

SPECIALTY MATERIALS COMPANY

Manufacturers of Boron and SCS Silicon Carbide Fibers and Boron Nanopowder

SPECIALTY MATERIALS, INC. MATERIAL SAFETY DATA SHEET Boron Fiber

----- SECTION 1 – PRODUCT AND COMPANY IDENTIFICATION -----

Product Name: Boron Fiber 3-mil, 4-mil and 5.6-mil

Product Use Description: Reinforcing fiber for use in high strength, high temperature polymer composite applications

Manufacturer's Name: Specialty Materials, Inc.
Address: 1449 Middlesex Street
City, State, and ZIP: Lowell, MA 01851

Emergency Telephone No.: 978-322-1927

Other Information : 978-322-1900

Date Prepared: March 8, 2011

HMIS LABEL

| | |
|------------|---|
| HEALTH | 1 |
| FIRE | 0 |
| REACTIVITY | 0 |
| PPE | B |

----- SECTION 2 – HAZARDOUS INGREDIENTS / IDENTITY -----

| HAZARDOUS COMPONENT(S) | CAS NUMBER | % MAXIMUM CONTENT |
|--------------------------------|------------|---------------------------|
| Mercury on 3-mil boron fiber | 7439-97-6 | < 0.8 ppm detection limit |
| Mercury on 4-mil boron fiber | 7439-97-6 | < 0.8 ppm detection limit |
| Mercury on 5.6-mil boron fiber | 7439-97-6 | 3.8 ppm |

----- SECTION 3 - PHYSICAL & CHEMICAL CHARACTERISTICS -----

Boiling Point: Not Applicable

Specific Gravity (H₂O = 1): 2.4

Vapor Pressure (mm Hg): Negligible

Solubility in Water: Negligible

Reactivity in Water: None

Melting Point: Sublimes @ 2300°C

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Appearance and Odor: Odorless black cylindrical fiber, diameter range from 3 – 5.6
mils (75 to 142 μm)

Composition: Elemental boron on a tungsten substrate

----- SECTION 4 - FIRE & EXPLOSION DATA -----

Flash Point: Not Applicable

Flammable Limits in Air % by Volume:

LEL Lower: Not Applicable

UEL Upper: Not Applicable

Auto-Ignition Temperature: None

Extinguisher Media: Not Applicable

Special Fire Fighting Procedures: None

Unusual Fire and Explosion Hazards: None

----- SECTION 5 - PHYSICAL HAZARDS (REACTIVITY DATA) -----

Stability: Unstable () Stable (X)

Conditions to Avoid: Not reactive

Incompatibility (Materials to Avoid): None known

Hazardous Decomposition Products: None known

Hazardous Polymerization: May Occur () Will Not Occur (X)

Conditions to Avoid: None known

----- SECTION 6 - HEALTH HAZARDS -----

Health hazards when handled under normal circumstances are associated with short-term irritant effects on the upper respiratory tract, rasopharynx and eye.

1. Acute: Puncture of the skin by fiber splinters

2. Chronic: None known

Signs and Symptoms
of Exposure: Localized pain and possible redness and swelling.

Medical Conditions Generally
Aggravated by Exposure: None known

Emergency and First

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| Aid Procedures: | Removal of splinters should be accomplished as soon as possible to avoid any infections. Medical assistance may be required in some instances. |
| Route of Entry: | |
| Inhalation: YES () NO (X) | Unlikely, unless fiber dust is inhaled from grinding or machining operations. |
| Eyes: YES (X) NO () | Seek medical attention immediately. |
| Skin: YES (X) NO () | Removal of splinters in skin can be difficult. Recommend medical assistance for removal of some splinters. |
| Ingestion: YES () NO (X) | Not a likely route of entry, however, seek medical attention. |

CHEMICAL LISTED AS CARCINOGEN OR POTENTIAL CARCINOGEN:

| | |
|------------------------------|------------------|
| National Toxicology Program: | Yes () No (X) |
| I.A.R.C. Monographs: | Yes () No (X) |
| OSHA: | Yes () No (X) |

----- SECTION 7 - SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURES -----

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|--|---|
| Precautions to be taken in Handling and Storage: | Avoid coiling tightly or doubling-over to minimize splinters. |
| Other Precautions: | Recommend safety glasses with side shields. Nitrile, or thin leather gloves are also recommended while handling fibers. |
| Steps to be Taken In Case Material Is Released or Spilled: | Carefully sweep or vacuum fiber shards to avoid inadvertent penetration of footwear or clothing of personnel. |
| Waste Disposal Method: | Not a hazardous waste. However, disposal/maintenance personnel must be aware of the splinter hazard. Consult Federal, State, and Local Regulations. |

-- SECTION 8 - SPECIAL PROTECTION INFORMATION/CONTROL MEASURES --

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| Respiratory Protection: | Not normally required. |
| Ventilation: | As per ACGIH for good quality indoor air. |
| Local Exhaust: | Not required |

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| Mechanical (General): | Not Applicable |
| Protective Gloves: | Recommend nitrile gloves, or thin leather gloves if operations can be performed using them. |
| Eye Protection: | Recommend safety glasses with side shields or safety goggles. |
| Other Protective Clothing or Equipment: | Not required |
| Work/Hygienic Practices: | Careful handling to prevent splinters. Wash hands thoroughly before eating or smoking. |

----- **SECTION 9 – TOXICITY INFORMATION** -----

None

----- **SECTION 10 – ATTACHMENTS** -----

NOTICE:

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