

EPIKURE(TM) 3277 Curing Agent

Version 7
Revision Date 11/08/2004

Print Date 06/28/2005

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Trade name : EPIKURE(TM) 3277 Curing Agent

Product code : K9072

MSDS Number : 1509

Product Type : Curing agent.

Company : Resolution Performance Products LLC
P. O. Box 4500
Houston, TX 77210
USA

Telephone : (832) 486-6700

Emergency telephone number : CHEMTREC US Domestic (800) 424-9300
CHEMTREC International (703) 527-3887

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No.	Weight %
1,3-Propanediamine, N-[3-(tridecyloxy)propyl]-, branched	68479-04-9	> 40 %
POLYOXYPROPYLENEDIAMINE	9046-10-0	> 30 %
4,4'-Isopropylidenebisphenol	80-05-7	< 30 %

SECTION 3. HAZARDS IDENTIFICATION

Emergency Overview

Human health hazards : Corrosive to the eyes. Corrosive to the skin. Vapors/mists may be corrosive to upper respiratory tract. Corrosive and may cause severe and permanent damage to mouth, throat and stomach. May be toxic if absorbed through skin. May cause skin sensitization.

Safety hazards : Material will not burn unless preheated.

SECTION 4. FIRST AID MEASURES

EPIKURE(TM) 3277 Curing Agent

Version 7
Revision Date 11/08/2004

Print Date 06/28/2005

- Inhalation : Remove victim to fresh air and provide oxygen if breathing is difficult. Give artificial respiration if not breathing. 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. Get medical attention.
- Eye contact : Immediately flush eyes with plenty of water for 15 minutes while holding eyelids open. Rinse continuously with water while on way to get medical attention
- Ingestion : Do not induce vomiting. Give one glass of water unless victim is drowsy, convulsing, or unconscious. Seek medical attention immediately.

Notes to physician

- Symptoms : Irritation as noted above. Lung damage (scarring, bronchitis, emphysema) may be evidenced by shortness of breath, especially on exertion, and may be accompanied by chronic cough. Skin sensitization (allergy) may be evidenced by rashes, especially hives.

SECTION 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Use water fog, "alcohol foam", dry chemical or carbon dioxide.

Do not use water in a jet. Product will float. Water or fog may cause frothing which can be violent, especially if sprayed into containers of hot or burning liquid.
- Specific hazards during fire fighting : Material will not burn unless preheated. Delayed lung damage (pulmonary edema) can be experienced after exposure to combustion products, sometimes hours after the exposure. Nitrogen oxides and other potentially hazardous nitrogen-containing compounds may be released upon combustion.

Cool fire exposed containers with water.
- Special protective equipment for fire-fighters : Do not enter confined fire space without full bunker gear (helmet with face shield, bunker coats, gloves and rubber boots). including a positive pressure NIOSH approved self-contained breathing apparatus.

EPIKURE(TM) 3277 Curing AgentVersion 7
Revision Date 11/08/2004

Print Date 06/28/2005

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions : Corrosive.
Prevent all bodily contact with spilled material.
Shut off leaks, if possible without personal risk.
Remove ignition sources.
- Environmental precautions : Dike and contain.
Contain run-off and dispose of properly.
Prevent from entering into drains, ditches or rivers.
- Clean-up methods - small spillage : Take up with an absorbent material and place in non-leaking containers.
Seal tightly for proper disposal.
- Clean-up methods - large spillage : Remove with vacuum trucks or pump to storage/salvage vessels.
Soak up residue with an absorbent such as clay, sand or other suitable material; place in non-leaking containers for proper disposal.
Flush area with water to remove trace residue.
- Additional advice : Notify authorities if any exposures to the general public or environment occurs or is likely to occur.
See Section 13 for information on disposal.

SECTION 7. HANDLING AND STORAGE**Handling**

- Advice on safe handling : Do not get in eyes, on skin or on clothing. Do not breathe vapour, mists Do not pressurize drum containers to empty them. Heating this curing agent above 300 Deg. F in the presence of air may cause slow oxidative decomposition; above 500 Deg. F, polymerization may occur. Some epoxy resins can produce exothermic reactions which in large masses can cause runaway polymerization and charring of the reactants. Fumes and vapors from these thermal and chemical decompositions vary widely in composition and toxicity. Do not breathe fumes. Use a NIOSH-approved respirator as required to prevent overexposure. In accord with 29 CFR.1910.134, use either an atmosphere-supplying respirator or an air-purifying respirator for organic vapors. DANGER. Corrosive to skin and eyes. May be corrosive to respiratory tract. Corrosive to the digestive tract. May be toxic and harmful if absorbed

EPIKURE(TM) 3277 Curing Agent

Version 7
Revision Date 11/08/2004

Print Date 06/28/2005

through skin. May cause skin sensitization. Containers, even those that have been emptied, can contain hazardous product residues. Wash with soap and water before eating, drinking, smoking, applying cosmetics, or using toilet facilities. Launder contaminated clothing before reuse. Contaminated leather articles, including shoes, cannot be decontaminated and should be destroyed to prevent reuse.

Storage

Requirements for storage areas and containers : Store in a cool, dry place with adequate ventilation. Keep away from open flames and high temperatures.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Protective measures : Wear appropriate respirator and full-body protective clothing.

Engineering measures : Use ventilation as required to control vapor concentrations. Eye wash fountains and safety showers should be available for emergency use.

Eye protection : Do not get in eyes.
Wear chemical goggles if there is potential contact with eyes.

Skin and body protection : Do not get on skin, on clothing.
Wear chemical-resistant protective clothing such as gloves, outer clothing or apron, overshoes and a face-shield suitable to potential exposure.

Respiratory protection : Do not breathe vapors or mists.
Use a NIOSH-approved respirator as required to prevent overexposure.
In accord with 29 CFR 1910.134,
Use either a full-face, atmosphere-supplying respirator or air-purifying respirator for organic vapors.
Avoid breathing vapors which may be produced under some conditions such as heating or applications of uncured material in large surface areas (e.g., flooring and painting).
Avoid breathing aerosols and mists which may be formed by various methods of application.

Exposure Guidelines

Components with workplace control parameters	Regulation	Exposure time	Value	Remarks

EPIKURE(TM) 3277 Curing Agent

Version 7
Revision Date 11/08/2004

Print Date 06/28/2005

1,3-Propanediamine, N-[3-(tridecyloxy)propyl]-, branched	ACGIH			None established.
POLYOXYPROPYLENE DIAMINE	ACGIH			None established.
4,4'-Isopropylidenebisphenol	ACGIH			None established.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Form	: Viscous liquid
Colour	: Light
Odour	: Amine
Flash point	: > 93.33 °C (> 199.99 °F) (Setaflash)
Vapour pressure	: < 1.33 mbar at 20 °C (68 °F)
Relative density	: 0.96
Relative vapour density	: > 1
Solubility in water	: Partially soluble.

SECTION 10. STABILITY AND REACTIVITY

Conditions to avoid	: Heat, flames and sparks.
Materials to avoid	: Avoid contact with strong oxidizing agents.
Hazardous decomposition products	: Nitrogen oxides, carbon monoxide and unidentified organic compounds may be formed during combustion.
Hazardous reactions	: Stable. Hazardous polymerization will not occur.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute oral toxicity	: Expected to be moderately toxic, 400 < LD50 <= 2000 mg/kg.
Acute dermal toxicity	: Expected to be moderately toxic, 400 < LD50 <= 2000 mg/kg.

Chronic Health Hazard

EPIKURE(TM) 3277 Curing AgentVersion 7
Revision Date 11/08/2004

Print Date 06/28/2005

Components	Concentration	Regulation	Value	Remarks
1,3-Propanediamine, N-[3-(tridecyloxy)propyl]-, branched	> 40 %	US. IARC Monographs on Occupational Exposures to Chemical Agents		This component has not been classified by the International Agency for Research on Cancer (IARC).
POLYOXYPROPYLENEDIAMINE	> 30 %	US. IARC Monographs on Occupational Exposures to Chemical Agents		This component has not been classified by the International Agency for Research on Cancer (IARC).
4,4'-Isopropylidenebis phenol	< 30 %	US. IARC Monographs on Occupational Exposures to Chemical Agents		This component has not been classified by the International Agency for Research on Cancer (IARC).

Potential Health Effects

- Inhalation** : Vapors/mists may be corrosive to upper respiratory tract. Repeated or prolonged exposure can result in lung damage.
- Skin** : Corrosive to the skin. May be toxic if absorbed through skin. May cause skin sensitization.
- Eyes** : Corrosive to the eyes and may cause severe damage including blindness. Vapors may be irritating.
- Ingestion** : Not expected to be a relevant route of exposure, however, corrosive and may cause severe and permanent damage to mouth, throat, and stomach.

EPIKURE(TM) 3277 Curing Agent

Version 7
Revision Date 11/08/2004

Print Date 06/28/2005

Aggravated Medical Condition : Preexisting eye, skin and respiratory disorders may be aggravated by exposure to this product.

SECTION 12. ECOLOGICAL INFORMATION

Elimination information (persistence and degradability)

Biodegradability : This section will be updated as ecological reviews are completed.

Ecotoxicity effects

Toxicity to fish : This section will be updated as ecological reviews are completed.

SECTION 13. DISPOSAL CONSIDERATIONS

Product disposal : If this material becomes a waste, it would not be a hazardous waste by RCRA criteria (40 CFR 261). Place in an appropriate disposal facility in compliance with local and federal regulations.

SECTION 14. TRANSPORT INFORMATION

DOT	: UN/NA-No	2735
	Class	8
	Packing group	III
	ERG No.	153
	Proper shipping name contains	POLYAMINES, LIQUID, CORROSIVE, N.O.S. TRIDECYLOXYPROPYL-1,3-PROPANEDIAMINE, BRANCHED, POLYOXYPROPYLENEDIAMINE

EPIKURE(TM) 3277 Curing Agent

Version 7
Revision Date 11/08/2004

Print Date 06/28/2005

IMDG	: UN-No	2735
	Class	8
	Packaging group	III
	ERG No.	153
	Description of the goods contains	POLYAMINES, LIQUID, CORROSIVE, N.O.S. TRIDECYLOXYPROPYL-1,3-PROPANEDIAMINE, BRANCHED, POLYOXYPROPYLENEDIAMINE
IATA	: UN-No	2735
	Class	8
	Packaging group	III
	ERG No.	153
	Description of the goods contains	POLYAMINES, LIQUID, CORROSIVE, N.O.S. TRIDECYLOXYPROPYL-1,3-PROPANEDIAMINE, BRANCHED, POLYOXYPROPYLENEDIAMINE

SECTION 15. REGULATORY INFORMATION

Notification status

- TSCA : All components listed.
- EINECS : All components listed or polymer exempt.
- DSL : All components listed.
- AICS : All components listed.
- INV (CN) : All components listed.
- KECI (KR) : All components listed.
- ENCS (JP) : Not all components listed.
- PICCS (PH) : All components listed.

EPIKURE(TM) 3277 Curing Agent

Version 7
Revision Date 11/08/2004

Print Date 06/28/2005

US. EPA CERCLA Hazardous Substances (40 CFR 302)

1,3-Propanediamine, N-[3-(tridecyloxy)propyl]-, branched No RQ

POLYOXYPROPYLENEDIAMINE No RQ

4,4'-Isopropylidenebisphenol No RQ

SARA 311/312 Hazards

Acute Health Hazard
Chronic Health Hazard

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required

1,3-Propanediamine, N-[3-(tridecyloxy)propyl]-, branched No De minimis Concentration

POLYOXYPROPYLENEDIAMINE No De minimis Concentration

4,4'-Isopropylidenebisphenol De minimis concentration: 1.0 %

The mixture or trade name product contains a toxic chemical or chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A)

1,3-Propanediamine, N-[3-(tridecyloxy)propyl]-, branched Threshold Planning Quantity: No TPQ

POLYOXYPROPYLENEDIAMINE Threshold Planning Quantity: No TPQ

4,4'-Isopropylidenebisphenol Threshold Planning Quantity: No TPQ

1,3-Propanediamine, N-[3-(tridecyloxy)propyl]-, branched Reportable quantity: No RQ

POLYOXYPROPYLENEDIAMINE Reportable quantity: No RQ

EPIKURE(TM) 3277 Curing Agent

Version 7
Revision Date 11/08/2004

Print Date 06/28/2005

4,4'-Isopropylidenebisphenol Reportable quantity: No RQ

New Jersey Right-To-Know Chemical List

1,3-Propanediamine, N-[3-(tridecyloxy)propyl]-, branched Not Listed

POLYOXYPROPYLENEDIAMINE Not Listed

4,4'-Isopropylidenebisphenol Listed.

Pennsylvania Right-To-Know Chemical List

1,3-Propanediamine, N-[3-(tridecyloxy)propyl]-, branched Not Listed

POLYOXYPROPYLENEDIAMINE Not Listed

4,4'-Isopropylidenebisphenol Environmental hazard.

Massachusetts Right-To-Know Chemical List

1,3-Propanediamine, N-[3-(tridecyloxy)propyl]-, branched Not Listed

POLYOXYPROPYLENEDIAMINE Not Listed

4,4'-Isopropylidenebisphenol Not Listed

HMIS Rating : Health: 3
 Fire: 1
 Reactivity: 0

SECTION 16. OTHER INFORMATION

EPIKURE(TM) 3277 Curing Agent

Version 7
Revision Date 11/08/2004

Print Date 06/28/2005

Reference : Prepared in accordance with 29 CFR 1910.1200.

Other information : EPIKURE is a Resolution trade mark.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

A vertical bar (|) in the left margin indicates an amendment from the previous version.