



Revision Number: 004.0

Issue date: 12/09/2014

1. PRODUCT AND COMPANY IDENTIFICATION

Product name:	LOCTITE EA E-05MR A known as HYSOL E-05MR 50ML PART B	IDH number:	1086593
Product type:	Epoxy Hardener	Item number:	1086593_193384
Restriction of Use:	None identified	Region:	United States
Company address:	Henkel Corporation One Henkel Way Rocky Hill, Connecticut 06067	Contact information:	Telephone: (860) 571-5100 MEDICAL EMERGENCY Phone: Poison Control Center 1-877-671-4608 (toll free) or 1-303-592-1711 TRANSPORT EMERGENCY Phone: CHEMTREC 1-800-424-9300 (toll free) or 1-703-527-3887 Internet: www.henkelna.com

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DANGER: CAUSES SEVERE SKIN BURNS AND EYE DAMAGE.
MAY CAUSE AN ALLERGIC SKIN REACTION.
TOXIC IF INHALED.
MAY CAUSE ALLERGY OR ASTHMA SYMPTOMS OR BREATHING
DIFFICULTIES IF INHALED.

HAZARD CLASS	HAZARD CATEGORY
ACUTE TOXICITY INHALATION	3
SKIN CORROSION	1B
SERIOUS EYE DAMAGE	1
RESPIRATORY SENSITIZATION	1
SKIN SENSITIZATION	1

PICTOGRAM(S)



Precautionary Statements

Prevention:	Do not breathe vapors, mist, or spray. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves, eye protection, and face protection. In case of inadequate ventilation wear respiratory protection.
Response:	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to remove. Continue rinsing. Immediately call a poison control center or physician. If skin irritation or rash occurs: Get medical attention. If experiencing respiratory symptoms: Call a poison center or physician. Wash contaminated clothing before reuse.
Storage:	Store in a well-ventilated place. Keep container tightly closed. Store locked up.
Disposal:	Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Component(s)	CAS Number	Percentage*
2,2'-[1,2-ethanediy]bis(oxy)]bis(ethanethiol)	14970-87-7	10 - 30
Amine	Proprietary	5 - 10
Polyglycol diamine	Proprietary	1 - 5
Benzyl dimethylamine	103-83-3	0.1 - 1

* Exact percentage is a trade secret. Concentration range is provided to assist users in providing appropriate protections.

4. FIRST AID MEASURES

Inhalation:	Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Skin contact:	Remove contaminated clothing and footwear. Immediately flush skin with plenty of water (using soap, if available). Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.
Eye contact:	Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.
Ingestion:	DO NOT induce vomiting unless directed to do so by medical personnel. Rinse the mouth. Drink 1-2 glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.
Symptoms:	See Section 11.

5. FIRE FIGHTING MEASURES

Extinguishing media:	Water spray (fog), foam, dry chemical or carbon dioxide.
Special firefighting procedures:	Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.
Unusual fire or explosion hazards:	In case of fire, keep containers cool with water spray. Burning produces obnoxious and toxic fumes. Personnel in vicinity and downwind should be evacuated. Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products:	Oxides of carbon. Oxides of nitrogen. Oxides of sulfur. Ammonia. Phenolics. Hydrogen sulfide. Nitric acid. Toxic fumes. Irritating vapors.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions:	Do not allow product to enter sewer or waterways.
-----------------------------------	---

Clean-up methods:

Ensure adequate ventilation. Wear appropriate personal protective equipment. Refer to Section 8 "Exposure Controls / Personal Protection" prior to clean up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Scrape up spilled material and place in a closed container for disposal.

7. HANDLING AND STORAGE

Handling:

Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Use only with adequate ventilation. Keep container closed.

Storage:

Keep container tightly closed and in a cool, well-ventilated place away from incompatible materials. Keep away from heat, spark and flame.

For information on product shelf life contact Henkel Customer Service at (800) 243-4874.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous Component(s)	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
2,2'-[1,2-ethanediy]bis(oxy)]bis(ethanethiol)	None	None	None	None
Amine	None	None	None	None
Polyglycol diamine	None	None	None	None
Benzyl dimethylamine	None	None	None	None

Engineering controls:

Use local exhaust ventilation if the potential for airborne exposure exists.

Respiratory protection:

Use a NIOSH approved respirator if ventilation is inadequate.

Eye/face protection:

Safety goggles or safety glasses with side shields. Full face protection should be used if the potential for splashing or spraying of product exists.

Skin protection:

Use chemical resistant, impermeable clothing including gloves and either an apron or body suit to prevent skin contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid
Color:	Clear
Odor:	Mild
Odor threshold:	Not available.
pH:	Not available.
Vapor pressure:	Not available.
Boiling point/range:	Not available.
Melting point/ range:	Not available.
Specific gravity:	1.12
Vapor density:	Not available.
Flash point:	> 93.94 °C (> 201.09 °F) Pensky Martens closed cup
Flammable/Explosive limits - lower:	Not available.
Flammable/Explosive limits - upper:	Not available.
Autoignition temperature:	Not available.
Evaporation rate:	Not available.
Solubility in water:	Not available.
Partition coefficient (n-octanol/water):	Not available.
VOC content:	0 %; 0 g/l (value as mixed for use)
Viscosity:	Not available.
Decomposition temperature:	Not available.

10. STABILITY AND REACTIVITY

Stability:	Stable under normal conditions of storage and use.
Hazardous reactions:	None under normal processing.
Hazardous decomposition products:	Oxides of carbon. Oxides of nitrogen. Oxides of sulfur. Ammonia. Phenolics. Hydrogen sulfide. Nitric acid. Toxic fumes. Irritating vapors.
Incompatible materials:	Oxidizing agents. Acids. Bases. Sodium hypochlorite. Peroxides. This product slowly corrodes copper, aluminum, zinc and galvanized surfaces.
Reactivity:	Not available.
Conditions to avoid:	Keep away from heat, ignition sources and incompatible materials.

11. TOXICOLOGICAL INFORMATION

Relevant routes of exposure: Skin, Inhalation, Eyes, Ingestion

Potential Health Effects/Symptoms

Inhalation:	Mists, vapors or liquid may cause severe irritation or burns. May cause allergic respiratory reaction. May be toxic if inhaled.
Skin contact:	Causes skin burns. May cause allergic skin reaction.
Eye contact:	Causes serious eye damage.
Ingestion:	If ingested, severe burns of the mouth and throat may occur, as well as perforation of the esophagus and the stomach.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
2,2'-[1,2-ethanediy]bis(oxy)]bis(ethanethiol)	None	No Records
Amine	None	Allergen, Eyes, Irritant, Respiratory
Polyglycol diamine	None	Corrosive
Benzylidimethylamine	None	Irritant, Corrosive, Allergen, Respiratory

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
2,2'-[1,2-ethanediy]bis(oxy)]bis(ethanethiol)	No	No	No
Amine	No	No	No
Polyglycol diamine	No	No	No
Benzylidimethylamine	No	No	No

12. ECOLOGICAL INFORMATION

Ecological information: Not available.

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal:	Follow all local, state, federal and provincial regulations for disposal.
Hazardous waste number:	It is the responsibility of the user to determine if an item is hazardous as defined in the Resource Conservation and Recovery Act (RCRA) at the time of disposal. Product uses, transformations, mixtures, processes, etc., may render the resulting material hazardous, under the criteria of ignitability, corrosivity, reactivity and toxicity characteristics of the Toxicity Characteristics Leaching Procedure (TCLP) 40 CFR 261.20-24.

14. TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name:	Amines, liquid, corrosive, n.o.s. (Diethylene glycol di-(3-aminopropyl) ether, N,N'-Dimethyldipropyltriamine)
Hazard class or division:	8
Identification number:	UN 2735
Packing group:	II

International Air Transportation (ICAO/IATA)

Proper shipping name:	Amines, liquid, corrosive, n.o.s. (Diethylene glycol di-(3-aminopropyl) ether, N,N'-Dimethyldipropyltriamine)
Hazard class or division:	8
Identification number:	UN 2735
Packing group:	II

Water Transportation (IMO/IMDG)

Proper shipping name:	AMINES, LIQUID, CORROSIVE, N.O.S. (Diethylene glycol di-(3-aminopropyl) ether, N,N'-Dimethyldipropyltriamine)
Hazard class or division:	8
Identification number:	UN 2735
Packing group:	II

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status:	All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12 (b) Export Notification:	None above reporting de minimis
CERCLA/SARA Section 302 EHS:	None above reporting de minimis
CERCLA/SARA Section 311/312:	Immediate Health
CERCLA/SARA Section 313:	None above reporting de minimis
California Proposition 65:	No California Proposition 65 listed chemicals are known to be present.

Canada Regulatory Information

CEPA DSL/NDL Status:	One or more components are not listed on, and are not exempt from listing on either the Domestic Substances List or the Non-Domestic Substances List.
-----------------------------	---

16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: New Safety Data Sheet format.

Prepared by: Rena Petrides, Regulatory Affairs Specialist

Issue date: 12/09/2014

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation and its affiliates ("Henkel") does not assume responsibility for any results obtained by persons over whose methods Henkel has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any Henkel's products. In light of the foregoing, Henkel specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel's products. Henkel further disclaims any liability for consequential or incidental damages of any kind, including lost profits.



Revision Number: 004.0

Issue date: 08/27/2014

1. PRODUCT AND COMPANY IDENTIFICATION

Product name:	LOCTITE EA E-05MR A known as HYSOL E-05MR 50ML PART A	IDH number:	1086592
Product type:	Epoxy resin	Item number:	1086592_193383
Restriction of Use:	None identified	Region:	United States
Company address:	Henkel Corporation One Henkel Way Rocky Hill, Connecticut 06067	Contact information:	Telephone: (860) 571-5100 MEDICAL EMERGENCY Phone: Poison Control Center 1-877-671-4608 (toll free) or 1-303-592-1711 TRANSPORT EMERGENCY Phone: CHEMTREC 1-800-424-9300 (toll free) or 1-703-527-3887 Internet: www.henkelna.com

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING: CAUSES SKIN IRRITATION.
MAY CAUSE AN ALLERGIC SKIN REACTION.
CAUSES SERIOUS EYE IRRITATION.

HAZARD CLASS	HAZARD CATEGORY
SKIN IRRITATION	2
EYE IRRITATION	2A
SKIN SENSITIZATION	1

PICTOGRAM(S)



Precautionary Statements

Prevention:	Avoid breathing vapors, mist, or spray. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wear eye and face protection. Wear protective gloves.
Response:	IF ON SKIN: Wash with plenty of soap and water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to remove. Continue rinsing. If skin irritation or rash occurs: Get medical attention. If eye irritation persists: Get medical attention. Take off contaminated clothing.
Storage:	Not prescribed
Disposal:	Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.

3 % of the mixture consists of ingredient(s) of unknown acute toxicity.

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Component(s)	CAS Number	Percentage*
Epoxy resin	Proprietary	30 - 60
Epoxy resin	Proprietary	10 - 30
Epoxy resin	Proprietary	10 - 30
Substituted silane	Proprietary	1 - 5

* Exact percentage is a trade secret. Concentration range is provided to assist users in providing appropriate protections.

4. FIRST AID MEASURES

Inhalation:	Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If symptoms develop and persist, get medical attention.
Skin contact:	Remove contaminated clothing and footwear. Immediately flush skin with plenty of water (using soap, if available). If symptoms develop and persist, get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.
Eye contact:	Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.
Ingestion:	DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If symptoms develop and persist, get medical attention.
Symptoms:	See Section 11.

5. FIRE FIGHTING MEASURES

Extinguishing media:	Water spray (fog), foam, dry chemical or carbon dioxide.
Special firefighting procedures:	Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.
Unusual fire or explosion hazards:	In case of fire, keep containers cool with water spray. Closed containers may rupture (due to build up of pressure) when exposed to extreme heat.
Hazardous combustion products:	Oxides of carbon. Acids. Aldehydes. Phenolics. Irritating vapors.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions:	Do not allow product to enter sewer or waterways.
Clean-up methods:	Ensure adequate ventilation. Wear appropriate personal protective equipment. Refer to Section 8 "Exposure Controls / Personal Protection" prior to clean up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Scrape up spilled material and place in a closed container for disposal.

7. HANDLING AND STORAGE

- Handling:** Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Use only with adequate ventilation. Keep container closed.
- Storage:** Keep container tightly closed and in a cool, well-ventilated place away from incompatible materials. Keep away from heat, spark and flame. Protect from direct sunlight.

For information on product shelf life contact Henkel Customer Service at (800) 243-4874.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous Component(s)	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Epoxy resin	None	None	None	None
Epoxy resin	None	None	None	None
Epoxy resin	None	None	None	None
Substituted silane	None	None	None	None

- Engineering controls:** Use local exhaust ventilation if the potential for airborne exposure exists.
- Respiratory protection:** Use a NIOSH approved respirator if ventilation is inadequate.
- Eye/face protection:** Safety goggles or safety glasses with side shields. Full face protection should be used if the potential for splashing or spraying of product exists.
- Skin protection:** Use chemical resistant, impermeable clothing including gloves and either an apron or body suit to prevent skin contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical state:** Liquid
- Color:** Clear
- Odor:** Slight
- Odor threshold:** Not available.
- pH:** Not available.
- Vapor pressure:** Not available.
- Boiling point/range:** Not available.
- Melting point/ range:** Not available.
- Specific gravity:** 1.18
- Vapor density:** Not available.
- Flash point:** > 95.9 °C (> 204.62 °F) Pensky Martens closed cup
- Flammable/Explosive limits - lower:** Not available.
- Flammable/Explosive limits - upper:** Not available.
- Autoignition temperature:** Not available.
- Evaporation rate:** Not available.
- Solubility in water:** Insoluble
- Partition coefficient (n-octanol/water):** Not available.
- VOC content:** 0 %; 0 g/l (value as mixed for use)
- Viscosity:** Not available.
- Decomposition temperature:** Not available.

10. STABILITY AND REACTIVITY

Stability:	Stable at normal conditions.
Hazardous reactions:	Reaction with some curing agents may produce an exothermic reaction which in large masses could cause runaway polymerization.
Hazardous decomposition products:	Oxides of carbon. Aldehydes. Acids. Phenolics. Irritating vapors.
Incompatible materials:	Oxidizing agents. Strong acids and strong bases. Amines.
Reactivity:	Not available.
Conditions to avoid:	Keep away from heat, ignition sources and incompatible materials. Protect from direct sunlight. Note: Heating the epoxy resin in this product above 148.9 °C (300 °F) in the presence of air may cause slow oxidative decomposition. Above 260 °C (500 °F) polymerization of the epoxy resin may occur. Aliphatic polyamines can produce exothermic reactions with epoxy resins 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.

11. TOXICOLOGICAL INFORMATION

Relevant routes of exposure: Skin, Inhalation, Eyes

Potential Health Effects/Symptoms

Inhalation:	Inhalation of vapors or mists of the product may be irritating to the respiratory system.
Skin contact:	Causes skin irritation. May cause allergic skin reaction.
Eye contact:	Causes serious eye irritation.
Ingestion:	Not expected under normal conditions of use.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Epoxy resin	None	Allergen, Irritant
Epoxy resin	None	Allergen, Irritant
Epoxy resin	None	Allergen, Irritant
Substituted silane	None	Allergen, Irritant

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Epoxy resin	No	No	No
Epoxy resin	No	No	No
Epoxy resin	No	No	No
Substituted silane	No	No	No

12. ECOLOGICAL INFORMATION

Ecological information: Not available.

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Follow all local, state, federal and provincial regulations for disposal.
Hazardous waste number: Not a RCRA hazardous waste.

14. TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

International Air Transportation (ICAO/IATA)

Proper shipping name: Environmentally hazardous substance, liquid, n.o.s. (Bisphenol-A Epichlorhydrin resin, Bisphenol-F Epichlorhydrin resin)
Hazard class or division: 9
Identification number: UN 3082
Packing group: III

Water Transportation (IMO/IMDG)

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bisphenol-A Epichlorhydrin resin, Bisphenol-F Epichlorhydrin resin)
Hazard class or division: 9
Identification number: UN 3082
Packing group: III
Marine pollutant: Bisphenol-A Epichlorhydrin resin, Bisphenol-F Epichlorhydrin resin

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12 (b) Export Notification: None above reporting de minimis
CERCLA/SARA Section 302 EHS: None above reporting de minimis
CERCLA/SARA Section 311/312: Immediate Health
CERCLA/SARA Section 313: None above reporting de minimis
California Proposition 65: This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Canada Regulatory Information

CEPA DSL/NDL Status: All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: New Safety Data Sheet format.

Prepared by: Rena Petrides, Regulatory Affairs Specialist

Issue date: 08/27/2014

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation and its affiliates ("Henkel") does not assume responsibility for any results obtained by persons over whose methods Henkel has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any Henkel's products. In light of the foregoing, Henkel specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel's products. Henkel further disclaims any liability for consequential or incidental damages of any kind, including lost profits.