



Revision Date: 03/06/2006

Issue date: 03/07/2006

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: Hysol E-05CL Epoxy Adhesive - Ultra Clear
Product type: Epoxy Hardener
Company address: Henkel Corporation
1001 Trout Brook Crossing
Rocky Hill, Connecticut 06067

Item No. : 29300_HARDENER
Region: United States
Contact Information:
Telephone: 860.571.5100
Emergency telephone: 860.571.5100
Internet: www.loctite.com

2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous components</u>	<u>%</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>	<u>OTHER</u>
Polymercaptan hardener Proprietary	60-100	None	None	None
Tertiary amine Proprietary	5-10	None	None	None
Aliphatic amine Proprietary	1-5	3 ppm TWA 6 ppm STEL	3 ppm TWA 6 mg/m ³ TWA	None

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

HMIS:

Physical state: Liquid	HEALTH: 3*
Color: Clear	FLAMMABILITY: 1
Odor: Mercaptan	PHYSICAL HAZARD: 0
	Personal Protection: See Section 8

DANGER: COMBUSTIBLE LIQUID AND VAPOR.
CAUSES EYE AND SKIN BURNS.
MAY CAUSE ALLERGIC SKIN AND RESPIRATORY REACTION.
CAUSES RESPIRATORY TRACT IRRITATION.
MAY BE HARMFUL IF SWALLOWED.

Relevant routes of exposure: Eye contact, Ingestion, Inhalation, Skin contact

Potential Health Effects

Inhalation: Allergic respiratory reaction. Severe respiratory tract irritation. May cause irritation to nose and throat. Tearing.

Skin contact: May cause skin burns. Allergic skin reaction. Rash. Redness.

Eye contact: Burns. Severe eye irritation. Redness. Tissue damage.

Ingestion: May be harmful if swallowed. May cause burns of mouth and throat if swallowed.

Existing conditions aggravated by exposure: Skin disorders. Skin allergies. Respiratory disorders. Eye disorders.

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Product name: Hysol E-05CL Epoxy Adhesive - Ultra Clear

See Section 11 for additional toxicological information.

4. FIRST AID MEASURES

Inhalation:	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Skin contact:	Immediately flush skin with plenty of water (using soap, if available). Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention if symptoms occur.
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. Keep individual calm. Get medical attention immediately.
Notes to physician:	None.

5. FIRE-FIGHTING MEASURES

Flash point:	78°C (176°F) Pensky Martens closed cup
Autoignition temperature:	Not available
Flammable/Explosive limits-lower %:	Not available
Flammable/Explosive limits-upper %:	Not available
Extinguishing media:	Water spray (fog), foam, dry chemical or carbon dioxide.
Special fire fighting procedures:	Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.
Unusual fire or explosion hazards:	In the event of fire, cool tanks with water spray.
Hazardous combustion products:	Oxides of carbon. Oxides of nitrogen. Ammonia. Nitric acid. Irritating organic fragments.

6. ACCIDENTAL RELEASE MEASURES

Environmental precautions:	Prevent product from entering drains or open waters.
Clean-up methods:	Remove all ignition sources. Immediately contact emergency personnel. Scrape up as much material as possible. Clean residue with soap and water. Store in a closed container until ready for disposal.

7. HANDLING AND STORAGE

Handling:	Keep away from heat, spark and flame. Do not breathe mist or vapors. Do not get in eyes. Do not get on skin or clothing. Do not taste or swallow. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling.
Storage:	Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.
Incompatible products:	Refer to Section 10.

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

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls:	Use local exhaust ventilation to maintain airborne concentrations below established exposure limits.
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Product name: Hysol E-05CL Epoxy Adhesive - Ultra Clear

Respiratory protection: Use a NIOSH approved air-purifying respirator if the potential to exceed established exposure limits exists.

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

Eye/face protection: Chemical splash goggles or safety glasses with side shields.

See Section 2 for exposure limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid
Color: Clear
Odor: Mercaptan
Vapor pressure: Not available
pH: Not applicable
Boiling point/range: Not determined
Melting point/range: Not available
Specific gravity: 1.12
Vapor density: Not determined
Evaporation rate: Not available
Solubility in water: Not determined
Partition coefficient (n-octanol/water): Not available
VOC content: <1%; <10 grams/liter (estimated)

10. STABILITY AND REACTIVITY

Stability: Stable

Hazardous polymerization: Polymerization is a highly exothermic reaction and may generate sufficient heat to cause thermal decomposition and/or rupture containers.

Hazardous decomposition products: None

Incompatibility: Strong acids. Strong bases. Peroxides. Calcium hypochlorite. Sodium hypochlorite.

Conditions to avoid: Excessive heat. Storage with incompatible materials.

11. TOXICOLOGICAL INFORMATION

Carcinogen Status

Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen
Polymercaptan hardener Proprietary	No	No	No
Tertiary amine Proprietary	No	No	No
Aliphatic amine Proprietary	No	No	No

Literature Referenced Target Organ & Other Health Effects

Hazardous components	Health Effects/Target Organs
Polymercaptan hardener Proprietary	No data
Tertiary amine Proprietary	Irritant
Aliphatic amine Proprietary	Irritant, Kidney, Liver

12. ECOLOGICAL INFORMATION

Ecological information: Not available

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose according to EPA and local governmental regulations.

EPA hazardous waste number: This product may contain traces of benzene and may be classified as a hazardous waste (waste number(s) D018) under EPA RCRA (40 CFR 261.24). However this product is only classifiable as hazardous waste if it exhibits the characteristics of toxicity as shown by the toxicity characteristic leaching procedure (TCLP). Under RCRA, it is the responsibility of the end user of this product to determine whether it meets this criteria at the time of disposal.

14. TRANSPORT INFORMATION

The shipping classifications in this section are for non-bulk packaging only (unless otherwise specified). Shipping classification may be different for bulk packaging.

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

Proper shipping name: AMINES, LIQUID, CORROSIVE, N.O.S. (Aliphatic amines)
Hazard class or division: 8
Identification number: UN 2735
Packing group: III
Exceptions: Consumer Commodity ORM-D (Not more than 5L)

International Air Transportation (ICAO/IATA):

Proper shipping name: Amines, Liquid, Corrosive, n.o.s. (Aliphatic amines)
Hazard class or division: 8
Identification number: UN2735
Packing group: III

WaterTransportation (IMO/IMDG):

Proper shipping name: Amines, liquid, corrosive, n.o.s. (Aliphatic amines)
Hazard class or division: 8
Identification number: UN2735
Packing group: III
Marine pollutant: None known

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.

CERCLA/SARA Section 302 EHS: None above reporting de minimus.
CERCLA/SARA Section 311/312: Immediate Health Hazard, Delayed Health Hazard
CERCLA/SARA 313: None above reporting de minimus.

California Proposition 65: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

Canada Regulatory Information

CEPA DSL/NDSL Status: Contains one or more components listed on the Non-Domestic Substances list. All other components are listed on or are exempt from listing on the Domestic Substances List.
WHMIS hazard class: E, D.2.B, B.3

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: This material safety data sheet contains changes from the previous version in section(s): 7

Prepared by: Anna Orlovsky, Product Safety and Regulatory Affairs Specialist

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Revision Date: 03/06/2006

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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: Hysol E-05CL Epoxy Adhesive - Ultra Clear
Product type: Epoxy Resin
Company address: Henkel Corporation
1001 Trout Brook Crossing
Rocky Hill, Connecticut 06067

Item No. : 29300_RESIN
Region: United States
Contact Information:
Telephone: 860.571.5100
Emergency telephone: 860.571.5100
Internet: www.loctite.com

2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous components</u>	<u>%</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>	<u>OTHER</u>
Epoxy resin Proprietary	60-100	None	None	None
Epoxy resin Proprietary	10-30	None	None	None
Neopentyl glycol diglycidyl ether 17557-23-2	5-10	None	None	None

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

HMIS:

Physical state: Liquid	HEALTH:	2
Color: Clear Yellow	FLAMMABILITY:	1
Odor: Epoxy	PHYSICAL HAZARD:	1
	Personal Protection:	See Section 8

WARNING: MAY CAUSE ALLERGIC SKIN AND RESPIRATORY REACTION.
MAY CAUSE EYE AND SKIN IRRITATION.

Relevant routes of exposure: Eye contact, Ingestion, Inhalation, Skin contact

Potential Health Effects

Inhalation: Allergic respiratory reaction. Sensitization. Shortness of breath. May cause irritation to nose and throat.
Skin contact: Allergic skin reaction. Moderate skin irritation. Itching. Redness.
Eye contact: Moderate eye irritation. Redness.
Ingestion: Not expected under normal conditions of use.

Existing conditions aggravated by exposure: Skin disorders. Skin allergies. Respiratory disorders. Asthma.

See Section 11 for additional toxicological information.

Item No. : 29300_RESIN

Product name: Hysol E-05CL Epoxy Adhesive - Ultra Clear

4. FIRST AID MEASURES

Inhalation:	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Skin contact:	Immediately flush skin with plenty of water (using soap, if available). Remove contaminated clothing and shoes. Wash clothing before reuse. Get medical attention if symptoms occur.
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. Keep individual calm. Get medical attention if symptoms develop and persist.
Notes to physician:	None.

5. FIRE-FIGHTING MEASURES

Flash point:	Greater than 93°C (200°F) Pensky Martens closed cup
Autoignition temperature:	Not available
Flammable/Explosive limits-lower %:	Not available
Flammable/Explosive limits-upper %:	Not available
Extinguishing media:	Foam, dry chemical or carbon dioxide.
Special fire fighting procedures:	Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.
Unusual fire or explosion hazards:	In the event of fire, cool tanks with water spray. Closed containers may rupture (due to build up of pressure) when exposed to extreme heat. May decompose above 149°C (300°F). May polymerize above 260°C (500°F) in which case closed containers may rupture or explode. Fumes and vapors from thermal decompositions vary in composition and toxicity.
Hazardous combustion products:	Oxides of carbon. Irritating organic fragments. Acids. Aldehydes.

6. ACCIDENTAL RELEASE MEASURES

Environmental precautions:	Prevent product from entering drains or open waters.
Clean-up methods:	Remove all ignition sources. Immediately contact emergency personnel. Scrape up as much material as possible. Clean residue with soap and water. Store in a closed container until ready for disposal.

7. HANDLING AND STORAGE

Handling:	Do not breathe mist or vapors. Avoid contact with eyes, skin and clothing. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling.
Storage:	Store in original container until ready to use. Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.
Incompatible products:	Refer to Section 10.

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

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls:	Use local ventilation if general ventilation is insufficient to maintain vapor concentration below established exposure limits.
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Respiratory protection: Use a NIOSH approved air-purifying respirator if the potential to exceed established exposure limits exists.

Skin protection: Chemical resistant, impermeable gloves.

Eye/face protection: Chemical splash goggles or safety glasses with side shields.

See Section 2 for exposure limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid
Color: Clear Yellow
Odor: Epoxy
Vapor pressure: Not available
pH: Not applicable
Boiling point/range: Greater than 149°C (300°F)
Melting point/range: Not available
Specific gravity: 1.11
Vapor density: Not available
Evaporation rate: Not available
Solubility in water: Negligible.
Partition coefficient (n-octanol/water): Not available
VOC content: <1%; <10 grams/liter (estimated)

10. STABILITY AND REACTIVITY

Stability: Stable

Hazardous polymerization: Reaction with some curing agents may produce an exothermic reaction which in large masses could cause runaway polymerization.

Hazardous decomposition products: None

Incompatibility: Strong oxidizers. Strong acids. Strong bases. Amines.

Conditions to avoid: Do not expose to temperatures above 149°C (300°F). Storage with incompatible materials.

11. TOXICOLOGICAL INFORMATION

Carcinogen Status

Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen
Epoxy resin Proprietary	No	No	No
Epoxy resin Proprietary	No	No	No
Neopentyl glycol diglycidyl ether 17557-23-2	No	No	No

Literature Referenced Target Organ & Other Health Effects

Hazardous components	Health Effects/Target Organs
Epoxy resin Proprietary	Allergen, Irritant
Epoxy resin Proprietary	Allergen, Irritant
Neopentyl glycol diglycidyl ether 17557-23-2	Allergen, Irritant, Blood, Immune system, Bone Marrow, Reproductive

12. ECOLOGICAL INFORMATION

Ecological information: Not available

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose according to EPA and local governmental regulations.

EPA hazardous waste number: Not a RCRA hazardous waste.

14. TRANSPORT INFORMATION

The shipping classifications in this section are for non-bulk packaging only (unless otherwise specified). Shipping classification may be different for bulk packaging.

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

Water Transportation (IMO/IMDG):

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

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.

CERCLA/SARA Section 302 EHS: None above reporting de minimus.
CERCLA/SARA Section 311/312: Immediate Health Hazard, Delayed Health Hazard
CERCLA/SARA 313: None above reporting de minimus.

California Proposition 65: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

Canada Regulatory Information

CEPA DSL/NDSL Status: All components are listed on or are exempt from listing on the Domestic Substances List.
WHMIS hazard class: D.2.B

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: This material safety data sheet contains changes from the previous version in section(s): 7

Prepared by: Anna Orlovsky, Product Safety and Regulatory Affairs Specialist

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