

**SECTION 1 -- PRODUCT IDENTIFICATION**

IDENTITY (Trade Name): Diamond or Cubic Boron Nitride Grinding Wheel

SYNONYMS: Abrasive wheel

FAMILY/CHEMICAL NAME: Ceramic abrasive

PRODUCT USE: Grinding wheels break down during use. The resulting dust is classified by OSHA as inert or nuisance dust. Data provided pertains primarily to the dust produced during and after use.

MANUFACTURER/SUPPLIER: BORIDE Engineered Abrasives  
2615 Aero Park Dr.  
Traverse City MI 49686-9101

ORIGINAL ISSUE DATE: June 30, 2015

TELEPHONE NUMBER: (800) 662-0336

24-HOUR EMERGENCY NUMBER: (231) 922-1959

**SECTION 2 – HAZARDS IDENTIFICATION**

PRIMARY ROUTES OF EXPOSURE: During or after use, the dust resulting from breakdown may be inhaled or come in contact with skin or eyes.

POTENTIAL HEALTH EFFECTS:

ACUTE: Eyes: Dust can cause irritation, redness and eye watering.

Skin: No skin absorption hazard. May cause rash from mechanical irritation.

Inhalation (Breathing): Nuisance dust may cause coughing or sneezing.

Ingestion (Swallowing): Abrasive particles may cause irritation.

CHRONIC: Prolonged inhalation of inert dust can cause respiratory distress.

MEDICAL CONDITION AGGRAVATED BY EXPOSURE: Nuisance dust may aggravate pre-existing pulmonary conditions.

NFPA RATINGS: Health: 0; Flammability: 0; Reactivity: 0

**SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS**

MATERIAL	CAS #	WEIGHT %	PEL	EC#
Aluminum Oxide	1344-28-1	10-30	15 mg/m3	215-691-6
Aluminum <sup>1</sup>	7429-90-5	60-90	15 mg/m3	231-072-3
Cubic Boron Nitride	10043-11-5	1-5	10 mg/m3	233-136-6
Cobalt	7440-48-4	1-5	0.05 mg/m3	231-158-0
Copper	7440-50-8	1-10	0.1 mg/m3	231-159-6
Cured Phenolic resin	9003-35-4	1-5	N/E	N/E
Diamond	7782-40-3	1-5	N/E	231-953-2
Graphite Powder	7782-42-5	15-20	10 mg/m3	231-955-3
Iron <sup>2</sup>	7439-89-6	70-80	1 mg/m3	231-096-4
Manganese	7439-96-5	3	1 mg/m3	231-105-1
Nickel	7440-02-0	1-10	1 mg/m3	231-111-4
Silica, amorphous	60676-86-0	1-5	0.1 mg/m3	N/E
Silicon	7440-21-3	5	10 mg/m3	231-130-8
Silicon Carbide	409-21-2	1-10	10 mg/m3	206-991-8
Tungsten Carbide	12070-12-1	1-5	N/E	235-123-0

<sup>1</sup> If aluminum hub; <sup>2</sup> If steel hub; N/E = not established

**SECTION 4 – FIRST AID MEASURES**

**EYES:** Flush eyes with water for 15 minutes lifting upper and lower lids occasionally. Seek medical attention if irritation or pain persists.

**SKIN:** Thoroughly wash affected area with soap and water and isolate from exposure. If irritation or rash persists, seek medical attention.

**INHALATION:** If symptoms of pulmonary involvement develop (coughing, sneezing, shortness of breath) remove from exposure. If condition persists seek medical attention.

**OTHER HEALTH RISKS:** Grinding may create sound and vibration levels that could effect hearing and aggravate circulatory problems in the hands. Obtain medical evaluation and use proper protection.

**SECTION 5 – FIREFIGHTING MEASURES**

FLASH POINT: Non-flammable.

FLAMMABLE LIMITS IN AIR: Not Known.

AUTOIGNITION TEMPERATURE: Not applicable.

UNUSUAL FIRE AND EXPLOSION HAZARDS: None.

FIRE FIGHTING PROCEDURES: Not applicable.

EXTINGUISHING MEDIA: Not applicable.

HAZARDOUS COMBUSTION PRODUCTS: Carbon monoxide, carbon dioxide.

**SECTION 6 – ACCIDENTAL RELEASE MEASURES**

SPILL PROCEDURES: Sweep or shovel product into closable container for disposal. Use a vacuum or wet cleanup for dust.

METHODS FOR CONTAINMENT: Containment is not necessary.

**SECTION 7 – HANDLING AND STORAGE**

HANDLING: If use conditions generate airborne dust, use in well-ventilated area and avoid breathing dust. Dust should be removed by washing or vacuuming.

STORAGE: No special storage conditions required.

PERSONAL HYGIENE: Use good personal hygiene. Wash hands before eating, drinking or smoking. Do not shake clothing, rags or other items to remove dust.

**SECTION 8 – EXPOSURE CONTROLS, PERSONAL PROTECTION**

MATERIAL	CAS #	WEIGHT %	PEL	Hazardous Ingredient (YES/NO)
Aluminum Oxide	1344-28-1	10-30	15 mg/m3	No
Aluminum <sup>1</sup>	7429-90-5	60-90	15 mg/m3	No
Cubic Boron Nitride	10043-11-5	1-5	10 mg/m3	No
Cobalt	7440-48-4	1-5	0.05 mg/m3	No
Copper	7440-50-8	1-10	0.1 mg/m3	No
Cured Phenolic resin	9003-35-4	1-5	N/E	No
Diamond	7782-40-3	1-5	N/E	No
Graphite Powder	7782-42-5	15-20	10 mg/m3	No
Iron <sup>2</sup>	7439-89-6	70-80	1 mg/m3	No
Manganese	7439-96-5	3	1 mg/m3	No
Nickel	7440-02-0	1-10	1 mg/m3	No
Silica, amorphous	60676-86-0	1-5	0.1 mg/m3	No
Silicon	7440-21-3	5	10 mg/m3	No
Silicon Carbide	409-21-2	1-10	10 mg/m3	No
Tungsten Carbide	12070-12-1	1-5	N/E	No

<sup>1</sup> If aluminum hub; <sup>2</sup> If steel hub; N/E = not established. None of the components are considered hazardous in their vitrified or bonded state as part of a grinding wheel.

**PRECAUTIONS FOR SAFE USE AND HANDLING**

**HANDLING PRECAUTIONS:** Visually inspect all wheels for physical defects before mounting.

**CONTROL MEASURES**

**EYE PROTECTION:** Goggles or safety glasses with side shields are recommended when vitrified products are used in grinding operations.

**PROTECTIVE GLOVES:** Recommended but not required for grinding wheels.

**RESPIRATORY PROTECTION:** Not normally required. Selection and use of respiratory protective equipment, if warranted, should be in accordance with OSHA General Industry Standard 29 CFR 1910.134 in the U.S.A. and with CSA Standard Z94.4-M1982 in Canada.

**ENGINEERING CONTROLS:** Provide process enclosure or local ventilation needed to maintain dust below applicable exposure limits.

**OTHER PROTECTIVE EQUIPMENT:** None required.

**SECTION 9 -- PHYSICAL AND CHEMICAL PROPERTIES**

PHYSICAL STATE, APPEARANCE, and ODOR: Solid wheels. No odor.

ODOR THRESHOLD: Not applicable.

SPECIFIC GRAVITY: greater than 1.

VAPOR DENSITY: Not applicable.

BOILING POINT: Not applicable.

VAPOR PRESSURE: Not applicable.

FREEZING POINT: Not applicable.

EVAPORATION RATE: Not applicable.

PH: Not applicable.

SOLUBILITY IN WATER: Not soluble.

MOLECULAR WEIGHT: Not applicable.

VOLATILE ORGANIC COMPOUNDS: No.

**SECTION 10 – STABILITY AND REACTIVITY**

STABILITY: Stable, not reactive with water.

INCOMPATIBILITY (material & conditions to avoid): None known.

HAZARDOUS POLYMERIZATION: Will not occur.

HAZARDOUS DECOMPOSITION PRODUCTS: None known.

**SECTION 11 – TOXICOLOGICAL INFORMATION**

Carcinogenicity for raw materials: Nickel - EPA-A, IARC-2B, NTP-R, NIOSH-X, MAK-1; Cobalt - IARC-2B, MAK-2; Crystalline Silica(Quartz) - IARC-2A, NIOSH-X, NTP-R; Copper - EPA-D; Manganese - EPA-D.

None of the components are considered toxic in their vitrified or bonded state as part of a grinding wheel.

**SECTION 12 – ECOLOGICAL INFORMATION**

ECOTOXICITY: No information available.

PERSISTENCE AND DEGRADABILITY: No information available.

MOBILITY IN SOIL: No information available.

**SECTION 13 – DISPOSAL CONSIDERATIONS**

WASTE DISPOSAL METHODS: Dispose in accordance with federal, state, provincial and local regulations.

**SECTION 14 -- TRANSPORTATION INFORMATION**

DOT

PROPER SHIPPING NAME: None. HAZARD CLASS: None. ID NUMBER: None

Packaging Group: None. ER Guidebook #: None.

IATA Shipping Name: Not regulated as dangerous goods.

IMO Shipping Name: Not regulated as dangerous goods.

TDGA (Canada): Not regulated as dangerous goods.

**SECTION 15 -- REGULATORY INFORMATION**

TSCA Inventory Status: Listed

ECHA REACH Candidate List: Not listed

EINECS Number: Most components are listed (see Section 3).

SARA TITLE III: Product does not contain 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.

SECTION 302 EXTREMELY HAZARDOUS SUBSTANCE LIST: Not listed

SECTION 313 TOXIC CHEMICALS LIST: Not listed

FEDERAL RCRA HAZARDOUS WASTE: Not listed

REPORTABLE QUANTITY (RQ), UNDER U.S.: Not listed

**SECTION 16 -- ADDITIONAL INFORMATION**

SDS creation date: June 30, 2015

SDS revision date: June 30, 2015

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