SAFETY DATA SHEET

SECTION 1. INDENTIFICATION

Great Lakes Orthodontics
200 Cooper Ave
Tonawanda, NY 14150

716-871-1161
800-828-7626
CHEMTREC: 800-424-9300

Product Name: Carbide Burs
Product Number: 085-001, 085-002, 085-003, 085-004, 085-005, 085-006, 085-007, 085-008, 085-009, 085-010, 085-011, 085-012, 085-013, 085-014, 085-015, 085-016, 085-017, 085-018, 085-046, 085-047

Effective Date: 3/19/13

SECTION 2. HAZARDOUS IDENTIFICATION

Potential Health Effects:

Primary Routes of Entry

- Inhalation
- Skin Contact
- Eye Contact
- Ingestion

Human Effects and Symptoms of Overexposure:

Skin

Can cause irritation or an allergic skin rash due to cobalt sensitization. Certain skin conditions such as dry skin may be aggravated by exposure.

Ingestions

Reports outside the industry suggest that ingestion of significant amounts of cobalt has the potential for causing blood, heart, and other organ problems.

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 including coughing, 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.

Eyes

Can cause irritation.

Carcinogenicity

No carcinogenic substances as defined by IARC, NTP and / or OSHA.

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Components	OSHA PEL	ACGIH TLV	% By Weight
Tungsten Carbide (limits for Tungsten dust)	5 mg/m3	5mg/m3	41 – 97% *
Cobalt **	.01 mg/m3	0.2 mg/m3	3 – 30% *
Tantatum Carbide (limits for Tatatum dust)	5 mg/m3	5 mg/m3	0.0 – 52% *
Chromium Carbide (limits for Chromium (+3) dust)	0.5 mg/m3	0.5 mg/m3	0.0 – 5.1% *
Titanium Carbide (limits for Titanium dust)	5 mg/m3	none established	0.0 – 20.0% *
Niobium Carbide (limits for Niobium dust)	5 mg/m3	5 mg/m3	0.0 – 20.0% *

* Depends on grade specifications.

** Identifies substances that are subject to the requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1966 and 40 CFR Part 372.

SECTION 4. FIRST AID MEASURES

Eye Contact

If irritation occurs, flush with copious amounts of water. If irritation persists, 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.

Inhalation

If systems of pulmonary involvement develop (coughing, wheezing, shortness of breath, etc.) remove from exposure and seek medical attention.

Ingestion

If substantial quantities are swallowed, dilute with a large amount of water, induce vomiting and seek medical attention.

SECTION 5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media

For powder fires smother with dry sand, dry dolomite, ABC type fire extinguisher or flood with water.

Special Fire Fighting Procedures

For 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 / Explosion Hazards

Hard cemented carbide product is not a fire hazard. Dust generated in grinding operations may present a fire or explosion hazard under rare favoring conditions of particle size, dispersion and strong ignition source. However, this is not reported to be a problem under normal handling and use.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Spill and Leak Procedures

Ventilate area of spill. Clean up using methods which avoid dust generation such as vacuum (with appropriate filter to prevent airborne dust levels exceeding the PEL or TLV) or wet clean-up. If airborne dust is generated, use an appropriate NIOSH approved respirator.

SECTION 7. HANDLING & STORAGE

Handling / Storage Precautions

Maintain good housekeeping procedures to prevent dust accumulation during grinding. Avoid dust inhalation and direct skin contact with dust.

Further Info on Storage Conditions

Protect equipment (e.g.: storage bins, conveyors, dust collectors) with explosion vents.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Industrial Hygiene

Wash hands thoroughly after handling, 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): the clothing, rags, or other items.

Ventilation Measures

Use adequate local exhaust ventilation to limit personal exposure to airborne dust to levels below 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 applicable PEL or TLV. All requirements set forth in 29 CFR 1910.134 should be met.

Hand Protection

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. Eyewash equipment should be available and accessible at the workplace.

Additional Protective Measures

Periodic medical examinations are recommended for individuals regularly exposed to dust or mist.

SECTION 9. PHYSICAL & CHEMICAL PROPERTIES

- **Appearance –** Metal
- **Color –** Dark Gray
- **Odor –** Odorless
- **Solubility in Water –** Insoluble
- **Specific Gravity –** 11.0 to 15.5
- **Percentage Volatile by Volume** – 0
- **How Best Monitored –** Air Sample

Not applicable: Boiling Point, Vapor Pressure (mm Hg.), Vapor Density (Air=1), Evaporating Rate.

SECTION 10. STABILITY & REACTIVITY

Hazardous Reactions – Hazardous polymerization will not occur.
Stability – Stable
Materials to Avoid – Strong acids, strong oxidizers.
Conditions to Avoid – Contact with incompatible materials.
Hazardous Decomposition Products – None.

SECTION 11. TOXICOLOGICAL INFORMATION

Not applicable.

SECTION 12. ECOLOGICAL INFORMATION (non-mandatory)

Not applicable.

SECTION 13. DISPOSAL CONSIDERATIONS (non-mandatory)

Waste Disposal Method
Dispose of in accordance with applicable government regulations. May be sold as scrap for reclamation.

SECTION 14. TRANSPORT INFORMATION (non-mandatory)

Not applicable.

SECTION 15. REGULATORY INFORMATION (non-mandatory)

Not applicable.

SECTION 16. OTHER INFORMATION (non-mandatory)

Not applicable.