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MATERIAL SAFETY DATA SHEET

Section 1- PRODUCT IDENTIFICATION

COMPOSITION B4C	PRODUCT NAME Boron Carbide, tetraboron carbide, norbide
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Section 2- HAZARDOUS INGREDIENTS

Note: Products under normal conditions do not represent an inhalation, ingestion or contact health hazard.

MATERIAL OR COMPONENT	CAS NUMBER	WT%	EXPOSURE LIMITS	
			OSHA PEL (Mg/M3)	ACGIH TLV(MG/M3)
Boron Carbide	12069-32-8	100	Not set 10mg/ m³ (as B2O3)	Not set 15mg/m³ (as B2O3)

Section 3- PHYSICAL DATA

MATERIAL IS (AT NORMAL CONDITIONS) <input type="checkbox"/> Liquid <input checked="" type="checkbox"/> Solid <input type="checkbox"/> Gas <input type="checkbox"/> Other	APPEARANCE AND ODOR Black Crystalline powder, no odor
MELTING POINT (BASE METAL) 2350° C	SPECIFIC GRAVITY 2.6gm/cc

Section 4- FIRE AND EXPLOSION

Flash Point (Method Used) N/A	Flammable Limits N/A	LEL N.A.	UEL N.A.
EXTINGUISHING MEDIA Dry chemical, CO², graphite			
SPECIAL FIRED FIGHTING PROCEDURES Wear a self-contained breathing apparatus with full protective clothing.			
UNUSUAL FIRE AND EXPLOSION HAZARDS None			

Section 5- REACTIVITY DATA

STABILITY Stable	INCOMPATIBILITY (MATERIALS TO AVOID) Molten Alkalies
CONDITIONS TO AVOID None	
HAZARDOUS DECOMPOSITION PRODUCTS B2O3	

Section 6- HEALTH HAZARD GUIDE

MAJOR EXPOSURE HAZARD

Inhalation Skin Skin Absorption Eye Contact Ingestion

EFFECTS OF OVEREXPOSURE

INHALATION: Considered a nuisance dust. May cause coughing, sneezing and wheezing. Chronic exposure may cause lung granulomas.

DERMAL: Mechanical irritation only.

EYE CONTACT: Mechanical irritation only.

OTHER: Boron is considered an industrial poison, and affects the central nervous system similar to lead, arsenic and manganese. Symptoms of boron poisoning include depressed circulation, persistent vomiting and diarrhea. Subnormal temperature and a scarletina form rash may occur. As B4C is insoluble and non-reactive, it should pose minimal health risks.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: None

EMERGENCY & FIRST AID PROCEDURES

INGESTION: Give victim 1-2 glasses of milk or water to induce vomiting. Seek medical attention.

INHALATION: Remove from exposed area to fresh air immediately. Seek medical attention.

SKIN CONTACT: Remove contaminated clothing; brush material off skin. Wash affected area with soap or mild detergent until no evidence of the chemical remains. Seek medical attention.

EYE CONTACT: Flush eyes with lukewarm water lifting up the upper and lower lids for at least fifteen minutes. Seek medical attention.

Section 7- SPILL OR LEAK PROCEDURES

SPILL OR LEAK PROCUDRES

Wear a self-contained breathing apparatus and full protective clothing. Isolate the area where the spill occurred and insure that proper ventilation is available. Vacuum up the spill using a high efficiently unit and place in a closed container for proper disposal.

WASTE DISPOSAL METHODS

Observe all federal, state and local regulations when storing or disposing.

Section 8- SPECIAL PROTECTION

RESPIRATORY:

Wear NIOSH-approved dust-mist-fume cartridge respirator.

VENTILATION

Local exhaust: Maintain exposure below TLV for B2O3.

Mechanical ventilation is recommended.

EYE PROTECTION & PROTECTIVE CLOTHING

Wear Safety glasses. Wear neoprene protective gloves. Wear protective clothing to prevent contamination of skin and clothes.

Section 9- SPECIAL PRECAUTIONS

Store in tightly closed containers in a cool, dry place. Wash hands and face thoroughly after handling and before eating.

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