

**MATERIAL SAFETY DATA SHEET (M.S.D.S)**

Complies to OSHA Hazardous  
 Communications Standard,  
 29 CFR 1910.1200. Standard must consulted for specific requirements

**TRADE NAME**

DIAMOND CORE BITS, DIAMOND BLADES, CUP GRINDERS,  
 DIAMOND SEGMENTS, DIAMOND WIRE and GRINDING DISCS

**NOTE:** Blank spaces are not permitted.  
 If any item is not applicable, the  
 space must be marked to  
 indicate that.

**SECTION 1 - COMPANY INFORMATION**

Manufacturers Name

**Diamond Products, LLC**

Manufacturers Address (Number, Street, City, State and Zip Code)

**333 Prospect Street  
 Elyria, OH 44035**

Emergency Telephone Number

**(440) 323-4616**

Telephone Number for Information

**(440) 323-4616**

Date Prepared

**Revised 04/04/08**

Signature of Preparer (Optional)

Distributed by:

STIHL Incorporated

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**SECTION 2 - HAZARDOUS INGREDIENTS/IDENTITY**

Hazardous Components (Specify Chemical and Common Names)	OSHA PEL	ACGIH TLV	Percentage
<b>Cobalt Metal, 744-48-4 Cobalt</b>	.1 mg/m <sup>3</sup>	.02 mg/m <sup>3</sup>	1 to 100
<b>Carbonyl Iron Metal, 7439-86-6 Iron</b>	10 mg/m <sup>3</sup>	5 mg/m <sup>3</sup>	1 to 50
<b>Copper Metal, 7440-50-8 Copper</b>	1 mg/m <sup>3</sup>	1 mg/m <sup>3</sup>	1 to 60
<b>Tungsten Carbide, 12070-12-4 Tungsten</b>	NE-PNOR	5 mg/m <sup>3</sup>	1 to 50
<b>Nickel Metal, 7440-02-0 Nickel</b>	1 mg/m <sup>3</sup>	1.5 mg/m <sup>3</sup>	1 to 75
<b>Titanium Metal</b>	NE-PNOR	NE-PNOR	1 to 3
<b>Tin Metal, 7440-31-50 Tin</b>	2 mg/m <sup>3</sup>	2 mg/m <sup>3</sup>	1 to 20
<b>Silver Metal, 7440-22-4 Silver</b>	0.01 mg/m <sup>3</sup>	.01 mg/m <sup>3</sup>	1 to 15
<b>Manganese Metal, 7439-96-5</b>	C-5 mg/m <sup>3</sup> -C	0.2 mg/m <sup>3</sup>	.5 to 3
<b>Chromium Carbide, 12012-35-0</b>	1 mg/m <sup>3</sup>	0.5 mg/m <sup>3</sup>	.1 to 3
<b>Carbon, 7782-40-3 Industrial Diamonds</b>	N/A	N/A	3 to 18
As a nuisance particulate covered under "Particulates Not Otherwise Regulated" (PNOR) by OSHA or "Particulates Not Otherwise Classified" (PNOC) by ACGIH	15 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	

**SECTION 3 - PHYSICAL/CHEMICAL CHARACTERISTICS**

<b>Boiling Point</b>	N/A	<b>Specific Gravity (H<sub>2</sub>O = 1)</b>	8.5 to 15.0
<b>Vapor Pressure (mm Hg)</b>	N/A	<b>Melting Point</b>	2719 degrees F.
<b>Vapor Density (Air = 1)</b>	N/A	<b>Evaporation Rate (Butyl Acetate = 1)</b>	N/A
<b>Solubility in Water</b>	None	<b>Appearance and Odor</b>	Metallic - silver-grey to black - Odorless

**SECTION 4 - FIRE and EXPLOSION HAZARD DATA**

DIAMOND CORE BITS, DIAMOND BLADES, CUP GRINDERS, DIAMOND SEGMENTS, DIAMOND WIRE and GRINDING DISCS present no fire or explosive hazards. There are no special fire fighting procedure needed and have no flash point or flammable limits.

**SECTION 5 - REACTIVITY DATA**

<b>Stability:</b> Stable	<b>Conditions to Avoid:</b> None	<b>Incompatibility (Materials to Avoid):</b> Strong oxidizers, Strong acids
<b>Hazardous Decomposition By-Products:</b> None	<b>Hazardous Polymerization:</b> Will Not Occur	<b>Conditions to Avoid:</b> None Known

**SECTION 6 - ENVIRONMENTAL**

<b>Spill or Leak Procedures</b>	N/A
<b>Waste Disposal Methods</b>	Disposal must comply with applicable federal, state and local disposal laws.

**SECTION 7 - HEALTH HAZARD DATA**

These products in their manufactured state do not present an inhalation or contact hazard. Operations such as grinding, cutting, welding or brazing may release fumes and dust, which may present health hazards. Prolonged exposure to dust, fumes or mists containing cobalt and nickel may cause serious respiratory illness or skin reaction. The by-product of dry cutting or drilling (dust) any substance containing silica has been known to cause silicosis.

Proper protective equipment is recommended (See **SECTION 8**)

**Effects of Over Exposure:**

**Acute** - Dust or fumes may cause irritation to eyes, nose or throat. Over-exposure to dusts generated during use can cause coughing or wheezing and shortness of breath. Exposure to welding or brazing fumes may leave a metallic taste in the mouth. Inhalation of metal oxides produced in welding or brazing may produce flu-like symptoms commonly known as "metal fume fever".

**Chronic** - Repeated over-exposure to dusts and fumes generated during use can create the health hazards described below:

**COBALT** (metal as dust and fume)\* - Lung inflammation and damage, and diffuse pulmonary fibrosis from inhalation. The National Toxicology Program (NTP) has identified Cobalt as a potential carcinogen.

**COPPER** (dust and fume, Cu)\* - Inhalation may cause nose and throat irritation and prolonged contact dermatitis

**CHROMIUM** (metal)\* - May enter and affect the body through inhalation, ingestion, or skin contact. The NTP (National Toxicology Program) and IARC (International Agency for Research on Cancer) report they possess sufficient evidence to establish a causal relationship for human cancer from chromium.

**IRON** (oxide as dust and fume)\* - Inhalation of iron oxide fume or dust may result in a condition known as siderosis.

**MANGANESE** (compounds and fume as Mn)\* - Inhalation may result in symptoms such as headache, restlessness, neurological dysfunction or muscular weakness.

**NICKEL** (metal and other compounds as Ni)\* - Inhalation may result in inflammation of the respiratory tract and fever. The International Agency for Research on Cancer (IARC), and the National Toxicology Program (NTP) have identified Nickel as a potential carcinogen.

**SILVER** (metal dust and soluble compounds as Ag)\* - May cause irritation to eyes, nasal, septum, throat and skin, and may cause intestinal disturbance.

**TIN** (metallic flake, powder)\* - May cause eye, skin, and respiratory system irritation.

**TUNGSTEN CARBIDE** \* - May contain trace amounts of Cobalt or Nickel. The International Agency for Research on Cancer (IARC), and the National Toxicology Program (NTP) have identified Tungsten Carbide as a potential carcinogen.

**SILICA** (airborne particles of respirable size, not a direct component of product) - During the use of this product the generation of silica, crystalline (airborne particles of respirable size) may be released from the material being cut. Silica, Crystalline (airborne particles of respirable size) are known to the State of California to cause cancer and/or birth defects or other reproductive harm.

\* The information contained in this MSDS was obtained from various sources including OSHA, NIOSH and MSDS provided by material suppliers.

## SECTION 8 - PERSONAL PROTECTION EQUIPMENT

### RESPIRATORY PROTECTION

Use of an appropriate NIOSH-approved respirator for operators and bystanders is mandatory if airborne concentrations exceed the appropriate OSHA PEL and TLV levels and is always highly recommended. (See OSHA 29 CFR 1910.1000 - air contaminants; 1910.134 - respirators). Use of adequate ventilation and/or water spray mist to reduce generated dust concentration is recommended wherever possible (see OSHA 29 CFR 1910.94 - ventilation).

### GENERAL PROTECTIVE REQUIREMENTS

Use of eye and face protection is mandatory when cutting (see OSHA 29 CFR 1910.133 - eye and face protection). The use of hearing protection is mandatory to control noise exposure (see OSHA 29 CFR 1910.95 - noise exposure). The use of skin protection and good hygiene practice is mandatory to control skin exposure (see OSHA 29 CFR 1910.138 - skin exposure). The use of all machine safety guards is mandatory (see OSHA 1910.211 -222 - safety guards).

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