

MSDS#  
MMC 60530100

Date Created: 7/30/01  
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PRODUCT NAME..... CERKOMET/DST-Dihart "CERMET" Grades  
 CHEMICAL NAME..... Cemented Carbonitride Product with Metal Binder  
 TRADE NAME AND SYNONYMS..... CERKOMET/DST CERMET Grades  
 CHEMICAL FAMILY..... Refractory Metal Carbonitride  
 MOLECULAR WEIGHT..... N/A

### PHYSICAL DATA

APPEARANCE AND ODOR..... Dark Gray Metal/No odor  
 BOILING POINT..... N/A  
 SPECIFIC GRAVITY (H<sub>2</sub>O=1)..... 5.5 to 8.5  
 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.....Personal/Area Air Sample

### INGREDIENTS

MATERIAL	%BY WEIGHT	OSHA PEL	ACGIH TLV	CASE #
Titanium Nitride	0-100%	5mg/m3	5mg/m3	None
Titanium Carbide	0-80%	5mg/m3	5mg/m3	None
Niobium Carbide	0-80%	5mg/m3	5mg/m3	None
Tungsten Carbide	0-70%	1mg/m3	5mg/m3	None
Tantalum Carbide	0-70%	5mg/m3	5mg/m3	None
Molybdenum Carbide	0-20%	5mg/m3	5mg/m3	None
Vanadium Carbide	0-20%	5mg/m3	5mg/m3	None
Cobalt	0-20%	0.1mg/m3	0.1mg/m3	7440484
Nickel	0-20%	1mg/m3	1mg/m3	7440020

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## FIRE AND EXPLOSION HAZARD DATA

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

Cemented Carbonitride Product with Metal Binder is not a fire hazard, except that dusts generated in grinding operations might ignite if allowed accumulating 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 Firefighting 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:**

Dust 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:** Stable**Conditions to Avoid:** N/A**Incompatibility:** Contact of dust with strong oxidizers may cause fire or explosion**Materials to Avoid:** Strong Acids    **Hazardous Polymerization:** Will not occur.**Hazardous Decomposition Products:** None

## SPILL OR LEAK PROCEDURES

**Steps to be taken in case material is released or spilled:**

Ventilate spilled area. 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.

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**Waste Disposal Method:**

Dispose of in accordance with appropriate government regulations.

**Routes of Exposure:**

Grinding Cemented Carbonitride Products with Metal Binder will produce dust of potentially hazardous ingredients, which 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 I interstitial fibrosis in a small percentage of exposed individuals. It is reported that Cobalt and Nickel 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. Nickel is suspected of causing nasal and lung cancer. Symptoms include pain, bleeding, nasal obstruction, vision impairment, weight loss, and voice resonance change.

**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.

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 large amounts of water. If irritation persists, seek medical attention.

Ingestion: If substantial quantities are swallowed, dilute with large amount of water, induce vomiting and seek medical attention.

**Carcinogenic Assessment** (NTP Annual Report, IARC Monographs, other):

NTP, IARC and OSHA have identified nickel as a suspected carcinogen.

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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 or state OSHA regulations should be met.

### Ventilation:

Use local exhaust ventilation, which is adequate to limit personal exposure to levels, which do not exceed the PEL or TLV. If such equipment is not available use respirator as specified above.

### Skin Protection:

Protective gloves or barrier cream are recommended when contact with dust or mist is likely. Wash thoroughly prior to applying the barrier cream or use of protective gloves.

### 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 avoiding 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.

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

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**For additional information, contact:**

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**KOMET of AMERICA, Inc.**  
2050 Mitchell Blvd.,  
Schaumburg, IL 60193-4544  
MAIN OFFICE: 847/923-8400  
FAX: 1-800-865-6638  
CUSTOMER SERVICE/ORDER ENTRY:  
847/923-8480

**KOMET de MEXICO, S.DE R.L.**  
Acceso 1 No.116 Fraccionamiento  
Industrial La Montaña  
Querétaro, QRO. C.P 76138  
MEXICO  
TELEFONO: (52) (42) 18-2544  
FAX: (52) (42) 18-2077