

# MATERIAL SAFETY DATA SHEET

## I. PRODUCT IDENTIFICATION

**Gaylee Corporation**  
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Sterling Heights, Michigan 48313  
586-977-8007

**Chemical Name:** Cemented Carbide Product with Cobalt Binder  
**Trade Name:** SOLID CARBIDE CUTTING TOOLS  
Carbide Tips (in Carbide Tipped Cutting Tools)  
**Chemical Family:** Refractory Metal Carbide  
**Molecular Weight:** N/A  
**Grade Specification:**

**Date:** June 7, 2006

### PRODUCT:

#### GENERAL COMMENTS:

We do not consider this product in the form it is sold to constitute a physical or health hazard. Subsequent operations such as heating, cutting or grinding may cause some of the ingredients to change to a form which could affect exposed workers.

Gaylee Corporation does not manufacture or formulate any of the steel used in its products. The information set forth herein has been summarized from MSDS supplied to Gaylee Corporation by its suppliers.

No threshold limit values (TLV's) exist for cutting tools. TLV's may be applicable to constituent elements.

Although Gaylee Corporation has attempted to provide current and accurate information herein, Gaylee Corporation makes no representation 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.

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.

## II. HAZARDOUS INGREDIENTS

MATERIAL	CAS NO.	PERCENT BY WEIGHT	PEL (mg/m <sup>3</sup> )	TLV (mg/m <sup>3</sup> )
Tungsten Carbide	12070-12-1	30.0-97.7*	-	5 (as W)
Cobalt	7440-48-4	2-30*	0.1	0.1
Tantalum Carbide	12070-06-3	0.0-56.4*	5 (as Ta)	5 (as Ta)
Chromium Carbide	12012-35-0	0.0-5.1*	1 (as Cr)	5 (as Cr)
Chromium	(+3) 7440-47-3	0.0-4.5*	1	0.5

Cadmium and/or Nickel may be present in brazed tools - see applicable Material Safety Data Sheet  
\*Depends on grade specifications

## III. PHYSICAL DATA

<b>Boiling Point:</b>	N/A	<b>Vapor Pressure (mm Hg):</b>	N/A
<b>Specific Gravity (H<sub>2</sub>O=1):</b>	Approx. 9.5 - 15.5	<b>Solubility in H<sub>2</sub>O:</b>	Insoluble
<b>Vapor Density (Air=1):</b>	N/A	<b>Evaporation Rate:</b>	N/A
<b>%Volatiles by Volume:</b>	0	<b>How Best Monitored</b>	Air Sample
<b>Appearance and Odor:</b>	Dark Gray metal/ no odor		

## IV. FIRE AND EXPLOSION 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.

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#### IV. FIRE AND EXPLOSION DATA - Cont.

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**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 involving this material, 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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#### V. HEALTH HAZARD INFORMATION

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

**PRIMARY ROUTES OF ENTRY:**

Inhalation - Eye Contact -  
Skin Contact - Ingestion

**EMERGENCY FIRST AID:**

Remove to fresh air, if condition continues - consult physician, flush area well with running water to remove particulate. Get medical attention. Brush off excess dust. Wash area well with soap and water. Seek medical help if large quantities of material have been ingested.

**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 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 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 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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#### VI. REACTIVITY DATA

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**Stability:** Stable

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

**Hazardous Decomposition Products:** None

**Conditions to Avoid:** N/A

**Materials to Avoid:** Strong acids

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## VII. SPILL OR LEAK PROCEDURES

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### **STEPS TO BE TAKEN IN CASE OF RELEASE OR SPILL:**

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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## VIII. SPECIAL PROTECTION INFORMATION

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**Ventilation Requirements:** 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.

**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.

**Eye Protection:** Safety glasses with side shields, or goggles should always be worn.

**Gloves:** Gloves and Barrier creams are recommended when contact with dust or mist is likely. Prior to applying the Barrier Cream or use of protective gloves, wash thoroughly.

**Other Clothing or Equipment:** N/A.

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## IX. 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 PEL or TLV), wet dust mop or wet clean-up. If airborne dust is generated, use an appropriated 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.

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**In case of question please call:**  
**Gaylee Corporation**  
586-977-8007

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