

MATERIAL SAFETY DATA SHEET

Prepared by: Technical Barrier Systems Revision Date: January 15, 2010
This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200). Where a proprietary ingredient is shown, the identity may be made available as provided in this standard.

All components of this product are included in the EPA Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

1. **PRODUCT NAME: EPOXY GROUT RESIN**

Chemical Family: Epoxy resin and petroleum hydrocarbon

2. HAZARDOUS INGREDIENTS:	CASNO	TLV	EXPOSURE LIMITS*		CONTENT
			STEL	PEL	
Epoxy Resin	25068-38-6	None	None	None	55-70%
Triphenylphosphite	101-02-0	None	None	None	10-20%
Xylene	1330-20-7	100ppm	150ppm	100ppm	< 105%
Ethyl Benzene	100-41-4	100ppm	125ppm	100ppm	< 1.5%

*) Refer to Section 7 for available LD/LC(50) Health Hazard Data.

3. **PHYSICAL DATA:**

Boiling Point (°C):	(Xylene) 138	Water/Oil Distribution	
Percent Volatile:	ca. 10	Coefficient:	N/Av
Freezing Point (°C)	N/Av	Solubility in Water:	Nil
Vapor Pressure mmHg @20(°C):	(Xy) 9	Specific Gravity:	1.11
Vapor Density:	> Air	pH:	N/Av
Odor Threshold:	N/Av	Evaporation Rate:	N/Av
Appearance:	Amber Liquid	Odor:	Mild
N/Av = Not Available	N/Av = Not Available	ca. = Approximate	

4. **FIRE AND EXPLOSION HAZARD DATA:** HMIS Hazard Rating No. 2 (Moderate)

Flash Point: 35°C (95°F) Method: Pensky Martin C.C.

Auto-Ignition Temp.: 528°C (982°F)

Limits of Flammability: LEL: 1.0% UEL: 7.0%

Extinguishing Media: Carbon dioxide, foam, dry chemical & water fog.

EPOXY GROUT RESIN

4. FIRE AND EXPLOSION HAZARD DATA: (cont'd)

Special Fire & Unusual Hazards: At higher temperature vapors can cause pressure build up in sealed containers. Use water to cool containers exposed to fire. Self-contained respirator equipment and full protective clothing required when smoke or fumes are generated. Electrical grounding is not recommended.

5. REACTIVITY DATA: HMIS Hazard Rating No. 0 (Minimal)

Stability: Stable. Not sensitive to mechanical impact. Excessive heat, fumes and smoke can occur if this product is not mixed and used according to directions.

Incompatibility: Strong acids, strong bases, amines, and mercaptans may initiate polymerization possibly hazardously.

Hazardous Decomposition Products: Oxides of carbon and nitrogen; aldehydes, phosphorous and various unknown hydrocarbons from incomplete combustion.

Hazardous Polymerization: Will not occur when handled per instructions.

6. ENVIRONMENTAL AND DISPOSAL INFORMATION:

Action to Take For Spills/Leaks: Ventilate area, eliminate all sources of ignition. Wear appropriate protective gear, contain leak or spill, salvage, clean up residue with absorbent material.

Waster Disposal Method: Handle disposal of waste material in manner which complies with local, state, province and federal regulation. Landfill if solidified or incineration at agency approved waste-disposal facilities.

7. HEALTH HAZARD DATA: HMIS Hazard Rating No. 2 (Moderate)

PRIMARY ROUTE OF ENTRY: Inhalation, Dermal, Ingestion

Effects of Overexposure

Inhalation: Vapors can be irritating to nose and mucus membranes. High Xylene exposures may result in narcotic effect, headaches and possible unconsciousness.

LCLo(50) Inhal.	CASRN	100-41-4	4000	ppm/4Hrs.Rat.
LC(50) Inhal.		1330-20-7	5000	ppm/4Hrs. Rat.

Eyes: Contact can cause severe irritation, redness, tearing and blurred vision.

Skin Absorption: Not expected to be absorbed through skin insufficient quantity to significantly increase overall toxicity.

LD(50) Dermal	CASRN	100-41-4	17.8 gm/kg Rabbit.
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EPOXY GROUT RESIN

10. ADDITIONAL INFORMATION:

Average Shelf Life: Refer to Product Data Sheet.
Special Instructions: Store in cool, dry place.

REGULATORY INFORMATION:

Title III Section 302: CASRN 100-41-4 RQ: 1000lbs
1330-20-7 1000lbs

Title III Section 311/312: Health hazard: Immediate
Delayed
Physical hazard: Fire

Title III Section 313: CASRN 100-41-4 < 5.0%
1330-20-7 < 25.0%

State: California This product may contain chemicals known to the state of California to cause cancer.

Ethyl Benzene CASRN 100-41-4 < 5.0%

WHMIS Classification: Class B, Div 3
Class D, Div 2, Sub B

Canadian Domestic Substance List: May contain chemicals not listed.

TRANSPORTATION

National Motor Freight Classification (NMFC): 46030 Sub: - Class: 55

Description: REGULATED - USE DOT PROPER SHIPPING NAME

Emergency Response Guide Page No.: 26

DOT Reportable Quantity: 4,000 LBS

Shipping Name: RESIN SOLUTION
UNNO: UN 1866 Class: 3 Package Group: II
Label: FLAMMABLE Sub-Label: NONE

Marine Pollutant: NL
(NL = Not Listed; P = Moderate; PP = Severe; ND = Not Determined)

The information herein is given in good faith. No warranty, expressed or implied, is given regarding the accuracy of these data or the results obtained from the use thereof. Consult Technical Barrier Systems Inc. for further information.

MATERIAL SAFETY DATA SHEET

Prepared by: Technical Barrier Systems Revision Date: September 1, 2009

This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200). Where a proprietary ingredient is shown, the identity may be made available as provided in this standard.

All components of this product are included in the EPA Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

1. **PRODUCT NAME: EPOXY GROUT HARDENER**

Chemical Family: Polyamide/amine mixture

2. HAZARDOUS INGREDIENTS:	CASNO	TLV	EXPOSURE LIMITS*		
			STEL	PEL	CONTENT
Polyamide Resin	68082-29-1	None	None	None	35-50%
Polyethylenepolyamine	68603-66-7	None	None	None	20-40%
Triethylenetetramine (TETA)	112-24-3	None	None	None	< 5%
Tetraethylenepentamine	112-57-2	None	None	None	< 5%
Diethylenetriamine	111-40-0		1ppm	None	1ppm < 5%

*) Refer to Section 7 for available LD/LC(50) Health Hazard Data.

3. **PHYSICAL DATA:**

Boiling Point (°C):	(TETA) 277	Water/Oil Distribution
Percent Volatile:	Slight	Coefficient: N/Av
Freezing Point (°C)	N/Av	Solubility in Water: 100%
Vapor Pressure mmHg @20(°C):	1.01 (TETA)	Specific Gravity: 0.98
Vapor Density:	> Air	pH: Alkaline
Odor Threshold:	N/Av	Evaporation Rate: N/Av
Appearance:	Gray clear Liquid	Odor: Ammoniacal
N/Av = Not Available	N/Av = Not Available	ca. = Approximate

4. **FIRE AND EXPLOSION HAZARD DATA:** HMIS Hazard Rating No. 1 (Slight)

Flash Point: 118°C (245°F) (TETA) Method: Tag C.C.

Auto-Ignition Temp.: Not Available

Limits of Flammability: LEL: Not Available UEL: Not Available

Extinguishing Media: Carbon dioxide, foam, dry chemical & water fog.

EPOXY GROUT HARDENER

4. FIRE AND EXPLOSION HAZARD DATA: (cont'd)

Special Fire & Unusual Hazards: At higher temperature vapors can cause pressure build up in sealed containers. Use water to cool containers exposed to fire. Self-contained respirator equipment and full protective clothing required when smoke or fumes are generated. Electrical grounding is not recommended.

5. REACTIVITY DATA: HMIS Hazard Rating No. 0 (Minimal)

Stability: Stable. Not sensitive to mechanical impact. Excessive heat, fumes and smoke can occur if this product is not mixed and used according to directions.

Incompatibility: Strong oxidizing agents, acids, isocyanates, and organic peroxides may result in violent explosive reaction.

Hazardous Decomposition Products: Oxides of carbon and nitrogen; various unknown hydrocarbons from incomplete combustion.

Hazardous Polymerization: Will not occur when handled per instructions.

6. ENVIRONMENTAL AND DISPOSAL INFORMATION:

Action to Take For Spills/Leaks: Ventilate area, eliminate all sources of ignition. Wear appropriate protective gear, contain leak or spill, salvage, clean up residue with absorbent material.

Waster Disposal Method: Handle disposal of waste material in manner which complies with local, state, province and federal regulation. Incineration at agency approved waste-disposal facilities.

7. HEALTH HAZARD DATA: HMIS Hazard Rating No. 2 (Moderate)

PRIMARY ROUTE OF ENTRY: Dermal, Ingestion

Effects of Overexposure

Inhalation: Due to the low vapor pressure of this product fumes will be minimal below 95°F. At higher temperatures fumes will be irritating.

Eyes: Contact can cause severe irritation, redness, tearing and blurred vision.

Skin Contact: Short single exposure may cause moderate irritation to mild burn. Prolonged or repeated exposure may cause a severe burn. This material may result in an allergic type reaction or sensitization response in some individuals.

Skin Absorption: May be absorbed through skin to increase overall toxicity.

LD(50) Dermal	CASRN	111-40-0	1090 mg/kg Rabbit.
		112-24-3	805 mg/kg Rabbit.
		112-57-2	660 mg/kg Rabbit.

EPOXY GROUT HARDENER

7. HEALTH HAZARD DATA (cont'd):

Ingestion: Intake can cause gastrointestinal irritation, nausea, vomiting, diarrhea, headache and drowsiness. Can result in burns of mouth, esophagus and stomach.

LD(50) Oral	CASRN	111-40-0	1080 mg/kg Rat.
		112-24-3	2500 mg/kg Rat.
		112-57-2	205 mg/kg Rat.
		68082-29-1	2000 mg/kg Rat.

Chronic: Product does not contain carcinogenic materials as defined by OSHA Hazardous Communications Act 1910.1200.

Materials are not known mutagenic, teratogenic or reproductive health hazards.

8. FIRST AID:

Inhalation: Remove victim from exposure. If difficulty with breathing, administer oxygen. If breathing has stopped administer artificial respiration, preferably mouth-to-mouth. Seek medical attention.

Eyes: Flush eyes with water and/or 1% boric acid, lifting upper and lower lids occasionally for 15 minutes. Seek prompt medical attention.

Skin: Remove contaminated clothing. Wash thoroughly with soap and water. If irritation persists seek medical attention. Wash contaminated clothing before reuse.

Ingestion: Do NOT induce vomiting; give large quantities of water or diluted water with acetic acid; get immediate medical attention. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquids into lungs. Do not give anything by mouth to an unconscious person.

9. SPECIAL PROTECTION INFORMATION:

Ventilation: Ventilation is recommended. Air movement must be designed to insure turnover at all locations in work area to avoid build up of heavy vapors.

Personal Protection Equipment: Do NOT wear contact lenses when working with this material. Use chemical goggles/safety glasses with side shields and Rubber/Latex gloves. Selection of specific items such as boots and apron will depend on operation. Wear respirator protection whenever airborne concentrations exceed TLV ceilings or TWA, use NIOSH/OSHA approved respirators equipped with an organic vapor cartridge for listed hazard.

Confined spaces, rooms, or tanks are areas where concern for TLV's is especially important. Reference OSHA Regulation CFR 29 1910.134 for recommended respiratory protection.

EPOXY GROUT HARDENER

10. ADDITIONAL INFORMATION:

Average Shelf Life: Refer to Product Data Sheet.

Special Instructions: Store in cool, dry place.

REGULATORY INFORMATION:

Title III Section 302: No reportable materials.

Title III Section 311/312: Health hazard: Immediate
Physical hazard: None

Title III Section 313: No reportable materials.

WHMIS Classification: Class D, Div 2, Sub B

TRANSPORTATION

National Motor Freight Classification (NMFC): 46030 Sub: - Class: 55

Description: RESIN COMPOUNDS

Emergency Response Guide Page No.: 0

DOT Reportable Quantity: 0

DOT

Shipping Name: NOT REGULATED - USE NMFC DESCRIPTION
UNNO: N/AP Class: N/AP Package Group: N/AP
Contains: N/AP
Label: NONE Sub-Label: NONE

INTERNATIONAL

Shipping Name: NOT REGULATED - USE NMFC DESCRIPTION
UNNO: N/AP TDGDC: N/AP Package Group: N/AP
Contains: N/AP
Label: NONE Sub-Label: NONE

Marine Pollutant: ND

(NL = Not Listed; P = Moderate; PP = Severe; ND = Not Determined)

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