	0-15%	5mg/m3	5mg/m3
Titanium Carbide	12070-08-5	0-15%	5mg/m3	N/A
Cobalt	7440-48-4	3-25%	0.1mg/m3	0.02mg/m3

*Depends on grade specification

HEALTH HAZARD DATA

ROUTES OF EXPOSURE:

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

EFFECTS OF OVER EXPOSURE:

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 outside the industry 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 dust or mists)

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 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 (NIP 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.



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FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: N/A TEST METHOD USED: - FLAMMABLE LIMITS: N/A LEL: - LEL: -

Standard 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 use dry sand, 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, firefighters 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.

REACTIVITY DATA

STABILITY Unstable CONDITIONS TO AVOID: N/A

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.



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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:
Eagle International
(704) 878-9583

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SUPERCEDES: August, 2000

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