

# BORIDE PRODUCTS

## MATERIAL SAFETY DATA SHEET

MSDS # 910

K-0963-910

Date of Issue: 5/01

Supersedes: 4/99

### SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Boron Carbide Nozzles, Seals, Tiles, etc.

Chemical Name: Boron Carbide

Synonyms: Ceramic

Manufacturer: Boride Products, 2879 Aero Park Drive, Traverse City, MI 49686-9170

<b>EMERGENCY TELEPHONE NUMBER: THE 3E COMPANY 1-800-451-8346</b>
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### SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

Material	CAS Number	% by Weight	OSHA PEL	ACGIH TLV	NFPA HAZARD RATING SCALE		
			TWA (mg/m <sup>3</sup> )	TWA (mg/m <sup>3</sup> )	0-4	Health	Fire
Boron Carbide	12069-32-8	+99	6	10	No rating	No rating	No rating

This substance is regulated by OSHA as a Particulate Not Otherwise Regulated (PNOR). The exposure limit listed for OSHA is listed above. The TLV regulated by ACGIH is for a nuisance dust.

### SECTION 3 - HAZARDS IDENTIFICATION

Carbide particles break down during use and the resulting dust is classified by OSHA as inert or nuisance dust and would have the pulmonary effects of inert dust. Dust may be inhaled or come in contact with skin or eyes.

#### **Inhalation:**

May cause irritation of the nose and throat.

#### **Skin Contact:**

May cause irritation.

**Eye Contact:** May cause irritation.

#### **Ingestion:**

May cause irritation

### SECTION 4 - FIRST AID MEASURES

Inhalation: If symptoms of pulmonary involvement develop (coughing, wheezing, shortness of breath), remove from exposure area to fresh air immediately. Keep affected person warm and at rest. Get medical attention immediately.

Skin Contact: If irritation or rash occurs, remove contaminated clothing and shoes immediately. Wash affected area with soap or mild detergent and large amounts of water until no evidence of material remains (approximately 15-20 minutes). Get medical attention if rash persists.

Eye Contact: If irritation occurs, wash eyes immediately with large amounts of water, occasionally lifting upper and lower lids, until no evidence of material remains (approximately 15-20 minutes). Get medical attention immediately.

Ingestion: If this material has been swallowed and person is conscious, immediately give person large amounts of water. Do not attempt to make an unconscious person drink or vomit. Get medical attention immediately. Induce vomiting only if specifically instructed by a physician.

## MSDS # 910

K-0963-910

### ***SECTION 5 - FIRE FIGHTING MEASURES***

Fire and Explosion Hazards: Hard boron carbide product is not a fire hazard. Dusts may ignite if allowed to accumulate. 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.

Flash Point: Not applicable.

Firefighting Media: For localized powder fires, smother with dry sand, dry dolomite, or dry graphite powder.

Special Firefighting Procedures: For a powder fire confined to a small area, use a respirator approved for toxic dusts and fumes. For a large fire, firefighters should use self-contained breathing apparatus.

### ***SECTION 6 - ACCIDENTAL RELEASE MEASURES***

Steps to be Taken if Material is Released or Spilled: Ventilate area of spill. Clean up using methods which avoid dust generation such as vacuum (with appropriate filter to prevent airborne dust levels which exceed PEL or TLV), wet dust mop or wet clean-up. If airborne dust is generated, use an appropriate NIOSH approved respirator.

### ***SECTION 7 - HANDLING AND STORAGE***

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

Other Precautions: Wash hands thoroughly after handling, before eating or smoking. Do not shake clothing, rags or other items to remove dust. Dust should be removed by washing or vacuuming. Periodic examinations are recommended for individuals regularly exposed to dust or mist.

### ***SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION***

Ventilation: Provide local exhaust ventilation or general dilution to maintain exposure levels below the PEL and TLV.

Respiratory Protection:

Use an appropriate NIOSH-approved respirator if airborne dust concentrations exceed the appropriate PEL or TLV. All appropriate requirements set forth in 29 CFR 1910.134 should be met.

Firefighting: Self-contained breathing apparatus with a full facepiece operated in pressure-demand or other positive-pressure mode.

Clothing: Employee must wear appropriate protective clothing and equipment to prevent repeated or prolonged skin contact with this substance. Soiled clothing should be laundered separately.

Gloves: Employee must wear appropriate protective gloves or barrier creams to prevent contact with this substance. Prior to applying the barrier cream or use of protective gloves, wash thoroughly.

Eye Protection: Safety glasses with side shields or goggles are recommended. Where there is any possibility that an employee's eyes may be exposed to this substance, the employer should provide an eye wash fountain within the immediate work area for emergency use. Contact lenses should not be worn when handling these materials.

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

Appearance and Odor: Odorless, black powder

Solubility in Water: Insoluble

Petroleum Based Solvent Solubility: Not applicable

Boiling Point: Not applicable

Melting Point: Not applicable

Specific Gravity: (H<sub>2</sub>O = 1): Varies

### ***SECTION 10 - STABILITY AND REACTIVITY***

Stability: Stable under normal temperatures and pressure.

Decomposition: Will not occur.

Incompatibilities: Contact of dust with strong oxidizers may cause fire or explosions.

### ***SECTION 11 - TOXICOLOGICAL INFORMATION***

None of the components of this material have been identified as a known or suspected carcinogens by NTP, IARC, or OSHA.

**MSDS # 910**

K-0963-910

***SECTION 12 - ECOLOGICAL INFORMATION***

No data available.

***SECTION 13 - DISPOSAL CONSIDERATIONS***

Waste Disposal Method: Disposal should be made in compliance with federal, provincial/state, and local environmental regulations.

***SECTION 14 - TRANSPORT INFORMATION***

May be classified as a hazardous substance when it is in a quantity, in one package, in which individual, regulated components equal or exceed the reportable quantities established by the department of transportation.

***SECTION 15 - REGULATORY INFORMATION***

Some ingredients may be subject to reporting requirements of Section 313 of Title III of Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372 – see Section 2.

***SECTION 16 - OTHER INFORMATION***

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Prepared by: Boride Products and Kennametal Inc. Hazard Communication Committee