

EPIKURE(TM) 3282 Curing Agent

Version 8.1

Print Date 05/01/2007

Revision Date 07/01/2005

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

Trade name : EPIKURE(TM) 3282 Curing Agent

Product code : K814L

MSDS Number : 1641

Product Type : Curing agent.

Company : Hexion Specialty Chemicals, Inc.
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 %
Polyethylenepolyamine Epoxy Adduct	*	
DIETHYLENETRIAMINE	111-40-0	
4,4'-Isopropylidenebisphenol	80-05-7	
N-BUTYL GLYCIDYL ETHER	2426-08-6	

In accordance with 29 CFR 1910.1200, the specific chemical identity and percent in composition are considered trade secret information for component(s):

SECTION 3. HAZARDS IDENTIFICATION

Emergency Overview

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- Human health hazards : Causes burns. Harmful by inhalation and in contact with skin. Irritating to respiratory system. May cause sensitization by skin contact.
- Safety hazards : Not classified as flammable but will burn.

SECTION 4. FIRST AID MEASURES

- Inhalation : Remove to fresh air. If rapid recovery does not occur, obtain medical attention.
- Skin contact : DO NOT DELAY. Remove contaminated clothing. Wash skin with water using soap if available. OBTAIN MEDICAL ATTENTION IMMEDIATELY.
- Eye contact : DO NOT DELAY. Flush eye with water. OBTAIN MEDICAL ATTENTION IMMEDIATELY.
- Ingestion : DO NOT DELAY. Do not induce vomiting. Give nothing by mouth. OBTAIN MEDICAL ATTENTION IMMEDIATELY.

Notes to physician

- Symptoms : Liquid may cause skin and eye burns. Irritation of the skin, eyes and respiratory tract
- Treatment : Skin irritation and chemical burns should be treated symptomatically. If skin sensitisation has developed and a causal relationship has been confirmed, further exposure should not be allowed.

SECTION 5. FIRE-FIGHTING MEASURES

- Unsuitable extinguishing media : Water in a jet.
- Suitable extinguishing media : Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
- 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 : Not classified as flammable but will burn. Hazardous combustion products may include oxides of nitrogen, carbon monoxide

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Cool fire exposed containers with water.

Special protective equipment for fire-fighters : Full protective clothing and self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions : Avoid contact with skin, eyes, clothing
Do not breathe fumes, mists, aerosols, spray
Take off immediately all contaminated clothing.
Evacuate the area of all non-essential personnel.
Shut off leaks, if possible without personal risk.

Environmental precautions : Prevent contamination of soil and water.
Prevent from spreading or entering into drains, ditches or rivers
by using sand, earth, or other appropriate barriers.

Clean-up methods - small spillage : Absorb or contain liquid with sand, earth or spill control
material.
Shovel up and place in a labelled, sealable container for
subsequent safe disposal.
Put leaking containers in a labelled drum or overdrum.
Scrub contaminated surfaces with detergent solution
Retain washings as contaminated waste.

Clean-up methods - large spillage : Transfer to a labelled, sealable container for product recovery
or safe disposal.
Treat residues as for small spillage.

Additional advice : See Section 13 for information on disposal.

SECTION 7. HANDLING AND STORAGE

Handling

Advice on safe handling : Avoid contact with skin, eyes and clothing Do not breathe
mists, aerosols, spray, vapour Use local exhaust extraction.

Storage

Requirements for storage areas and containers : Keep container tightly closed and in a cool, well-ventilated
place. Keep container dry.
Keep away from open flames and high temperatures.

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SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

- Protective measures : Wear appropriate respirator and full-body protective clothing.
- Engineering measures : Use local exhaust ventilation.
- Eye protection : Monogoggles
- Hand protection : Neoprene or nitrile rubber gloves gauntlet type
- Skin and body protection : Standard issue work clothes
Safety boots - chemical resistant without lace holes
In the event of risk from splashing wear PVC, neoprene or nitrile rubber apron.
- Respiratory protection : If risk of inhalation, use approved respirator (e.g. CEN, NIOSH/OSHA, AS) as required to prevent over exposure. Use an air-supplied respirator where high concentrations are expected, or an air-purifying respirator for organic vapours (with combined particulate filter if mist is present). Note: an air-supplied respirator should always be used in confined spaces.

Exposure Guidelines

Components with workplace control parameters	Regulation	Exposure time	Value	Remarks
Polyethylenepolyamine Epoxy Adduct	ACGIH			None established.
DIETHYLENETRIAMINE	ACGIH	Time Weighted Average (TWA):	1 ppm	
	ACGIH	Skin designation:		Can be absorbed through the skin.
	OSHA Z1A	Time Weighted Average (TWA):	1 ppm 4 mg/m3	
4,4'-Isopropylidenebisphenol	ACGIH			None established.
N-BUTYL GLYCIDYL ETHER	ACGIH	Time Weighted Average (TWA):	3 ppm	
	OSHA Z1	PEL:	50 ppm 270 mg/m3	

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	OSHA Z1A	Time Weighted Average (TWA):	25 ppm 135 mg/m3	
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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Form	: Viscous liquid
Colour	: Amber
Odour	: Aminic
Boiling point	: > 207 °C (> 405 °F)
Flash point	: 105 °C (221 °F) (ASTM D-93 / PMCC)
Lower explosion limit	: 1.4 %(V)
Vapour pressure	: < 13.33 Pa at 20 °C (68 °F)
Density	: ca. 1,090 kg/m3 at 25 °C (77 °F)
Partition coefficient (n-octanol/water)	: Data not available.
Solubility in water	: Partially soluble.
Viscosity, dynamic	: 60 - 150 Pa·s at 25 °C (77 °F)
Other physico-chemical properties	: The above properties are typical values only and do not constitute a specification (refer to supplier for supply specification).

SECTION 10. STABILITY AND REACTIVITY

Conditions to avoid	: Exposure to water vapour. Heat, flames and sparks.
Materials to avoid	: Strong acids. Strong oxidizing agents.
Hazardous decomposition products	: Nitrogen oxides, carbon monoxide and unidentified organic compounds may be formed during combustion.
Hazardous reactions	: Hygroscopic. Stable under normal use conditions.

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SECTION 11. TOXICOLOGICAL INFORMATION

- Acute oral toxicity : LD50 - (Rat)
Expected to be moderately toxic, 200 < LD50 <= 2000 mg/kg.
- Acute dermal toxicity : Expected to be moderately toxic, 400 < LD50 <= 2000 mg/kg.
- Acute inhalation toxicity : Inhalation of vapours or mists may cause irritation.

Chronic Health Hazard

Components	Concentration	Regulation	Value	Remarks
Polyethylenepolyamine Epoxy Adduct		US. IARC Monographs on Occupational Exposures to Chemical Agents		This component has not been classified by the International Agency for Research on Cancer (IARC).
DIETHYLENETRIAMINE		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'-Isopropylidenebisphenol		US. IARC Monographs on Occupational Exposures to Chemical Agents		This component has not been classified by the International Agency for Research on Cancer (IARC).

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N-BUTYL GLYCIDYL ETHER		US. IARC Monographs on Occupational Exposures to Chemical Agents	This component has not been classified by the International Agency for Research on Cancer (IARC).
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- Eye irritation : Severe eye irritant.
- Skin irritation : Causes skin burns.
- Sensitization : Expected to be a skin sensitiser.
- Human effects : See Section 4 for information regarding acute effects to humans.
- Basis for assessment : Information given is based on data on the components and the toxicology of similar products.

Potential Health Effects

- Inhalation : Vapors/mists may be corrosive to upper respiratory tract. Repeated or prolonged exposure can result in lung damage. May cause respiratory tract sensitization. May be moderately toxic and harmful if inhaled.
- Skin : Corrosive to the skin. May cause skin sensitization. May be toxic if absorbed through skin.
- 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. May be moderately toxic if swallowed.
- Aggravated Medical Condition : Preexisting eye, skin and respiratory disorders may be aggravated by exposure to this product.

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SECTION 12. ECOLOGICAL INFORMATION

Elimination information (persistence and degradability)

Biodegradability : Expected to be not readily biodegradable.

Bioaccumulation : Not expected to bioaccumulate significantly.

Ecotoxicity effects

Toxicity to fish : Expected to be toxic, 1 < LC/EC/IC 50 <= 10 mg/l .

Toxicity to algae : Expected to be toxic, 1 < LC/EC/IC 50 <= 10 mg/l .

Acute toxicity - invertebrates : Expected to be toxic, 1 < LC/EC/IC 50 <= 10 mg/l .

Sewage treatment : Expected to be toxic, 1 < LC/EC/IC 50 <= 10 mg/l .

Basis for assessment : Ecotoxicological data have not been determined specifically for this product. The information given below is based on a knowledge of the components and the ecotoxicology of similar products.

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	II
	ERG No.	153
	Proper shipping name contains	POLYAMINES, LIQUID, CORROSIVE, N.O.S. DIETHYLENETRIAMINE

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IMDG	: UN-No	2735
	Class	8
	Packaging group	II
	ERG No.	F-A
	Description of the goods contains	POLYAMINES, LIQUID, CORROSIVE, N.O.S. DIETHYLENETRIAMINE
IATA	: UN-No	2735
	Class	8
	Packaging group	II
	ERG No.	153
	Description of the goods contains	POLYAMINES, LIQUID, CORROSIVE, N.O.S. DIETHYLENETRIAMINE

SECTION 15. REGULATORY INFORMATION

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

Notification status

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

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US. EPA CERCLA Hazardous Substances (40 CFR 302)

Polyethylenepolyamine Epoxy Adduct No RQ

DIETHYLENETRIAMINE No RQ

4,4'-Isopropylidenebisphenol No RQ

N-BUTYL GLYCIDYL ETHER 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

Polyethylenepolyamine Epoxy Adduct No De minimis Concentration

DIETHYLENETRIAMINE 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.

N-BUTYL GLYCIDYL ETHER No De minimis Concentration

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

Polyethylenepolyamine Epoxy Adduct Threshold Planning Quantity: No TPQ

DIETHYLENETRIAMINE Threshold Planning Quantity: No TPQ

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

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N-BUTYL GLYCIDYL ETHER Threshold Planning Quantity: No TPQ

Polyethylenepolyamine Epoxy Adduct Reportable quantity: No RQ

DIETHYLENETRIAMINE Reportable quantity: No RQ

4,4'-Isopropylidenebisphenol Reportable quantity: No RQ

N-BUTYL GLYCIDYL ETHER Reportable quantity: No RQ

New Jersey Right-To-Know Chemical List

Polyethylenepolyamine Epoxy Adduct Not Listed

DIETHYLENETRIAMINE Not Listed

4,4'-Isopropylidenebisphenol Listed.

N-BUTYL GLYCIDYL ETHER Not Listed

Additional Components Not Found In Section 2:

Components	CAS-No.	Concentration	Remarks
Phenol	108-95-2	< 0.0025 %	

Pennsylvania Right-To-Know Chemical List

Polyethylenepolyamine Epoxy Adduct Not Listed

DIETHYLENETRIAMINE Not Listed

4,4'-Isopropylidenebisphenol Environmental hazard.

N-BUTYL GLYCIDYL ETHER Not Listed

Additional Components Not Found In Section 2:

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Components	CAS-No.	Concentration	Remarks
Phenol	108-95-2	< 0.0025 %	Environmental hazard.

Massachusetts Right-To-Know Chemical List

Polyethylenepolyamine Epoxy Adduct Not Listed

DIETHYLENETRIAMINE Not Listed

4,4'-Isopropylidenebisphenol Not Listed

N-BUTYL GLYCIDYL ETHER Not Listed

Additional Components Not Found In Section 2:

Components	CAS-No.	Concentration	Remarks
Phenol	108-95-2	< 0.0025 %	Extraordinarily hazardous.

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

SECTION 16. OTHER INFORMATION

Reference : Prepared in accordance with 29 CFR 1910.1200.

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.

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