



Revision Number: 007.0

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1. PRODUCT AND COMPANY IDENTIFICATION

Product name:	LOCTITE EA 445 HARDENER known as Fast Cure Epoxy HARDENER	IDH number:	701941
Product type:	Epoxy Hardener	Item number:	21425_150445
Restriction of Use:	None identified	Region:	United States
Company address:	Contact information:		
Henkel Corporation	Telephone: +1 (860) 571-5100		
One Henkel Way	MEDICAL EMERGENCY Phone: Poison Control Center		
Rocky Hill, Connecticut 06067	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 SKIN IRRITATION.
MAY CAUSE AN ALLERGIC SKIN REACTION.
CAUSES SERIOUS EYE DAMAGE.
SUSPECTED OF CAUSING CANCER.
CAUSES DAMAGE TO ORGANS THROUGH PROLONGED OR REPEATED EXPOSURE.
MAY CAUSE DAMAGE TO ORGANS THROUGH PROLONGED OR REPEATED EXPOSURE.

HAZARD CLASS	HAZARD CATEGORY
SKIN IRRITATION	2
SERIOUS EYE DAMAGE	1
SKIN SENSITIZATION	1
CARCINOGENICITY	2
SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE	1
SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE	2

PICTOGRAM(S)



Precautionary Statements

Prevention:	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe vapors, mist, or spray. Wash affected area thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves, clothing, eye and face protection.
Response:	IF ON SKIN: Wash with plenty of water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed or concerned: Get medical attention. If skin irritation or rash occurs: Get medical attention. Take off contaminated clothing.
Storage:	Store locked up.

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*
Aluminium hydroxide	21645-51-2	40 - 50
2,4,6-Tris(dimethylaminomethyl)phenol	90-72-2	5 - 10
Distillates, petroleum, heavy thermal cracked	64741-81-7	1 - 5
Residues (petroleum), thermal cracked	64741-80-6	1 - 5
Styrene	100-42-5	1 - 5
Silica, amorphous, fumed, crystal-free	112945-52-5	1 - 5
Ethylene glycol	107-21-1	1 - 5
Bis[(dimethylamino)methyl]phenol	71074-89-0	1 - 5

* Exact percentages may vary or are trade secret. Concentration range is provided to assist users in providing appropriate protections.

4. FIRST AID MEASURES

Inhalation:	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.
Skin contact:	Immediately flush skin with plenty of water (using soap, if available). Remove contaminated clothing and footwear. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.
Eye contact:	Rinse immediately with plenty of water, also under the eyelids, 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. 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. In case of fire, keep containers cool with water spray.
Unusual fire or explosion hazards:	Closed containers may rupture (due to build up of pressure) when exposed to extreme heat.

Hazardous combustion products:

Oxides of carbon. Oxides of nitrogen. Oxides of sulfur. Alcohols. Aldehydes. Ammonia. Ethers. 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:

Remove all sources of ignition. Evacuate and ventilate spill area; dike spill to prevent entry into water system; wear full protective equipment during clean-up. 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. Keep container closed. Use only with adequate ventilation. Refer to Section 8.

Storage:

Keep container tightly closed and in a cool, well-ventilated place away from incompatible materials. Keep away from heat, spark and flame. Store in original container until ready to use.

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
Aluminium hydroxide	1 mg/m3 TWA Respirable fraction. 10 mg/m3 TWA (as Al) Total dust.	15 mg/m3 TWA (as Al) Total dust. 5 mg/m3 TWA (as Al) Respirable fraction. 15 MPPCF TWA Respirable fraction. 15 mg/m3 TWA Total dust. 5 mg/m3 TWA Respirable fraction. 50 MPPCF TWA Total dust.	None	None
2,4,6-Tris(dimethylaminomethyl)phenol	None	None	None	None
Distillates, petroleum, heavy thermal cracked	None	None	None	None
Residues (petroleum), thermal cracked	None	None	None	None
Styrene	20 ppm TWA 40 ppm STEL	100 ppm TWA 200 ppm Ceiling 600 ppm MAX. CONC 5 minutes in any 3 hours	None	None
Silica, amorphous, fumed, crystal-free	10 mg/m3 TWA Inhalable dust. 3 mg/m3 TWA Respirable fraction.	20 MPPCF TWA 0.8 mg/m3 TWA	None	None
Ethylene glycol	25 ppm TWA Vapor fraction 50 ppm STEL Vapor fraction 10 mg/m3 STEL Aerosol, inhalable.	None	None	None
Bis(dimethylamino)methylphenol	None	None	None	None

Engineering controls:

Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.

Respiratory protection:

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

Eyeface 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. Safety showers and eye wash stations should be available.

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:

Paste

Color:

Black

Odor:

Mercaptan

Odor threshold:

Not available.

pH:

Not applicable

Vapor pressure:

Negligible

Boiling point/range:

> 149 °C (> 300.2 °F)

Melting point/ range:

Not available.

Specific gravity:

1.4

Vapor density:

Not available.

Flash point:	> 93 °C (> 199.4 °F) Tagliabue closed cup
Flammable/Explosive limits - lower:	Not available.
Flammable/Explosive limits - upper:	Not available.
Autoignition temperature:	Not available.
Flammability:	Not applicable
Evaporation rate:	Not available.
Solubility in water:	Slight
Partition coefficient (n-octanol/water):	Not available.
VOC content:	0.04 % (value for resin and hardener together)
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. Alcohols. Aldehydes. Ammonia. Ethers. Hydrogen sulfide. Nitric acid. Toxic fumes. Irritating vapors.
Incompatible materials:	Acids. Bases. Oxidizing agents. Sodium hypochlorite. Peroxides. Copper. Copper alloys. Halogens. Metal salts.
Reactivity:	Not available.
Conditions to avoid:	Excessive heat. Store away from incompatible materials. Heat, flames, sparks and other sources of ignition.

11. TOXICOLOGICAL INFORMATION

Relevant routes of exposure:	Skin, Inhalation, Eyes, Ingestion
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Potential Health Effects/Symptoms

Inhalation: May cause respiratory tract irritation. Vapors may cause headaches, nausea, dizziness and respiratory tract irritation. May cause irritation to nose and throat.
Skin contact: Causes skin irritation. May cause allergic skin reaction.
Eye contact: Causes serious eye damage.
Ingestion: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Aluminium hydroxide	Oral LD50 (Rat) = > 5,000 mg/kg	Irritant, Lung, Respiratory
2,4,6-Tris(dimethylaminomethyl)phenol	None	Irritant, Allergen
Distillates, petroleum, heavy thermal cracked	None	No Target Organs
Residues (petroleum), thermal cracked	None	No Data
Styrene	Oral LD50 (Mouse) = 316 mg/kg Oral LD50 (Rat) = 1 g/kg Oral LD50 (Rat) = 5,000 mg/kg Inhalation LC50 (Rat, 4 h) = 24 mg/l	Blood, Ear, Eyes, Irritant, Liver, Mutagen, Nervous System, Some evidence of carcinogenicity
Silica, amorphous, fumed, crystal-free	None	Nuisance dust
Ethylene glycol	Oral LD50 (Rat) = 5.89 g/kg Oral LD50 (Mouse) = 14.6 g/kg Dermal LD50 (Rabbit) = 9,530 mg/kg	Blood, Bone Marrow, Central nervous system, Developmental, Eyes, Irritant, Kidney, Liver, Metabolic
Bis[(dimethylamino)methyl]phenol	None	No Records

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Aluminium hydroxide	No	No	No
2,4,6-Tris(dimethylaminomethyl)phenol	No	No	No
Distillates, petroleum, heavy thermal cracked	No	Group 2B	No
Residues (petroleum), thermal cracked	No	No	No
Styrene	Reasonably Anticipated to be a Human Carcinogen.	Group 2B	No
Silica, amorphous, fumed, crystal-free	No	No	No
Ethylene glycol	No	No	No
Bis[(dimethylamino)methyl]phenol	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:	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

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, Delayed Health
CERCLA/SARA Section 313:	This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Styrene (CAS# 100-42-5). Ethylene glycol (CAS# 107-21-1).
CERCLA Reportable quantity:	Styrene (CAS# 100-42-5) 1,000 lbs. (454 kg)
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.
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16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: 2,3

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