

# Cemented Tungsten Carbide Product with Cobalt binder.

**SOMMA TOOL CO., INC.**

109 Scott Rd. - P.O. Box 2559  
Waterbury, CT 06725-2559

## MATERIAL SAFETY DATA SHEET

**TRADE NAME AND SYNONYMS:** All Tungsten Carbide Grades sold by Somma

**CHEMICAL FAMILY:** Refractory Metal Carbide

February 2007

**MOLECULAR WEIGHT:** N/A

### PHYSICAL DATA

<b>Appearance and Odor:</b>	Dark Gray Metal/No Odor		
<b>Boiling Point:</b>	N/A	<b>Specific Gravity (H<sub>2</sub>O=1):</b>	11.0 to 15.5
<b>Vapor Pressure (mm Hg):</b>	N/A	<b>Percent Volatile by Volume:</b>	0
<b>Vapor Density (Air=1):</b>	N/A	<b>Evaporation rate:</b>	N/A
<b>Solubility in Water:</b>	Insoluble	<b>How Best Monitored:</b>	Air Sample

### HAZARDOUS INGREDIENTS

MATERIAL	CAS NO.	OSHA PEL (Mg/M3)	ACGIH TLV (Mg/M3)	% BY WEIGHT
***ALUMINUM OXIDE	1344-28-1	---	10	0.0 - .5%
***CHROMIUM	7440-47-3	1	0.5	0 - 2%
CHROMIUM CARBIDE	12012-35-0	1	.5	0.0 - 5.1%
***COBALT	7440-48-4	.05	.05	0.0 - 30%
MOLYBDENUM	7439-98-7	10	10	15 - 35%
***NICKEL	7440-02-0	1	1	0.0 - 20%
NIOBIUM CARBIDE	12069-94-2	5	5	0.0 - 5%
TANTALUM	7440-25-7	5	5	0.0 - 50%
TANTALUM CARBIDE	12070-06-3	5	5	0.0 - 50%
TITANIUM CARBIDE (TiC)	12070-08-5	5	---	0.0 - 20%
TIN	25583-20-4	---	---	0.0 - 65%
TUNGSTEN LIMITS FOR DUST	7440-33-7	5	5	0.0 - 97%
TUNGSTEN CARBIDE	12070-12-1	5	5	0.0 - 98.5%

\*\*\*Signifies that this chemical is present in high enough concentrations to become subject to the reporting requirements of Section 313 of the Emergency Planning and the Community Right-to-Know Act of 1986, 40 CFR 372.

### HEALTH HAZARD DATA

**Routes of Exposure:** Grinding cemented tungsten carbide product with Cobalt binder may produce potentially hazardous dust 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. Some studies associate periodic inhalation of this respirable dust with the potential for transient respiratory reaction in Cobalt hypersensitized individuals and prolonged excessive inhalation of respirable dust or mist with transient, permanent or fatal respiratory disease. Adverse reactions are purportedly due to the Cobalt ingredient. Nickel is suspected in causing nasal and lung cancer.

**Skin Contact** — Can cause irritation or transient allergic skin rash in Cobalt hypersensitized individuals.

**Eye Contact** — Can cause mild pain or irritation.

**Ingestion** — No current scientific studies indicate adverse effects from ingestion of small quantities of dust.

**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.

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HMIS RATING:

HEALTH 1, FLAMMABILITY 0, REACTIVITY 0.

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## HEALTH HAZARD DATA (cont.)

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- 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.

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## CARCINOGENIC ASSESSMENT (NTP ANNUAL REPORT, IARC MONOGRAPHS, OTHERS):

Nickel has been identified as a suspected carcinogen by NTP, IARC or OSHA.

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## FIRE AND EXPLOSION HAZARD DATA

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

Hard Cemented Tungsten 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, 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 is not expected to be a problem under normal handling conditions.

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## REACTIVITY DATA

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**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

**Hazardous Polymerization:**

**Conditions to Avoid:** N/A

May Occur

Will Not Occur      X

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## SPILL OR LEAK PROCEDURES

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### 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.

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## **WASTE DISPOSAL METHOD:**

Dispose of in accordance with appropriate government regulations. May be sold as scrap for recycling.

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## **SPECIAL PROTECTION INFORMATION**

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### **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**

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## **SPECIAL PRECAUTIONS**

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### **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. Do not use coolant for wet clean up.

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.

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**California Safe Drinking Water Act (Prop 65) listing:**

<b>CHEMICAL</b>	<b>CAS NUMBER</b>
<b>NICKEL</b>	<b>7440-02-0</b>
<b>COBALT</b>	<b>7440-48-4</b>