SAFETY DATA SHEET

SECTION 1 - IDENTIFICATION

Product name:	Drillco “Magnum” Carbide Burs
Chemical name (Generic):	Cemented Carbide with Cobalt binder
Synonyms:	Solid Carbide
Product Use:	Metalworking Tools
Supplier Address:	Drillco Cutting Tools 13011 South Choctaw Drive Baton Rouge, LA 70815 USA
Emergency phone number:	CHEM-TEL INC 1-800-255-3924
General Information:	800-851-3821

SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS

INGREDIENT	%	CAS NUMBER	ACGIH TLV	OSHA PEL
Tungsten Carbide (limits for tungsten dust)	80-97	12070-12-1	5 mg/m3	-
Cobalt	3-20	7440-48-4	0.02 mg/m3	0.02 mg/m3
Tantalum Carbide (limits for Tantalum dust)	0-15	12070-06-3	5 mg/m3	5 mg/m3
Vanadium Carbide (limits for Vanadium dust)	0.1-2	11130-21-5	0.5 mg/m3	0.5 mg/m3

SECTION 3- HAZARDS IDENTIFICATION

Threshold limit value:	TLV for this product not established. Refer to the hazardous materials list for TLV of individual ingredients.
Primary route(s) of entry:	Grinding cemented carbide will produce a dust of potentially hazardous ingredients that can be inhaled, swallowed or come in contact with skin or eyes.
Carcinogen listed in:	
NTP (National Toxicology Program):	NO
IARC Monographs:	Cobalt listed as Group 2B
Hazard ratings:	NFPA
Health:	3
Flammability:	0
Reactivity:	0
OSHA:	NO

Signs and symptoms of exposure:

Inhalation:	Dust from grinding may 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, and shortness of breath, chest tightness and weight loss. Interstitial fibrosis (lung scaring) 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:	May cause eye irritation

Ingestion:	None expected during normal use conditions. Swallowing large pieces may cause obstruction of the gastrointestinal tract.

SECTION 4- FIRST-AID MEASURES

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 areas with soap and water and isolate from further 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 swallowed, dilute with a large amount of water, induce vomiting, and seek medical attention.
Medical conditions generally aggravated by exposure:	Persons with pre-existing respiratory disease may be at risk from exposure.
Notes to physician:	N/A

SECTION 5- FIRE FIGHTING MEASURES

Combustible/Not combustible:	Not combustible
Flammable/Not flammable:	Not flammable
Pyrophoric/Not pyrophoric:	Not pyrophoric
Explosive/Not explosive:	Not explosive
Flash point:	N/A
Flammable limits (in Air % by volume):	N/A LEL: N/A UEL: N/A
Extinguishing media:	For powder fires, smother with dry sand, dry dolomite, ABC type fire extinguisher, or flood with water
Special fire-fighting procedures or equipment:	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.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Clean up using methods to avoid dust generation such as vacuum (with appropriate filters), wet dust mop, or wet clean up. If airborne dust is generated, use an appropriate NIOSH approved respirator.

SECTION 7 – HANDLING AND STORAGE

Precautions for Safe Handling:	Operations such as welding, dust generation, or fume generation can result in hazardous exposure to the elements present in the alloy if necessary precautions are not taken. Protect against dust and fume inhalation and skin or eye contact. Use only with local exhaust ventilation.
Conditions for Safe Storage:	Store in a dry place. Store in a manner that prevents accidental environmental contamination from traces of industrial lubricants or wetting oils.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Protective gloves:	Cloth or leather gloves are recommended when contact with dust or mist is likely.
Eye protection:	Wear safety glasses or goggles with side shields. Contact lenses should not be worn when handling these materials. Employer should provide an eye wash station within the immediate work area for emergency use.

Other protective clothing or equipment:	Hearing protection might be required. Always use machine guards and wear safety glasses and protective clothing to prevent injury in the event of tool breakage. Soiled clothing should be laundered separately
Respiratory protection (specify type):	Use an appropriate NIOSH approved respirator if airborne dust concentration exceeds 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 airborne dust to levels that do not exceed the PEL or TLV. If such equipment is not available, use respirators as specified above.
Work/hygienic practices:	Wash hands thoroughly after handling and 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).

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Boiling point @ 760 mm Hg:	N/A
Vapor pressure at 20 °C:	N/A
Vapor density (air = 1):	N/A
Solubility in water:	Not Soluble
Appearance and odor:	Dark gray metal/no odor
Specific gravity (H_2O = 1.0):	11.0 to 15.5
Melting point:	N/A
Evaporation rate (butyl acetate = 1):	N/A

SECTION 10- STABILITY AND REACTIVITY

Material is stable/unstable:	Stable
Conditions to avoid:	Incompatible Materials
Incompatibility (materials to avoid)::	Strong Acids, Strong Oxidizers
Hazardous decomposition or by-products	None
Hazardous polymerization will/will not occur:	Will not occur
Oxidizer/Not an oxidizer:	Not an oxidizer

SECTION 11- TOXICOLOGICAL INFORMATION

The sintered, solid form of Tungsten Carbide with Cobalt Binder is not considered to be toxic, however the individual component Cobalt, which may be separated in dust form from the solid material by grinding, is listed as a Category 2B carcinogen (possibly carcinogenic to humans). The effects of dust containing Cobalt on human health are contained in section 3.

SECTION 12- ECOLOGICAL INFORMATION

Although there is no specific eco-toxicity data available, it is not expected that this product, especially in its solid form, would be a hazard to the environment.

SECTION 13 – DISPOSAL CONSIDERATIONS

Waste Disposal Method:	This is a valuable material that should be sent to an appropriate reclamation facility if available. If material cannot be sent to a reclamation facility, disposal should be made in compliance with federal, provincial/state, and local environmental regulations.

SECTION 14- TRANSPORT INFORMATION

The solid form of Tungsten Carbide Product is safe and therefore its transport is not regulated in Canada or the United States. No Hazard Class signage or other special labelling is required.

SECTION 15 – REGULATORY INFORMATION	
SARA hazard category (Section 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III)	N/A
Toxic chemical(s) subject to the supplier notification requirements of section 313 Title III of the Superfund Amendment and Reauthorization Act of 1986 (SARA) and the requirements of 40 CFR part 372	Cobalt- 7440-48-7 (20% max)
Canada	The Canadian Workplace Hazardous Materials Information System (WHMIS) classification for Cobalt is D2B. Cemented Tungsten Carbide Product itself is not a controlled product and meets the definition of a “manufactured article” under the WHMIS regulations
California Proposition 65	WARNING: This product contains a chemical known to the state of California to cause cancer.

SECTION 16 - OTHER INFORMATION

User Responsibilities- The information presented in this SDS has been compiled from sources deemed reliable. The information contained herein is based upon data provided by manufacturers and suppliers of raw materials used in the manufacture of high speed steel products. The information is offered in good faith as accurate and correct, but no representations, guarantees, or warranties of any kind are made as to its accuracy or completeness, suitability for particular applications, hazards connected with the use of the product, or the results to be obtained from the use thereof. User assumes all risk and liability of any use or handling of any material beyond Drillco’s control. Variations in methods, conditions, equipment used to store, handle, or process the material, and hazards connected with the use of the product are solely the responsibility of the user and remain at its sole discretion. It is the responsibility of the buyer/user to insure compliance with federal, state, provincial and local laws and regulations.

The information cannot be transferred to another product. In the case of mixing the product with other products or in the case of processing, the information on this safety information sheet is not necessarily valid.

Abbreviations Used:

OSHA	Occupational Safety and Health Administration
CAS	Chemical Abstract Service
ACGIH	American Conference of Government Industrial Hygienists
NOHSC	Not regulated by this mode of transportation
NTP	National Toxicology Program
IASC	International Agency for Research on Cancer
NIOSH	The Nation Institute for Occupational Safety and Health
TSCA	Toxic Substances Control Act
SARA	Superfund Amendment and Reauthorization Act
PEL	Permissible Exposure Limits
TLV	Threshold Limit Values