

MATERIAL SAFETY DATA SHEET



www.ueisystems.com

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: COUNTER MOLDING HARDENER Additional names:
EPOXY HARDENER or EPOXY CURING AGENT

General Use: Epoxy curing agent

Company: UEI® Systems, A UEI Group Company
Address/Phone: 9090 Nieman Road
Overland Park, KS 66214
(800) 221-9059 or (913) 541-0503

Emergency Contact Number: CHEMTREC – Available 24 hrs/day, 7 days/week
Domestic North America: 800-424-9300
International: 703-527-3887

SECTION 2 HAZARDS IDENTIFICATION

Emergency Overview

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 3 COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS-No.	Weight %
Polyethylenepolyamine Epoxy Adduct	*	
DIETHYLENETRIAMINE	111-40-0	
4,4'-Isopropylidenebisphenol	80-05-7	

SECTION 4 FIRST AID MEASURES

General advice Get medical attention immediately if symptoms occur

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 sensitization has developed and a causal relationship has been confirmed, further exposure should not be allowed.

MATERIAL SAFETY DATA SHEET



www.ueisystems.com

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. 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 labeled, sealable container for subsequent safe disposal. Put leaking containers in a labeled drum or overdrum. Scrub contaminated surfaces with detergent solution retain washings as contaminated waste.

Clean-up methods - large spillage : Transfer to a labeled, 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 : Observe all relevant local regulations. 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: Store in accordance with local regulations. Keep container tightly closed and in a cool, well-ventilated place. Keep container dry. Keep away from open flames and high temperatures.

MATERIAL SAFETY DATA SHEET



www.ueisystems.com

SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

Protective measures : Wear appropriate respirator and full-body protective clothing. Environmental exposure controls Observe all relevant local regulations.

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			Can be absorbed through the skin.
	OSHA Z1A		1 ppm 4 mg/m ³	
4,4'-Isopropylidenebisphenol	ACGIH			None established.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point:	> 207° C (> 405°F)	Melting Point:	175 - 200° C
Freezing Point:	NA	Vapor Pressure:	<13.33 Pa at 20°C (77°F)
Vapor Density (Air=1):	NA	Solubility in Water:	Partially Soluble
pH:	NA	Specific Gravity (Water=1):	NA
Viscosity, Dynamic	60-150 Pa*s at 25°C(77°F)	Evaporation Rate	NA
Flash Point	105°C (221°F) (ASTM D-93 / PMCC)	Density	Ca. 1,090 kg/m ³ at 25°C (77°F)
Lower explosion limit	1.4 % (V)	Partition coefficient: n-octanol/water	NA
Appearance and odor:	Viscous amber liquid, Aminic	Percent Volatile by Volume	NA
Other physico-chemical properties	The above properties are typical values only and do not constitute a specification (refer to supplier for supply specification).		

MATERIAL SAFETY DATA SHEET

SECTION 10 STABILITY AND REACTIVITY

Conditions to avoid	Exposure to water vapor, 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.

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 vapors 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).

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: Pre-existing eye, skin and respiratory disorders may be aggravated by exposure to this product.

MATERIAL SAFETY DATA SHEET

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, $1 < LC/EC/IC\ 50 \leq 10\ mg/l$.

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

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

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

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 INFORMATION

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	POLYAMINES, LIQUID, CORROSIVE, N.O.S.
	Contains	DIETHYLENETRIAMINE

IMDG	UN-Number	2735
	Class	8
	Packaging group	II
	EmS	F-A S-B
	Description of the goods	POLYAMINES, LIQUID, CORROSIVE, N.O.S.
	Contains	DIETHYLENETRIAMINE

ATA Cargo	UN-Number	2735
	Class	8
	Packaging group	II
	ERG No.	153
	Description of the goods	POLYAMINES, LIQUID, CORROSIVE, N.O.S.
	contains	DIETHYLENETRIAMINE

MATERIAL SAFETY DATA SHEET



www.ueisystems.com

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.

US. EPA CERCLA Hazardous Substances (40 CFR 302)

Polyethylenepolyamine epoxy adduct No RQ

DIETHYLENETRIAMINE 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

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.

MATERIAL SAFETY DATA SHEET



www.ueisystems.com

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

Polyethylenepolyamine epoxy adduct

Reportable quantity: No RQ

DIETHYLENETRIAMINE Reportable quantity: No RQ

4,4'-Isopropylidenebisphenol Reportable quantity: No RQ

New Jersey Right-To-Know Chemical List

Polyethylenepolyamine Epoxy Adduct Not Listed

DIETHYLENETRIAMINE Listed.

4,4'-Isopropylidenebisphenol Listed.

Additional Components Not Found In Section 2:

<u>Components</u>	<u>CAS-No.</u>	<u>Concentration</u>	<u>Remarks</u>
Phenol	108-95-2	< 0.0025 %	Listed.

Pennsylvania Right-To-Know Chemical List

Polyethylenepolyamine Epoxy Adduct Not Listed

DIETHYLENETRIAMINE Listed.

4,4'-Isopropylidenebisphenol Environmental hazard.

Additional Components Not Found In Section 2:

<u>Components</u>	<u>CAS-No.</u>	<u>Concentration</u>	<u>Remarks</u>
Phenol	108-95-2	< 0.0025 %	Environmental Hazard

Massachusetts Right-To-Know Chemical List

Polyethylenepolyamine Epoxy Adduct Not Listed

DIETHYLENETRIAMINE Listed.

4,4'-Isopropylidenebisphenol Not Listed

MATERIAL SAFETY DATA SHEET



www.ueisystems.com

Additional Components Not Found In Section 2:

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

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

SECTION 16 OTHER INFORMATION

UEI™ Systems provides the information contained herein in good faith. The information is believed to be correct. However it is not all-inclusive and should be used only as a guide. Individuals receiving the information must exercise their independent judgement in determining its appropriateness for a particular purpose. UEI™ Systems shall not be held liable for any damage resulting from handling or from contact with the product listed herein.