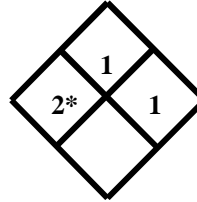


P.O. Box 4980  
The Woodlands, TX 77387-4980

8 am to 5 pm Phone: (800) 257-5547  
24-Hour Emergency Phone: (800) 328-8501  
International Emergency Phone: (409) 727-0831  
Asia Pacific Emergency Phone: (65) 6336-6011

**Effective Date:** 6/1/07**Material Safety Data Sheet**

MSDS No: 62066

**1. PRODUCT IDENTIFICATION****Trade Name:** Epocast 1610A-1**Material Code:** FPC7336**Chemical Family:** Filled Epoxy Resin**NFPA RATING**

**Intended Use or Product Type:** This material is free of Polybrominated Diphenyl Ethers (PBDEs) including penta-, octa-, and deca-PBDEs, or related compounds such as Polybrominated Biphenyl (PBB).

**2. COMPOSITION / INFORMATION ON INGREDIENTS**

O S H A	CAS No.	CHEMICAL IDENTITY	EXPOSURE LIMITS				CARCINOGEN STATUS			
			ACGIH		OSHA		MFR.	IARC	NTP	OSHA
			TWA	STEL	PEL	STEL				
	1185-55-3	SILANE, TRIMETHOXYMETHYL- trimethoxymethyl silane	NE	NE	NE	NE	NE	NR	NR	NR
	Common Name: Concentration	1.00 - 5.00 % by wt								
*	14808-60-7	Quartz (SiO <sub>2</sub> )	0.05 mg/m <sup>3</sup>	NE	NE	NE	NE	Yes	Yes	Yes
	Common Name: Concentration	Crystalline Silica (Quartz) 1.00 - 5.00 % by wt								
	21645-51-2	Aluminum hydroxide (Al(OH) <sub>3</sub> )	NE	NE	NE	NE	NE	NR	NR	NR
	Common Name: Concentration	1.00 - 5.00 % by wt								
*	2425-79-8	Oxirane, 2,2'-[1,4- butanediylbis(oxyethylene)]bis- 1,4-Butanediol Diglycidyl Ether	NE	NE	NE	NE	NE	NR	NR	NR
	Common Name: Concentration	5.00 - 10.00 % by wt								
*	25036-25-3	Phenol, 4,4'-(1- methylethylidene)bis-, polymer with 2,2'-[(1- methylethylidene)bis(4,1- phenyleneoxymethylene)]bis[oxira ne]	NE	NE	NE	NE	NE	NR	NR	NR
	Common Name: Concentration	Bisphenol A - BADGE copolymer 1.00 - 5.00 % by wt								

Effective Date: 6/1/07

	25068-38-6	Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane Bisphenol A Diglycidyl Ether Polymer Concentration: 30.00 - 60.00 % by wt	NE	NE	NE	NE	NE	NR	NR	NR
*	461-58-5	Guanidine, cyano-Dicyanamide Concentration: 1.00 - 5.00 % by wt	NE	NE	NE	NE	NE	NR	NR	NR
*	65997-17-3	Glass, oxide, chemicals glass oxide Concentration: 30.00 - 60.00 % by wt	NE	NE	NE	NE	NE	NR	NR	NR
*	84852-15-3	PHENOL, 4-NONYL-, BRANCHED Nonyl Phenol Concentration: 1.00 - 5.00 % by wt	NE	NE	NE	NE	NE	NR	NR	NR
	138265-88-0	Boron zinc Oxide (2ZnO-3B2O3-3-5H2O) zinc borate Concentration: 1.00 - 5.00 % by wt	NE	NE	NE	NE	NE	NR	NR	NR
	Confidential	nonhalogenated flame-retardant Concentration: 5.00 - 10.00 % by wt	NE	NE	NE	NE	NE	NR	NR	NR

NE = Not Established NR = Not Reviewed \* = OSHA Hazardous Ingredient

**3. HAZARDS IDENTIFICATION**

**Emergency Overview:** WARNING!!! Causes severe eye irritation. Causes skin irritation and possible allergic skin reaction. Harmful if inhaled. Harmful if swallowed.

**Primary Route(s) of Entry:** Dermal, inhalation.

**Potential Health Effects:** Severely irritating to eyes, may cause eye damage. Severely irritating to skin. Possibly harmful if swallowed. Vapor or mists may be harmful by inhalation.

**Carcinogenicity (NTP, IARC, OSHA):** Contains Crystalline silica, quartz which are considered to be carcinogenic by NTP, IARC, or OSHA.

**Chronic:** Prolonged and repeated exposure can cause allergic reaction. Also, prolonged repeated exposure of substance may cause delayed and serious injury.

**4. FIRST AID MEASURES**

**Ingestion:** If swallowed dilute by giving two (2) glasses water to drink. See a physician. Never give anything by mouth to an unconscious person.

---

**Effective Date:** 6/1/07

---

**Skin:** For skin contact, wash with large amounts of running water, and soap, if available, for 15 minutes. Remove contaminated clothing and shoes. Get immediate medical attention. Discard or decontaminate clothing before re-use and destroy contaminated shoes.

**Inhalation:** If inhaled, remove from area to fresh air. If not breathing, give artificial respiration. Get immediate medical attention. If breathing is difficult, transport to medical care and, if available, give supplemental oxygen.

**Eyes:** For eye contact, immediately flush eyes for at least 15 minutes with running water. Hold eyelids apart to ensure rinsing of the entire eye surface and lids with water. Get immediate medical attention.

**Note to Physician:** Allergic dermatitis or respiratory response in susceptible individuals may be delayed. It may appear after weeks or even months of frequent and prolonged contact.

**Medical Conditions Aggravated by Exposure:** Allergy, eczema, eye or respiratory conditions.

## **5. FIRE FIGHTING MEASURES**

**Flash Point:** > 94°C (> 201 °F) (estimated)

**Fire Fighting Extinguishing Media:** Carbon dioxide, foam, dry chemical, water spray.

**Fire Fighting Equipment:** Use self-contained breathing apparatus and full protective clothing.

**Fire and Explosion Hazards:** Keep fire-exposed containers cool with water.

**Hazardous Combustion Products:** Decomposition and combustion products may be toxic.

## **6. ACCIDENTAL RELEASE MEASURES**

**Accidental Release Measures:** Dike and absorb spill on inert material (sand, earth, etc.). Transfer to containers for disposal. Remove contaminated clothing and wash affected skin areas with soap and water. Wash clothing before re-use.

## **7. HANDLING AND STORAGE**

**Signal Word:** Warning !

**Precautions:** Avoid contact with eyes, skin, or clothing. Wear eye protection and impervious gloves when handling. Wash thoroughly after handling. Avoid breathing vapor or mist. Keep containers closed when not in use. Use only with adequate ventilation. Do not take internally.

**Other Handling Information:** In accordance with good industrial practice, handle with care and avoid unnecessary personal contact. Avoid contact with eyes and prolonged or repeated skin contact. Do not inhale mists. Use with adequate ventilation. For industrial use only.

**Storage Information:** MAXIMUM 35° C. Store indoors in a cool, dry area with adequate ventilation. Store out of direct sunlight.

Effective Date: 6/1/07

**Additional Information:** PLEASE READ TECHNICAL DATA SHEET BEFORE HANDLING THE PRODUCT. KEEP OUT OF THE REACH OF CHILDREN. FOR INDUSTRIAL USE ONLY.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Personal Protective Equipment:** Impervious apron, eyewash station, emergency shower.

**Exposure Guidelines:** Wash thoroughly after handling and before eating, drinking, or using tobacco products.

**Skin Protection:** Wear impervious gloves.

**Respiratory Protection:** Wear respirator (MSHA/NIOSH or approved equivalent) suitable for concentrations and type of air contaminants encountered.

**Eye Protection:** Wear splash-proof chemical goggles.

**Engineering Controls:** Good general mechanical ventilation and local exhaust if needed.

**Emergency Response Protection:** Wear breathing apparatus (MSHA/NIOSH-approved, pressure demand, self-contained or equivalent) and full protective gear.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Color:</b>	Off White
<b>Odor:</b>	Slight
<b>Physical State:</b>	Paste
<b>Solubility in Water:</b>	Negligible
<b>Viscosity:</b>	Paste
<b>Vapor Pressure:</b>	< 1 mm Hg at 20°C (68 °F)
<b>Specific Gravity:</b>	0.46 - 0.5 g/cc
<b>Evaporation Rate:</b>	< 1 (Butyl Acetate = 1)
<b>Vapor Density:</b>	> 1 (Air = 1)
<b>VOC:</b>	5 g/L (This is an estimated value.)
<b>Coefficient of water/oil:</b>	Not Evaluated

## 10. STABILITY AND REACTIVITY

**Conditions to Avoid:** Avoid storage above 10 °C, acids, strong bases, and amine hardeners in bulk.

**Stability:** Stable under normal conditions.

**Incompatibility:** Acids, amines, strong bases.

**Hazardous Decomposition Products:** Carbon monoxide, carbon dioxide, hydrocarbons, and aldehydes.

**Hazardous Polymerization:** Will not occur.

## 11. TOXICOLOGICAL INFORMATION

Effective Date: 6/1/07

**Inhalation Toxicity (LC50):** Not available

**Sensitization:** May cause allergic skin reaction and sensitization.

**Carcinogenicity:** Crystalline silica dust in its neat form is on the IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans (Volume 42, 1987) concludes that there is sufficient evidence for the carcinogenicity of crystalline silica to experimental animals, and there is limited evidence of the carcinogenicity of crystalline silica to Humans. IARC Class 2A

**Skin Irritation:** Moderate irritant.

**Eye Irritation:** Moderate - severe.

**12. ECOLOGICAL INFORMATION**

**Biodegradability:** No information available.

**Ecotoxicity:** No information available.

**13. DISPOSAL CONSIDERATIONS**

**Waste Disposal Method:** Incinerate liquid; landfill or incinerate contaminated diking material in accordance with local, state, and federal regulations.

**14. TRANSPORT INFORMATION**

<b>DOT: Non-Bulk</b>	
<b>Proper Shipping Name:</b>	Not Regulated
<b>TDG: Non-Bulk</b>	
<b>Proper Shipping Name:</b>	Not Regulated
<b>IATA: Non-Bulk</b>	
<b>Proper Shipping Name:</b>	Not Regulated
<b>IMDG: Non-Bulk</b>	
<b>Proper Shipping Name:</b>	Not Regulated

**15. REGULATORY INFORMATION**

**US Federal Regulations:**

**Occupational Safety and Health Act (OSHA):** This product is considered to be a hazardous chemical under the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Resource Conservation and Recovery Act (RCRA):** Not a hazardous waste under RCRA (40 CFR 261).

**SARA Title III: Section 304 - CERCLA:** This product contains the following chemicals regulated under Section 304 (40 CFR 302) as hazardous substance(s) for emergency release notification ("CERCLA" List):

**Effective Date:** 6/1/07

Chemical Name: Boron zinc Oxide (2ZnO-3B2O3-3-5H2O)  
Common Name: zinc borate  
CAS Number: 138265-88-0  
Percent in Composition: 1 - 5 % by wt  
Component RQ: 1000

Chemical Name: Urea, N'-(3,4-dichlorophenyl)-N,N-dimethyl-  
Common Name: Diuron  
CAS Number: 330-54-1  
Percent in Composition: 0.1 - 1 % by wt  
Component RQ: 100

**SARA Title III: Section 311/312 - Hazard Communication Standard (HCS):** Immediate (acute) health hazard  
Delayed (chronic) health hazard

**SARA Title III: Section 313 Toxic Chemical List (TCL):** This product contains a toxic chemical(s) for routine annual toxic chemical release reporting under section 313 (40 CFR 372). This information must be included in all MSDS's copied or distributed for this material.

Chemical Name: Boron zinc Oxide (2ZnO-3B2O3-3-5H2O)  
Common Name: zinc borate  
CAS Number: 138265-88-0  
Percent in Composition: 1 - 5 % by wt

**TSCA Section 8(b) - Inventory Status:** Chemical components listed on TSCA Inventory.

**TSCA Section 12(b) - Export Notification:** This product does not contain any chemical(s) that are subject to a Section 12(b) export notification.

### **International Regulations:**

**Australian Inventory Status:** This product contains only chemicals which are currently listed on the Australian Inventory of Chemical Substances.

**Canadian Inventory Status:** This product contains only chemicals that are currently listed on the Canadian Domestic Substance List.

**Canadian WHMIS:** This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations. D2A, D2B

**European Inventory Status (EINECS):** This product contains only chemicals that are currently listed on the European Inventory of Existing Commercial Chemical Substances (EINECS).

**Japanese Inventory Status:** This product contains one or more chemicals currently not on the Japanese Ministry of International Trade and Industry List of Existing and New Chemical Substances.

### **State Regulations:**

**California Proposition 65:** The following is required composition information. This product contains the following chemical(s) which are currently listed on the California list of Known Carcinogens and Reproductive Toxins:

Chemical Name: Quartz (SiO2)

**Effective Date:** 6/1/07

Common Name: Crystalline Silica (Quartz)

CAS Number: 14808-60-7

Percent in Composition: 1 - 5 % by wt

Comment: Warning! This chemical is known to the State of California to cause cancer.

Chemical Name: Urea, N'-(3,4-dichlorophenyl)-N,N-dimethyl-

Common Name: Diuron

CAS Number: 330-54-1

Percent in Composition: 0.9327 % by wt

Comment: Warning! This chemical is known to the State of California to cause cancer.

**Pennsylvania Right-to-Know:** The following is required composition information:

Chemical Name: Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane

Common Name: Bisphenol A Diglycidyl Ether Polymer

CAS Number: 25068-38-6

Comment: Not on Pennsylvania Hazardous Substance List

Chemical Name: Glass, oxide, chemicals

Common Name: glass oxide

CAS Number: 65997-17-3

Comment: Not on Pennsylvania Hazardous Substance List

Chemical Name: nonhalogenated flame-retardant

CAS Number: Confidential

Comment: Not on Pennsylvania Hazardous Substance List

Chemical Name: Oxirane, 2,2'-[1,4-butanediylbis(oxymethylene)]bis-

Common Name: 1,4-Butanediol Diglycidyl Ether

CAS Number: 2425-79-8

Comment: Not on Pennsylvania Hazardous Substance List

Chemical Name: Guanidine, cyano-

Common Name: Dicyanamide

CAS Number: 461-58-5

Comment: Not on Pennsylvania Hazardous Substance List

Chemical Name: Quartz (SiO<sub>2</sub>)

Common Name: Crystalline Silica (Quartz)

CAS Number: 14808-60-7

Comment: Hazardous Substance

**16. OTHER INFORMATION****MSDS No:**

62066

**Reason Issued:**add WHMIS + syn 5/07 - add syn 10/06 -  
update international reg - New Product**Prepared By:**

Matthew Austin

**Approved By:**

Matthew Austin

**Title:**

EH&amp;S Chemist

---

**Effective Date:** 6/1/07

---

**Other Information:** L/M Codes: DR/Si/CA1 (D12120031) [D36]  
Material Code: FPC7336

**Disclaimer:** The information and recommendations contained herein are based upon tests in controlled laboratory conditions, are believed to be correct, and are provided for the sole purpose of hazard communication as part of Huntsman's product safety program. This product has not been tested for, and therefore is not recommended or suitable for, uses for which prolonged contact with mucous membranes, abraded skin, or blood is intended or likely, or for uses for which implantation within the human body is intended, and Huntsman assumes no liability for any such uses.

The information and recommendations contained herein are not intended to constitute performance information concerning the product, which is available in separate technical data sheets available from Huntsman upon request. Users are urged, and are urged to urge others who may come in contact with the product, to obtain and consult data sheets prior to purchase, use, transportation or storage of the product.

HUNTSMAN MAKES NO REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY, QUALITY, OR FITNESS FOR A PARTICULAR PURPOSE. HUNTSMAN'S LIABILITY IS STRICTLY LIMITED TO REIMBURSEMENT OF BUYER'S PURCHASE PRICE, OR IN HUNTSMAN'S DISCRETION REPLACEMENT, OF THE PRODUCT IN RESPECT OF WHICH SUCH CLAIM IS MADE. HUNTSMAN'S LIABILITY IS STRICTLY LIMITED BY LEGAL NOTICES IN TECHNICAL DATA SHEETS, PRODUCT LITERATURE, AND/OR SALE DOCUMENTS. The foregoing DISCLAIMERS and LIMITATION OF LIABILITY supercede inconsistent or contradictory provisions in Buyer's documents.

USER SHOULD CONSULT A LEGAL ADVISOR OR THE APPROPRIATE GOVERNMENTAL AGENCY TO DETERMINE THE APPLICABILITY OR EFFECT OF ANY LAW OR REGULATION WITH RESPECT TO THE PRODUCT. HUNTSMAN DOES NOT UNDERTAKE TO FURNISH ADVICE ON SUCH MATTERS.

NO PERSON OR ORGANIZATION EXCEPT A DULY AUTHORIZED HUNTSMAN EMPLOYEE IS AUTHORIZED TO PROVIDE OR MAKE AVAILABLE DATA SHEETS FOR HUNTSMAN PRODUCTS. DATA SHEETS FROM UNAUTHORIZED SOURCES MAY CONTAIN INFORMATION THAT IS NO LONGER CURRENT OR ACCURATE. NO PART OF THIS DATA SHEET MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM, OR BY ANY MEANS, WITHOUT PERMISSION IN WRITING FROM HUNTSMAN. ALL REQUESTS FOR PERMISSION TO REPRODUCE MATERIAL FROM THIS DATA SHEET SHOULD BE DIRECTED TO HUNTSMAN, MANAGER, PRODUCT SAFETY AT THE ABOVE ADDRESS.