CERATIZIT USA

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MATERIAL SAFETY DATA SHEET
DOCUMENT I.D.: hm011
Date: 14 February 2013

Chemical Name:
Cemented Carbide Product with Cobalt/Nickel/Chrome binder.
Pertains To: All CERATIZIT Cemented Carbide Grades.
Trade Name and Synonyms:
Cemented Carbide, Sintered Carbide, Hardmetal.
Chemical Family: Refractory Metal Carbide.
Molecular Weight: N/A

PHYSICAL DATA

Appearance and Odor: Dark Grey Metal / Odorless

Boiling point:N/A	Specific Gravity (H_20=1) 10 to 15	
Vapour Pressure (mm Hg):	N/A	Percent Volatile by Volume: 0
Vapour Density (Air=1)	N/A	Evaporation Rate: N/A
Solubility in Water:	Insoluble	Best Monitored: Air Sample

HAZARDOUS INGREDIENTS

Material	Weight Percent*	CAS Number	OSHA PEL: TWA
Tungsten Insoluble Compounds as W	50-98%	7440-33-7	5.00 mg/m3
Tungsten Soluble Compounds as W	50-98%	7440-33-7	1.00 mg/m3
Cobalt Metal, Dust, and Fume as Co	1-30%	7440-48-4	0.05 mg/m3**
Tantalum Metal and Oxide Dust as Ta	0-15%	7440-25-7	5.00 mg/m3
Chromium (II+III Compounds as Cr+3	0-5%	7440-47-3	0.50 mg/m3
Chromium Metal as Cr+3	0-5%	7440-47-3	1.00 mg/m3
Nickel Metal and Insoluble Compounds as Ni	0-5%	7440-02-0	1.00 mg/m3
Nickel Soluble Compounds as Ni	0-5%	7440-02-0	0.10 mg/m3

*Depends on Grade Composition
**MIOSHA 0.05 mg/m^3, OSHA 0.1 mg/m^3

HEALTH HAZARD DATA

Routes of Exposure:
Dry grinding of the sintered product will produce dust of potentially hazardous ingredients; wet grinding of the sintered product will produce mist with potentially hazardous ingredients; heating of the sintered product will produce fumes of potentially hazardous ingredients, which can be inhaled, swallowed or come in contact with the skin or eyes.

Effects of Exposure:

Inhalation: Dust, mist or fumes from grinding or heating of the sintered product can cause irritation of the respiratory organs of a small percentage of sensitive persons, resulting in obstruction of respiratory ways with breathing difficulties: occupational asthma and interstitial fibrosis. It is reported that workers that have been exposed to air-borne cemented carbide dust have a higher risk of contracting lung cancer.

Skin Contact: Can cause irritation or an allergic skin rash due to cobalt or nickel sensitisation. 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 bleed, heart and other organ problems.

Emergency and First Aid Procedures, Applicable for Dusts, Fumes 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 a large amount of water, induce vomiting and seek medical attention.

Carcinogenic Assessment (NTP Annual Report, IARC Monographs, Other):
ACGIH, NTP, IARC and OSHA have identified nickel as a confirmed carcinogen.
IARC and NIOSH have indicated that cobalt is a suspected human carcinogen.

FIRE AND EXPLOSION HAZARD DATA

Flash Point: N/A

Flammable Limits: N/A
Hard cemented carbide product is not a fire hazard. Dusts generated during handling operations may ignite if allowed to accumulate when exposed to an ignition source.

Extinguishing Media:
For powder firs, 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 favouring 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
Materials to avoid: strong acids
Incompatibility: Contact of dust with strong oxidisers may cause fire or explosions.
Hazardous decomposition products: None
Hazardous polymerisation: Will not occur
Conditions to avoid: N/A

SPILL AND LEAK PROCEDURE

Steps to be Taken in Event that Dust or Sludge is Released or Spilled:

1. Ventilate area or spill.
2. Clean up using methods that 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.
3. If airborne dust is generated, use an appropriate NIOSH approved respirator.

Waste Disposal Method:
Dispose of any waste in accordance with appropriate government regulations. May be sold for recycling.

SPECIAL PROTECTION INFORMATION

Respiratory Protection:
Use the 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 that is adequate to limit personal exposure to respirable airborne dust to levels that do not exceed the PEL or TLV. If such equipment is not available, use a respirator 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

1. When using wet grinding equipment with closed water circuit, a suitable additive should be used to prevent cobalt from accumulating in the water. A recommended additive is CASTROL PE 425/6.
2. Clean equipment using methods that 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.
3. Wash hands thoroughly after handling dust or sludge, before eating or smoking.
4. Wash exposed skin at the end of work shift.
5. Do not shake clothing, rags, or other items to remove dust.
6. Dust should be removed from contaminated items by washing or vacuuming using the appropriate filters and precautions.
7. Allergic persons sensitive to cobalt or nickel must not be involved in activities where exposure to cobalt or nickel occurs.
8. Periodic medical examinations are recommended for individuals regularly working in the vicinity of dust and/or mist and for those who voluntarily or are required to wear respirators.

*HMIS

Health-*2	Fire-0	Reac-1	PPE-E

All CERATIZIT USA products are Conflict Material and REACH compliant as per the updated SVHC (Substances of Very High Concern) list.

If you should need further assistance or have any questions, please contact:

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Issue Date: 14 February 2013

Original Document:16 December 2003
Revision 001: 01 April 2004
Revision 002: 01 September 2009
Revision 003: 03 February 2012