STANFORD ADVANCED MATERIALS

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Stanford Advanced Materials
We not only sell products, we provide satisfactions.
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Current Version: 2.0
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Material Safety Data Sheet

Identity: Zirconium boride Formula: ZrB2

SECTION I - GENERAL INFORMATION

Manufacturer: Stanford Advanced Materials (SAM)

The information below is believed to be accurate and represents the best information available to SAM. However, SAM makes no warranty, expressed or implied with respect to such information and we assume no liability resulting from its use.

SECTION II – INGREDIENTS/SUMMARY OF HAZARDS

CAS #	%	OSHA/PEL	ACGIH TLV
12045-64-6	100	5mg(Zr)/m3	5mg(Zr)/m3

SECTION III – PHYSICAL DATA

Boiling Point: N/E or N/A
% Volatile: N/E or N/A
Specific Gravity (H20=1): 6.085
Vapor Density (air=1): NA
Physical State: Solid
Molecular weight: 112.84

Melting Point: 3200.0 C
Solubility in water: insoluble
Evaporation Rate: N/E or N/A
Vapor Pressure (mm Hg): N/E or N/A
Appearance and Odor: Gray powder, no odor.

SECTION IV – FIRE AND EXPLOSION HAZARD DATA

Flash Point: N/E or N/A Method Used: Non-flammable
Use suitable extinguishing media for surrounding materials and type of fire.

Extinguishing Media: Firefighters must wear full face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. Fumes from fire are hazardous. Isolate runoff to prevent environmental pollution.

Unusual Fire and Explosion Hazards: Zirconium boride may emit toxic fumes if involved in a fire.

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SECTION V – HEALTH HAZARDS

Routes of Exposure: Inhalation, skin, eyes, ingestion

Inhalation:
Acute: May cause irritation to the respiratory system and mucous membranes of the nose and throat..
Chronic: No chronic health effects recorded.
In Emergency Procedures: Remove victim to fresh air, keep warm and quiet, give oxygen if breathing is difficult, and seek medical attention.

Ingestion:

Acute: May cause irritation to the gastrointestinal tract and boron poisoning.
Chronic: No chronic health effects recorded.
In Emergency Procedures: Give 1-2 glasses of milk or water and induce vomiting; seek medical attention. Never induce vomiting or give anything by mouth to an unconscious person.
Skin:
Acute: May cause irritation.
Chronic: May cause dermatitis and skin granulomas.
In Emergency Procedures: Remove contaminated clothing, brush material off skin, wash affected area with mild soap and water. Seek medical attention if symptoms persist.

Eyes:
Acute: May cause irritation.
Chronic: No chronic health effects recorded.

In Emergency Procedures: Flush eyes and under eyelids with lukewarm water for at least 15 minutes. Seek medical attention.

Target organs: May affect the skin, respiratory and central nervous system.

SECTION VI – REACTIVITY DATA

Stability: Stable
Conditions to Avoid: None
Incompatibility: None recorded.
Hazardous Decomposition Products: None recorded.
Hazardous Polymerization: None.

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SECTION VII – ENVIRONMENTAL INFORMATION

In case of spill or leakage: Wear appropriate respiratory and protective equipment specified in section VIII. Isolate spill area and provide ventilation. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for proper disposal. Take care not to raise dust.

Waste Disposal Method: Dispose of in accordance with all applicable Federal, State and Local Regulations.

Hazard Label Information: Keep container tightly closed. Store in cool, dry area. Wash thoroughly after use.

SECTION VIII – PROTECTIVE EQUIPMENT

Protective Equipment: Rubber gloves and safety glasses and clothes to prevent skin contact.

Respiratory Protective: NIOSH approved dust respirator.

Ventilation:
Local exhaust: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.
Mechanical: Not recommended

Work/Hygienic/Maintenance Practices: Implement engineering and work practice controls to reduce and maintain concentration of exposure at low levels. Use good housekeeping and sanitation practices. Do not use tobacco or food in work area. Wash thoroughly before eating and smoking. Do not blow dust off clothing or skin compressed air.