



Safety Data Sheet – Vitrified Bonded Diamond Products



1. IDENTIFICATION

Product identifier: Vitrified Bonded Diamond Products

Trade Name: Grinding Wheels or Stones

Manufacturer: Radiac Abrasives, Inc.
A Tyrolit Company
1015 S. College Avenue
P.O. Box 1410
Salem, IL 62881

Phone Number: (800) 851-1095

Fax Number: (888) 244-8234

2. HAZARD(S) IDENTIFICATION

As sold, this product is a manufactured article. During processing, dust generated has the following hazards:

Classification:

Physical	Health	Environment
Not Hazardous	Not Hazardous	Not Hazardous

Hazards not otherwise classified: None

Symbol(s)

None

Signal word

None

Hazard statement(s)

None

Precautionary statement(s)

None

3. COMPOSITION / INFORMATION ON INGREDIENTS

Mixtures:

Chemical name	CAS No.	Concentration
Diamond	7782-40-3	≤60%
Glass or Glass/Porcelain	NA	≤30%
Aluminum Oxide	1344-28-1	≤15%
Silicon Carbide	409-21-2	≤15%
Ceramic Microspheres	NA	≤15%
The specific identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.		

4. FIRST-AID MEASURES

Inhalation: If exposed to dust from grinding: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get immediate medical attention if breathing is difficult.

Skin contact: Wash dust from skin with soap and water. Launder contaminated clothing before reuse.

Eye contact: Do not rub. Flush eyes thoroughly with plenty of water for several minutes, holding open eyelids. Get medical attention if irritation persists. Obtain immediate medical attention for foreign body in the eye.

Ingestion: If grinding dust is swallowed, seek medical attention.

Most important symptoms/effects, acute and delayed: Eye and skin contact with grinding dust may cause mechanical irritation. Inhalation of dust may cause nose, throat and upper respiratory tract irritation.

Indication of immediate medical attention and special treatment, if necessary: Immediate medical attention is generally not required.

5. FIRE-FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media: Use any media that is appropriate for the surrounding fire.

Specific hazards arising from the chemical: This product is not combustible; however, consideration must be given to the potential fire or explosion hazards from the base material being processed. Many materials create flammable or explosive dusts or turnings when machined or ground.

Special protective equipment and precautions for fire-fighters: Firefighters should wear full emergency equipment and NIOSH approved positive pressure self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures: Wear appropriate respirator and protective clothing as needed to avoid eye contact and inhalation of dust.

Environmental precautions: Avoid contamination of water supplies and environmental releases. Report spills as required to authorities.

Methods and materials for containment and cleaning up: Carefully collect dry material, avoiding the creation of airborne dust. Place in a suitable container for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling: Avoid breathing dust. Use with adequate ventilation. Avoid eye and skin contact with grinding dust. Wear suitable gloves, eye protection and appropriate protective clothing according to the operation. Wash thoroughly after handling. Consider potential exposure to components of the base materials or coatings being ground. Refer to OSHA's substance specific standards for additional work practice requirements where applicable.

Conditions for safe storage, including any incompatibilities: Store in accordance with ANSI B7.1. Protect abrasive wheels from damage.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure guidelines:

Diamond	None Established
Glass or Glass/Porcelain	None Established
Aluminum Oxide	15 mg/m ³ TWA OSHA PEL (total dust) 5 mg/m ³ TWA OSHA PEL (respirable fraction)
Silicon Carbide	0.1 mg/m ³ f/cc(F) TWA ACGIH TLV (including whiskers) 15 mg/m ³ TWA OSHA PEL (total dust) 5 mg/m ³ TWA OSHA PEL (respirable fraction)
Ceramic Microspheres	None Established

Appropriate engineering controls: Use local exhaust or general ventilation as required to minimize exposure to dust and maintain the concentration of contaminants below the TLVs.

Individual protection measures, such as personal protective equipment:

Respiratory protection: Use NIOSH approved respirator if exposure limits are exceeded or where dust exposures are excessive. Consider the potential for exposure to components of the coatings or base material being ground in selecting proper respiratory protection. Refer to OSHA's specific standards for lead, cadmium, etc. where appropriate. Selection of respiratory protection depends on the contaminant type, form and concentration. Select and use respirators in accordance with OSHA 1910.134 and good industrial hygiene practice.

Skin protection: Cloth or leather gloves recommended.

Eye protection: Safety goggles or face shield over safety glasses with side shields.

Other: Protective clothing as needed to prevent contamination of personal clothing. Hearing protection may be required.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.): Solid of various colors, mostly light gray to black.

Odor: No Odor

Odor threshold: Not applicable	pH: Not applicable
Melting point/freezing point: Not applicable	Initial boiling point and boiling range: Not applicable
Flash point: Non-Combustible	Evaporation rate: Not applicable
Flammability (solid, gas): Not applicable	UEL: Not applicable
Flammable limits: LEL: Not applicable	Vapor density:
Vapor pressure: Not applicable	Solubility(ies): Not applicable
Relative density: 1.2-2.8	Auto-ignition temperature: Not applicable
Partition coefficient: n-ctanol/water: Not applicable	Viscosity: Not applicable
Decomposition temperature: Not applicable	

10. STABILITY AND REACTIVITY

Reactivity: Not reactive

Chemical stability: Stable. Avoid overspeed and unsafe use conditions.

Possibility of hazardous reactions: Will not occur.

Conditions to avoid: None known

Incompatible materials: Strong acids and bases

Hazardous decomposition products: Dust from grinding could contain ingredients listed in Section 3 and other, potentially more hazardous components of the base material being ground or coatings applied to the base material.

11. TOXICOLOGICAL INFORMATION

Likely routes of exposure:

Inhalation: Dust may cause respiratory irritation.

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

Skin contact: None expected under normal use conditions. Rubbing product across the skin may cause mechanical irritation or abrasions.

Eye contact: Dust may cause serious eye irritation. Dust particles may cause abrasive injury to the eyes.

Chronic effects from short- and long-term exposure: Long-term overexposure to respirable dust may cause lung damage (fibrosis) with symptoms of coughing, shortness of breath and diminished breathing capacity. Chronic effects may be aggravated by smoking. Prolonged exposure to elevated noise levels during operations may affect hearing. A greater hazard, in most cases, is the exposure to the dust/fumes from the material or paint/coatings being ground. Most of the dust generated during grinding is from the base material being ground and the potential hazard from this exposure must be evaluated.

Numerical measures of toxicity:

Diamond: Oral rat LD50 > 2000 mg/kg, inhalation rat LC50 > 5.2 mg/L, dermal rat LD50 > 2000 mg/kg

Glass or Glass/Porcelain: No data available.

Aluminum Oxide: Oral rat LD50 > 2000 mg/kg, Dermal rat LD50 > 2000 mg/kg

Silicon Carbide: No data available.

Ceramic Microspheres: No data available.

Carcinogenicity: None of the components are listed as a carcinogen or potential carcinogen by OSHA, NTP or IARC.

12. ECOLOGICAL INFORMATION

Ecotoxicity:

Diamond: *Oncorhynchus mykiss* LC50 > 100 mg/L/96hr

This product is not expected to be hazardous to the environment.

Persistence and degradability: Biodegradation is not applicable to inorganic compounds.

Bioaccumulative potential: No data available

Mobility in soil: No data available.

Other adverse effects: No data available.

13. DISPOSAL CONSIDERATIONS

Dispose in accordance with all applicable local, state/provincial and federal regulations. Local regulations may be more stringent than regional and national requirements. It is the responsibility of the waste generator to determine the toxicity and physical characteristics of the material to determine the proper waste identification and disposal in compliance with applicable regulations.

14. TRANSPORT INFORMATION

	UN Number	Proper shipping name	Hazard Class	Packing Group	Environmental Hazard
DOT	None	Not Regulated	None	None	None
TDG	None	Not Regulated	None	None	None

Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code): Not applicable – product is transported only in packaged form.

Special precautions: None identified.

15. REGULATORY INFORMATION

SARA Section 311/312 Hazard Categories: Not Applicable (manufactured articles)

SARA Section 313: This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372 (Toxic Chemical Release Reporting):

Components	C.A.S. #	WT %
None		

California Proposition 65: WARNING You create dust when you cut, sand, drill or grind materials such as wood, paint, cement, masonry or metal. This dust often contains chemicals known to cause cancer, birth defects or other reproductive harm.

16. OTHER INFORMATION

NFPA Rating: Health = 1 Flammability = 0 Instability = 0
HMIS Rating: Health = 1 Flammability = 0 Physical Hazard = 0

Date of Revision: 05/21/2015

The information and recommendations set forth are taken from sources believed to be accurate. Radiac Abrasives, Inc., a Tyrolit Company, makes no warranty with respect to the accuracy of this information or the suitability of these recommendations, assumes no liability to any user thereof. It is the responsibility of the user to investigate and understand pertinent sources of information to comply with all laws and procedures applicable to the safe use and handling of the product and to determine the suitability of the product for its intended use.