

Material Safety Data Sheet

Revision Date: June 6, 2005

Section 1. Product Identification

Manufacturer:

Polymer Composites, Inc.
1871 Lake Place
Ontario, CA 91761
(909) 673-1007 • Fax: (909) 673-1605

Trade Name: **MAXBOND LOW VISCOSITY PART A**
Chemical Family: Modified Bisphenol A Epoxy Resin
Hazard Rating: Health = **2**, Fire = **1**, Reactivity = **0**
(Rating: **0** = None, **4** = Extreme)

Section 2. Product Components

Hazardous Component/s	%	OSHA PEL	ACGIH TLV	CAS #
Phenol, 4- (1-methylethylidene) Bis, Polymer with (Chloromethane) Oxerane	90 - 100	25 ppm	See Section 6	25068-38-6
Epoxidize Glycider Ether Modified	0-10	•	See Section 6	2426-08-6

- No established standards at the time of publication

Section 3. Physical Data

Specific Gravity (Water = 1)	-	1.10
Vapor Pressure (mm Hg)	-	<0.01
Vapor Density	-	Heavier than air
Evaporation Rate	-	Slower than butyl acetate
% VOC	-	0.0
Boiling Point	-	>200°C
Solubility in Water	-	<0.01%
Appearance	-	Clear Liquid
Odor	-	Characteristic Sweet odor

Section 4. Fire and Explosion Data

Flash Point	-	>200°F (COC, SETAFLASH Method)
Extinguishing Media	-	Use Carbon Dioxide or dry chemicals
Flammable Limits	-	LEL = NA UEL = NA

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Special Fire Fighting Procedures:

Remove all ignition sources. Wear self-contained breathing apparatus and complete protective equipment when confined to areas where potential for exposure to vapors or products of combustion exists.

Section 5. Reactivity Data

- | | |
|---------------------------------------|--|
| Stability | - Stable |
| Conditions to Avoid | - Prolonged exposure to extreme heat and direct sunlight |
| Materials to Avoid | - Amines, Strong mineral acids, caustic acid, peroxides and other oxidizers |
| Hazardous Decomposition or By-Product | - Fumes produced when heated to decomposition may include carbon monoxide, carbon dioxides and other oxides of nitrogen. |
| Hazardous Polymerization | - May occur if mixed with catalyst in large mass if stored at high temperature for prolonged periods. |
| Conditions to Avoid | - Do not catalyze in large mass or store above 100°F. |

Section 6. Hazard Data

ACUTE ORAL LD50 ACUTE DERMAL LD50 ACUTE INHALATION LC50

P 9.0 g/kg (rat) No data available No data available

1 11.4 g/kg (rat) >20 ml/kg (rabbit) No data available

1 15.6 g/kg (mouse)

2 1.53 g/kg (mouse) 788 mg/kg (rabbit) >3500 ppm/4H (mouse)

2 2.26 g/kg (rat) 1030 ppm/8H (rat)

HEALTH INFORMATION

The health effects noted below are consistent with requirements under the OSHA Hazard Communication Standard (29 CFR 1910.1200).

EYE CONTACT:

Based on similar product testing product may be severely irritating to the eyes. May cause corneal damage.

SKIN CONTACT:

Based on human experience, component 2 is extremely irritating to the skin and may cause skin damage. Based on human experience, component 2 is a skin sensitizer. Based on presence of component 2 products may be toxic if absorbed.

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INHALATION:

Based on human experience, component 2 may cause irritation of the respiratory tract. Based on component 2 testing, product may produce central nervous system (CNS) depression. No specific information is known at the time of this publication. Base on skin sensitization experience in humans. Component 2 may also be a respiratory tract sensitizer (see signs and symptoms) because of its low volatility. However, significant exposure by the inhalation route is unlikely under most ambient conditions. But vapors, aerosols, and mists may be formed during some applications. Based on component 2 testing, product may be moderately toxic, may be harmful if inhaled.

INGESTION:

Based on similar product testing, product may be slightly toxic. Based on the presence of component 2, product may cause CNS depression.

SIGNS AND SYMPTOMS:

Irritation as noted above. Skin sensitization (allergy) may be evidenced by rashes, especially hives. Respiratory tract sensitization (e.g., allergy, asthma) may be evidenced by wheezing with shortness of breath and cough. Early to moderate CNS depression may be evidenced by giddiness, headache, dizziness, and nausea; in extreme cases, unconsciousness and death may occur.

AGGRAVATED MEDICAL CONDITIONS:

Preexisting eye, skin, and respiratory disorders may be aggravated by exposure to this product. Preexisting skin or respiratory tract allergies may increase the chance of developing increased allergy symptoms from exposure to this product.

OCCUPATIONAL EXPOSURE LIMITS

OSHA ACGIH

NO. PEL/TWA PEL/CEILING TLV/TWA TLV/STEL

P None Established

1 None Established

2 25 ppm 25 ppm

EMERGENCY AND FIRST-AID PROCEDURES

EYE CONTACT:

Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Get medical attention.

SKIN CONTACT:

Immediately remove contaminated clothing or shoes, wipe excess from skin and flush with plenty of water for at least 15 minutes. Use soap if available or follow by washing with soap and water.

Do not reuse clothing until thoroughly cleaned.

INHALATION:

Remove victim to fresh air and provide oxygen if breathing is difficult. Give artificial respiration if not breathing.

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Do not give liquids if victim is unconscious or very drowsy. Otherwise, give no more than 2 glasses of water and induce vomiting by giving 30cc (2 tablespoons) syrup of Ipecac.* If Ipecac is unavailable, give 2 glasses of water and induce vomiting by touching finger to back of victim's throat. Keep victim's head below hips while vomiting. GET MEDICAL ATTENTION.

NOTE TO PHYSICIAN

If victim is a child, give no more than 1 glass of water and 15cc (1 tablespoon) syrup of Ipecac. If symptoms such as loss of gag reflex, convulsions or unconsciousness occur before emesis, gastric lavage should be considered following intubation with a cuffed endotracheal tube.

Section 7. Precautions for Safe Handling and Use

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| Steps to be taken in case material is released or spilled | - Prevent spills from entering waterways. Absorb with inert absorbent. |
| Waste disposal method | - Dispose of material per all Federal, State and Local regulations. |
| Storing | - Store in original container away from heat and direct sunlight. |

Section 8. Control Measures

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|----------------------------|--|
| Respiratory Protection | - Recommended if material is to be heated or atomized via aerosol or other atomizing equipment. OSHA approved organic vapor mask should be worn if no ventilation is present. |
| Protective Gloves | - Recommended as a general practice: Industrial Grade, impervious glove is suggested when handling this material. |
| Eye and Face Protection | - Chemical splash goggles. |
| Other Protective Equipment | - For operation where personal contact can occur: use chemical face shield, impervious body covering and steel toe boots. A safety shower and eye wash facility should be available. |

Section 9. Shipping and Regulatory Classifications

- | | |
|-------------------|--|
| DOT Shipping Name | - Not Applicable |
| DOT Hazard Class | - Not Regulated |
| DOT UN Number | - Not Applicable |
| SARA/Title III | - None |
| Other Information | - Does not contain any California Prop. 65 designated chemicals. This product does not contain chemicals that deplete the ozone layer. |

Disclaimer of Liability

The information cited here in is based on information available at the time of publication.

The manufacturer of this product or its direct representatives makes no warranties, express or implied as to its accuracy and assumes no liability arising from its use by others.

Compliance with all applicable Federal, State and Local laws and regulations remains the responsibility of the user.

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Section 1. Product Identification

Manufacturer:

Polymer Composites, Inc.
1871 Lake Place
Ontario, CA 91761
(909) 673-1007 • Fax: (909) 673-1605Trade Name: **MAXBOND Low Viscosity Part B**
Chemical Family: Polyamide Modified Curing Agent
Hazard Rating: Health = **2**, Fire = **1**, Reactivity = **0**
(Rating: **0** = None, **4** = Extreme)

Section 2. Product Components

Hazardous Component/s	%	TWA	ACGIH TLV	CAS #
Unsaturated fatty acid with TETA & TOFA	>40%	•	•	68082-29-1
Adduct of Triethylenetetramine with Epichlorohydrin of Bisphenol A	<70%	1ppm 6mg/m3		Proprietary

- No established standards at the time of publication

Section 3. Physical Data

Vapor Pressure (mm Hg)	-	<10.34 mm Hg at 70°F
Density	-	0.98 g/cc
Flash Point	-	>200°C
% VOC (Reportable)	-	0.0
Boiling Point	-	>180°C
Solubility in Water	-	Partial
Appearance	-	Amber Liquid
Odor	-	Characteristic ammonia odor

Section 4. Fire and Explosion Data

Flash Point	-	200°C (Pensky-Martin closed cup method)
Extinguishing Media	-	Use Carbon Dioxide or dry chemicals
Flammable Limits	-	LEL = NA UEL = NA
Fire Hazard Classification	-	(OSHA / NFPA) Class IIIB

Special Fire Fighting Procedures:

Remove all ignition sources. Wear self-contained breathing apparatus and complete protective equipment when confined to areas where potential for exposure to vapors or products of combustion exists.

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Section 5. Reactivity Data

Stability	- Stable
Conditions to Avoid	- None
Materials to Avoid	- Epoxy, isocyanate bearing compounds, strong mineral acids, caustic acid
Hazardous Decomposition or By-Product	- Fumes produced when heated to decomposition may include carbon monoxide, carbon dioxide, and other oxides of nitrogen. Ignition may result in Class B fire.
Hazardous Polymerization	- May occur if mixed with epoxy in large mass or if stored at high temperature for prolonged periods.
Conditions to Avoid	- Do not mix with epoxy in large mass or store above 100°F.

Section 6. Hazard Data

Effects of Overexposure

Indigestion	- Do not take internally. May cause gastrointestinal irritation.
Skin Contact	- Moderate irritation factor but may cause allergic reaction.
Eye Contact	- High irritation factor but may cause retinal damage.
Inhalation	- May cause irritation to upper respiratory tract.
Chronic Effects of Overexposure	- No specific information available.

Symptoms of Overexposure

- Skin contact of undiluted product may cause irritation and may cause burns or necrosis.
- Eye contact of undiluted product will cause immediate pain and irritation. Burns of the eye may cause blindness. Product vapor in low concentrations can cause lacrimation, conjunctivitis and corneal edema when absorb into the eye tissue. Corneal edema may give rise to perception of "blue haze" or "Fog" around light. The effect is transient and has no known residual effect.
- Inhalation may cause coughing and chest pains may occur.
- Ingestion may cause headaches, nausea and vomiting.

Emergency First Aid Treatment

Ingestion	- If appreciable amounts swallowed, seek medical attention.
Skin Contact	- Wash with warm water and mild soap. Remove and wash contaminated clothing. Seek medical attention if rash develops.
Eye Contact	- Flush with water for at least 15 minutes. Do not rub eyes. Seek immediate medical attention.
Inhalation	- Remove to fresh air. If breathing has stopped, call 911, administer artificial respiration or compressed oxygen if available.
Carcinogenicity	- (Substance present at a concentration of 0.1% or more classified as a carcinogen by IARC, NTP or OSHA): None Established.

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Section 7. Precautions for Safe Handling and Use

- | | |
|---|--|
| Steps to be taken in case material is released or spilled | - Prevent spills from entering waterways. Absorb with inert absorbent. |
| Waste disposal method | - Dispose of material per all Federal, State and Local regulations. |
| Storing | - Store in original container away from heat and direct sunlight. |

Section 8. Control Measures

- | | |
|----------------------------|--|
| Respiratory Protection | - NIOSH approved cartridge. Highly recommended if material is to be heated or atomized via aerosol or other atomizing equipment. OSHA approved organic vapor mask should be worn if no ventilation is present. |
| Protective Gloves | - Recommended as a general practice: Industrial Grade, impervious glove is suggested when handling this material. |
| Eye and Face Protection | - Chemical splash goggles. |
| Other Protective Equipment | - For operation where personal contact can occur: use chemical face shield, impervious body covering and steel toe boots. A safety shower and eye wash facility should be available. |

Section 9. Shipping and Regulatory Classifications

- | | |
|----------------------------|--|
| DOT Non-Bulk Shipping Name | - Not Regulated, Not a dangerous Substance |
| IMO Shipping Data | - Not Regulated |
| ICAO/IATA shipping Data | - Not Regulated |
| EPA SARA/Title III | - 311: None; 312: Acute HEALTH HAZARD |
| Other Information | - Does not contain any California Prop. 65 designated chemicals. This product does not contain chemicals that deplete the ozone layer (ODC). All components are listed in the TSCA chemical substance inventory. |

Disclaimer of Liability

The information cited here in is based on information available at the time of publication. The manufacturer of this product or its direct representatives makes no warranties, express or implied as to its accuracy and assumes no liability arising from its use by others. Compliance with all applicable Federal, State and Local laws and regulations remains the responsibility of the user.