

SPECIALTY MATERIALS, INC.

Manufacturers of Boron and SCS Silicon Carbide Fibers and Boron Nanopowder

MATERIAL SAFETY DATA SHEET - Boron Prepreg 5506

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

Product Name: Boron Prepreg 5506

Product Use Description: Unidirectional Boron monofilament reinforcement in a 350°F cure epoxy resin system for use in a B-1 high strength, high temperature composite application

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: August 28, 2009

HMIS LABEL

HEALTH	2
FIRE	1
REACTIVITY	1
PPE	X

----- SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS -----

Amounts specified are typical and do not represent a specification

Component(s)	OSHA PEL	ACGIH TLV	OTHER EXPOSURE LIMITS	% MAXIMUM CONTENT	CAS No.
Proprietary formulation of Multi-Functional Glycidyl Epoxy Resins (TGPAP, TGMDA and DGEBA)	N/E	N/E	N/E	30 - 40%	5026-74-4 (typ.)
Boron Filament (excluding Tungsten core)	N/E	N/E	N/E	60 - 70%	7440-42-8
Fibrous Glass (Micro Glass)	Nus. Dust 15mg/m ³ Resp. Dust 5mg/m ³	Fibrous Glass Dust 10mg/m ³	N/E	<1%	65997-17-3

Material is boron monofilament encapsulated in catalyzed epoxy resin

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

Boiling Point:	Not Applicable
Specific Gravity (H ₂ O = 1):	2.0
Vapor Pressure (mm Hg):	Negligible
Vapor Density (Air = 1):	Not Applicable
Solubility in Water:	Negligible
Reactivity in Water:	None
Melting Point:	Not Applicable
Appearance and Odor:	Black flat odorless tape

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

Flash Point:	>300 °F
Method Used:	Open Cup
Flammable Limits in Air % by Volume:	
LEL Lower:	Not Established
UEL Upper:	Not Established
Auto-Ignition Temperature:	Unknown
Extinguisher Media:	Submerge in water or cover with inert material
Special Fire Fighting Procedures:	Wear Self-Contained Breathing Apparatus to prevent exposure to fumes. Use Foam, CO ₂ Dry Chemical and/or cover with Sand.
Unusual Fire and Explosion Hazards:	None known

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

Stability:	Unstable () Stable (X)
Conditions to Avoid:	Extended Storage above 80 °F or Exposure to Direct Sunlight
Incompatibility (Materials to Avoid):	Acids, Bases, Anhydrides, Polysulfides
Hazardous Decomposition Products:	CO, CO ₂ , HCN
Hazardous Polymerization:	May Occur (X) Will Not Occur ()

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

1. Acute:	Fiber splinters, skin irritation and eye irritation
2. Chronic:	Possible allergic reaction, Dermatitis
Signs and Symptoms of Exposure:	Irritation of skin or eyes from splinters or epoxy resin
Medical Conditions Generally Aggravated by Exposure:	Dermatitis
Emergency and First Aid Procedures:	Excessive epoxy resin skin contact may cause irritation and fiber breakage may result in splinters. Remove splinters as soon as possible to guard against any infection. Wash affected skin areas with soap and water

ROUTES OF ENTRY:

1. Inhalation:	Unlikely – due to 100 – 200 µm diameter fiber size.
2. Eyes:	Unlikely -if occurs, Flush with copious amounts of water and seek Medical help.
3. Skin:	Most Likely - wash affected area with soap and water. Use extreme caution to prevent splinters.
4. Ingestion:	Unlikely - seek Medical Attention. Do not induce vomiting. Do not give anything by mouth to an unconscious or convulsing person.

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 -----

Precautions to be taken in Handling and Storage:	Careful handling to avoid any penetration of skin or eyes by fibers. Fiber size is too large and dense for inhalation and is encased in catalyzed epoxy resin. Some individuals can develop rashes from epoxy resins. Store in closed containers and use gloves or barrier creams if rash occurs.
Other Precautions:	None known. This resin system should be considered more reactive than most epoxy resin systems.

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Steps to be Taken In Case
Material Is Released or Spilled:

Clean material can be returned to storage. Contaminated material should be cured to prevent exotherm of resin. Clean up carefully to avoid fiber splinters. Sweep up or vacuum.

Waste Disposal Method
(Consult Federal, State,
and Local Regulations):

All disposal practices must be in accordance with Federal, State and local regulations. Cured material may not be considered a Hazardous Waste.

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

Respiratory Protection
(Specify Type):

None Usually - For Cutting or Grinding, Respirator For Nuisance Dust (29 CFR 1910.134)

Ventilation:

Recommended

Local Exhaust:

Not Required Unless Working in a Confined Space

Mechanical (General):

As Per ACGIH Industrial Vet. Guidelines

Protective Gloves:

Recommended (29 CFR 1910.132)

Eye Protection:

Recommended (29 CFR 1910.133)

Other Protective Clothing
or Equipment:

Additional Protective Clothing to include Long-Sleeved Garments and Face Shield for High Sensitivity Individuals

Work/Hygienic Practices:

Wash hands thoroughly before Eating or Smoking.

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

Acute Health Hazard

Skin:

None known. Epoxy constituents used in this product have resulted in positive patch test results for Allergic Contact Dermatitis (ACD)

Chronic Health Hazard

This Product Contains no Listed Carcinogens According to IARC, ACGIH, NTP and/or OSHA in Concentrations of 0.1 Percent or Greater

----- SECTION 10 – ATTACHMENTS -----

NOTICE:

THE INFORMATION PRESENTED HERE IN IS BASED UPON DATA CONSIDERED TO BE ACCURATE AS OF THE DATE OF MANUFACTURE OF THIS MATERIAL DATA SAFETY DATA SHEET. HOWEVER, NO WARRANTY OR REPRESENTATION, EXPRESSED OR OTHERWISE, IS MADE AS TO THE ACCURACY OR COMPLETENESS OF THE FOREGOING DATA AND SAFETY INFORMATION, NOR IS ANY AUTHORIZATION GIVEN OR IMPLIED TO PRACTICE ANY PATENTED INVENTION WITHOUT A LICENSE. IN ADDITION, THE VENDOR CAN ASSUME NO RESPONSIBILITY FOR ANY DAMAGE OR INJURY RESULTING FROM ABNORMAL USE, FROM ANY FAILURE TO ADHERE TO RECOMMENDED PRACTICES, OR FROM ANY HAZARDS INHERENT IN THE NATURE OF THE PRODUCT.