

SPECIALTY MATERIALS, INC.

Manufacturers of Boron and SCS Silicon Carbide Fibers and Boron Nanopowder

MATERIAL SAFETY DATA SHEET - 5521 Catalyzed Epoxy Resin

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

Product Name: 5521 Catalyzed Epoxy Resin

Product Use Description: 250°F cure epoxy resin system for use with boron filaments in high strength, moderate temperature preimpregnated unidirectional tape

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: January 28, 2009

HMIS LABEL	
HEALTH	2
FIRE	1
REACTIVITY	2
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 (TGMDA and DGEBA)	N/E	N/E	N/E	>85%	5026-74-4 (typ.)
Epoxy curing agents (type CG)	N/E	N/E	N/E	<10%	461-58-5
Diuron Urea 3-(3,4 dichlorophenyl) -1, 1-dimethylurea	10 mg/m ³	10 mg/m ³	10 mg/m ³ (DuPont AEL)	<10%	330-54-1
Fibrous Glass (Micro Glass)	Nus. Dust 15mg/m ³ Resp. Dust 5mg/m ³	Fibrous Glass Dust 10mg/m ³	N/E	<5%	65997-17-3
Amorphous fumed silica	None	None		<1%	112945-52-5

This Product Contains Components Considered to be Hazardous under OSHA Hazard communication Standard 29 CFR 1910.1200

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

Boiling Point:	Not Applicable
Specific Gravity (H ₂ O = 1):	1.2
Vapor Pressure (mm Hg):	Negligible
Vapor Density (Air = 1):	Not Applicable
Solubility in Water:	Negligible
Reactivity in Water:	None
Melting Point:	120°F
Appearance and Odor:	Yellow Solid, Odorless

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

Flash Point:	>300 DEG. 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:	Violent exothermic reaction may occur in bulk quantities of uncured resin

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

Stability:	Unstable () Stable (X)
Conditions to Avoid:	Extended Storage above 80 Deg. F or Exposure to Direct Sunlight, Heating Bulk Quantities above 100 Deg. F.
Incompatibility (Materials to Avoid):	Acids, Bases, Anhydrides, Polysulfides
Hazardous Decomposition Products:	CO, CO ₂ , HCN, NO _x
Hazardous Polymerization:	May Occur (X) Will Not Occur ()

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

1. Acute: Skin Irritation, Eye Irritation and Allergic Skin Reactions

2. Chronic: Possible allergic reaction, Dermatitis

Signs and Symptoms
of Exposure: Irritation of Skin or Eyes

Medical Conditions Generally
Aggravated by Exposure: Dermatitis

The following Toxicity Data is reported for Diuron, a minor component of this product: Dermal LD50 (Rabbit) = >2,000 mg/kg (Tech), Oral LD50 (Rat) = 2,900 mg/kg (Tech)

Emergency and First Aid Procedures:

1. Inhalation: Unlikely - unless solid epoxy is Pulverized or otherwise finely divided. If inhaled, remove to fresh air. If breathing is difficult, give oxygen and call a physician.

2. Eyes: Unlikely – if eye contact occurs, hold eye open and flush gently with water for at least 15 minutes and call a physician.

3. Skin or Clothing: Most Likely – remove contaminated clothing, wash affected area(s) with soap and water.

4. Ingestion: Unlikely - if swallowed, do not induce vomiting. Call a Poison Control Center or Physician immediately for treatment advice. Do not give anything by mouth to an unconscious or convulsing person.

Chemicals Listed as Carcinogen or Potential Carcinogen:

National Toxicology Program: Yes () No (X)

I.A.R.C. Monographs: Yes () No (X)

OSHA: Yes () No (X)

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

Precautions to be taken
in Handling and Storage:

This Catalyzed Epoxy Product should be stored in sealed, moisture proof plastic bags or other suitable closed containers, and maintained at a temperature not to exceed 0° F. In preparation for use Product should remain sealed until thawed to room temperature. Observe handling precautions identified in Section 8 of this MSDS.

Other Precautions:

None known. This resin system should be considered more reactive than most epoxy resin systems.

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

Prevent release into Sewers or any body of water. Clean material can be returned to proper storage. Contaminated material should be Cured to prevent exotherm of resin.

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

Do not dump into any Sewer, on the Ground or into any Body of Water. 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

None Usually - For Cutting or Grinding, use Approved Pesticide Respirator suitable for respirable dusts if exposure exceeds TLV level. Respirator For Nuisance Dust (29 CFR 1910.134)

Ventilation:

Recommended

Local Exhaust:

Not Required unless cutting or grinding the product

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, long pants and Face Shield for High Sensitivity Individuals

Work/Hygienic Practices:

Wash hands thoroughly before Eating or Smoking.

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

Acute Health Hazard

Ingestion:	No Data on the Product itself. The Diuron component of this product indicates Oral LD50 (Rat) = 2,900 mg/kg (Tech).
Inhalation:	No Data on the Product itself. The Diuron component of this product indicates possible weakness or shortness of breath by formation of methemoglobin due to inhalation.
Skin:	No Data on the Product itself. Epoxy constituents used in this Product have resulted in Positive Patch Test results for Allergic Contact Dermatitis (ACD). The Diuron component of this product indicates Dermal LD50 (Rabbit) = >2,000 mg/kg (Tech).
Eyes:	No Data on the Product itself. The Diuron component of this product indicates possible tearing or blurring of vision as a result of eye contact.

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.