

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

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24-Hour Emergency Phone: (800) 328-8501
International Emergency Phone: (409) 727-0831
Asia Pacific Emergency Phone: (65) 6336-6011

Effective Date: 12/5/08

Material Safety Data Sheet

MSDS No: 10848

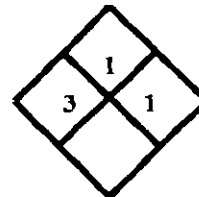
1. PRODUCT IDENTIFICATION

Trade Name: EPOCAST 52B

Material Code: FPC2573

MSDS Category: Commercial Product

Chemical Family: Modified Aliphatic Amines



NFPA RATING

Intended Use or Product Type: laminating systems

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				
	112-24-3	1,2-Ethanediamine, N,N'-bis(2-aminoethyl)- Triethylenetetramine Common Name: Concentration: 5.00 - 10.00 % by wt	NE	NE	NE	NE	NE	NR	NR	NR
	1761-71-3	4,4'-Diaminodicyclohexylmethane cycloaliphatic amine Common Name: Concentration: 30.00 - 60.00 % by wt	NE	NE	NE	NE	NE	NR	NR	NR
	68683-29-4	propenenitrile polymer with butadiene, cyanomethyloxo[piperazinyloxy]butyl-terminated propanenitrile rubber Common Name: Concentration: 1.00 - 5.00 % by wt	NE	NE	NE	NE	NE	NR	NR	NR
*	9046-10-0	Poly[oxy(methyl-1,2-ethanediy)], .alpha.-(2-aminomethylethyl)- .omega.-(2-aminomethylethoxy)- diaminopolypropylene glycol Common Name: Concentration: 1.00 - 5.00 % by wt	NE	NE	NE	NE	NE	NR	NR	NR
	135108-88-2	formaldehyde polymer with hydrogenated benzenamine formaldehyde polymer with hydrogenated benzenamine Common Name:	NE	NE	NE	NE	NE	NR	NR	NR

Effective Date: 12/5/08

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

6. ACCIDENTAL RELEASE MEASURES

Accidental Release Measures: Evacuate the spill area. Wear full protective clothing (acid resistant clothing, gloves and boots, chemical splash goggles and face shield.). 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. Keep spills and cleaning runoffs out of municipal sewers and open bodies of water. If spilled on a porous surface, ground contamination must be considered.

7. HANDLING AND STORAGE

Signal Word: DANGER!! CORROSIVE

Precautions: Do not get in eyes, on skin, or on clothing. Keep away from heat, sparks, and flames. Wear splash goggles and impervious gloves when handling. Wash thoroughly after handling. Avoid breathing vapor. 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: STORAGE TEMPERATURE: 35°C, maximum. Store indoors in a cool, dry area with adequate ventilation away from excessive heat, sources of ignition, and reactive materials. Do NOT store near food or feed. CORROSIVE to copper and brass on long-term storage.

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: Eye bath and safety shower should be available. Wear protective clothing.

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: Explosion-proof local exhaust ventilation at point of contaminant release.

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

9. PHYSICAL AND CHEMICAL PROPERTIES

Color: Light brown to brown

Effective Date: 12/5/08

DOT: Non-Bulk

Proper Shipping Name: Amines, Liquid, Corrosive, n.o.s.
Technical Shipping Name (If n.o.s.): Cycloaliphatic amine, Triethylene tetramine
Hazard Class: 8
ID Number: UN 2735
Packing Group: PG III
Label: Corrosive Liquid

IMDG: Non-Bulk

Proper Shipping Name: Amines, Liquid, Corrosive, n.o.s.
Technical Shipping Name (If n.o.s.): Cycloaliphatic amine, Triethylene tetramine
Hazard Class: 8
ID Number: UN 2735
Packing Group: PG III
Label: Corrosive Liquid

IATA: Non-Bulk

Proper Shipping Name: Amines, Liquid, Corrosive, n.o.s.
Technical Shipping Name (If n.o.s.): Cycloaliphatic amine, Triethylene tetramine
Hazard Class: 8
ID Number: UN 2735
Packing Group: PG III
Label: Corrosive Liquid

TDG: Non-Bulk

Proper Shipping Name: Amines, liquid, corrosive, n.o.s.
Technical Shipping Name (If n.o.s.): Cycloaliphatic amine, Triethylene tetramine
Hazard Class: 8
ID Number: UN 2735
Packing Group: PG III
Label: Corrosive

15. REGULATORY INFORMATION**US Federal Regulations:**

Occupational Safety and Health Act (OSHA): This Material Safety Data Sheet (MSDS) has been prepared in compliance with the federal OSHA Hazard Communication Standard 29 CFR 1910.1200. This product is considered to be a hazardous chemical under that standard.

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

SARA Title III: Section 304 - CERCLA: Not listed.

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

SARA Title III: Section 313 Toxic Chemical List (TCL): This product does not contain a toxic chemical for routine annual 'Toxic Chemical Release Reporting' under Sec. 313 (40 CFR 372).

TSCA Section 8(b) - Inventory Status: All chemical(s) comprising this product are listed on the TSCA inventory.

TSCA Section 12(b) - Export Notification: This product does not contain any chemicals subject to Section 12(b) export notification.

Effective Date: 12/5/08

Common Name: propanenitrile rubber
CAS Number: 68683-29-4
Comment: Not on Pennsylvania Hazardous Substance List

Chemical Name: Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)-
Common Name: diaminopolypropylene glycol
CAS Number: 9046-10-0
Comment: Not on Pennsylvania Hazardous Substance List

16. OTHER INFORMATION

MSDS No: 10848
Reason Issued: 12/08 add syn -4/08 add WHMIS - update
regulatory - New
Prepared By: Matthew Austin
Approved By: Matthew Austin
Title: EH&S Chemist

Other Information: L/M Codes: B L/CA3 - BL0597 (B10021833) [B78]
Material Code: FPC2573

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.

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Effective Date: 3/5/10

Material Safety Data Sheet

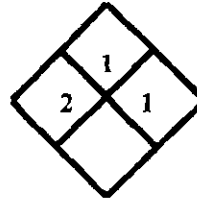
MSDS No: 10837

1. PRODUCT IDENTIFICATION

Trade Name: EPOCAST 52A

Material Code: FPC2572

Chemical Family: Epoxy Resin



NFPA RATING

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				
	28768-32-3	Oxiranemethanamine, N,N'-(methylenedi-4,1-phenylene)bis[N-(oxiranylmethyl)-epoxy resin Common Name: Concentration: 30.00 - 60.00 % by wt	NE	NE	NE	NE	NE	NR	NR	NR
*	29690-82-2	Formaldehyde, polymer with (chloromethyl)oxirane and 2-methylphenol Epoxy Cresol Novolac Common Name: Concentration: 10.00 - 30.00 % by wt	NE	NE	NE	NE	NE	NR	NR	NR
	5026-74-4	Oxiranemethanamine, N-[4-(oxiranylmethoxy)phenyl]-N-(oxiranylmethyl)-triglycidyl ether of-p-aminophenol Common Name: Concentration: 30.00 - 60.00 % 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.

Effective Date: 3/5/10

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: STORAGE TEMPERATURE: 35°C, maximum. Store indoors in a cool, dry area with adequate ventilation.

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: Eye bath and safety shower should be available. Wear protective clothing.

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.

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

9. PHYSICAL AND CHEMICAL PROPERTIES

Color:	Blue
Odor:	No Discernable Odor
Solubility in Water:	Negligible
Viscosity:	~ 5000 cps
Vapor Pressure:	< 1 mm Hg at 20°C (68 °F)
Specific Gravity:	1.2 (Water =1)
Evaporation Rate:	< 1 (Butyl Acetate = 1)
Vapor Density:	> 1 (Air = 1)
VOC:	12 g/L (This is an estimated value.)

10. STABILITY AND REACTIVITY

Conditions to Avoid: Do not heat in bulk, dangerous exothermic reaction may occur. Heat and direct sunlight.

Stability: Stable under normal conditions.

Incompatibility: Strong oxidizing agents, acids, and bases

Effective Date: 3/5/10

Technical Shipping Name (If n.o.s.):	epoxy resin
Hazard Class:	9
ID Number:	UN 3082
Packing Group:	PG III
Marine Pollutant:	Marine Pollutant
IMDG: Non-Bulk	
Proper Shipping Name:	Environmentally hazardous substance, liquid, n.o.s.
Technical Shipping Name (If n.o.s.):	epoxy resin
Hazard Class:	9
ID Number:	UN 3082
Packing Group:	PG III
Marine Pollutant:	Marine Pollutant
TDG: Non-Bulk	
Proper Shipping Name:	Environmentally hazardous substance, liquid, n.o.s.
Technical Shipping Name (If n.o.s.):	epoxy resin
Hazard Class:	9
ID Number:	UN 3082
Packing Group:	PG II
Marine Pollutant:	Marine Pollutant

15. REGULATORY INFORMATION

US Federal Regulations:

Occupational Safety and Health Act (OSHA): This Material Safety Data Sheet (MSDS) has been prepared in compliance with the federal OSHA Hazard Communication Standard 29 CFR 1910.1200. This product is considered to be a hazardous chemical under that standard.

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

SARA Title III: Section 304 - CERCLA: This product does not contain any chemicals regulated under Section 304 (40 CFR 302) as hazardous chemicals for emergency release notification ("CERCLA" List).

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 does not contain a toxic chemical for routine annual 'Toxic Chemical Release Reporting' under Sec. 313 (40 CFR 372).

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

TSCA Section 12(b) - Export Notification: This product does not contain any chemicals subject to 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.

Effective Date: 3/5/10

MSDS No: 10837
Reason Issued: 3/10 upate DOT WHMIS -update 3/07 -
update - Add Prop. 65 hazard
Prepared By: Matthew Austin
Approved By: Matthew Austin
Title: EH&S Chemist
Supersedes Date: 03/28/07

Other Information: L/M Codes: DR/CA3 -DL0597 (D10020033) [D62]
Material Code: FPC2572

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