LOCTITE EA E-60HP B HARDENER

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V001.13
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Section 1. Identification of the substance/preparation and of the company/undertaking

Product name: LOCTITE EA E-60HP B HARDENER

Other means of identification: LOCTITE EA E-60HP B 50ML
Product code: IDH701988
Recommended use of the chemical and restrictions on use

Intended use: Epoxy Hardener
Manufacturer/Importer/Distributor Representative Company

Henkel Adhesive Tech. Vietnam Co., Ltd,
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Emergency Telephone for Chemical Accidents: FOR EMERGENCIES ONLY (Spill, major leak, Fire, Exposure, or Accident). Call: +84 28 71006388

Section 2. Hazards identification

GHS Classification:

Hazard Class	Hazard Category	Route of Exposure
Acute toxicity	Category 4	Oral
Skin corrosion/irritation	Category 1B	
Serious eye damage/eye irritation	Category 1	
Skin sensitizer	Category 1	

GHS label elements:

Hazard pictogram:



Signal word: Danger

Hazard statement: H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.

Precaution:

Prevention: P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 Wash hands thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response: P301+P310+P330 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician. Rinse mouth.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P304+P340+P310 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or physician.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P363 Wash contaminated clothing before reuse.

Disposal: P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Section 3. Composition / information on ingredients

Substance or Mixture:
Mixture

Declaration of hazardous chemical:

Hazard component CAS-No.	Content	GHS Classification
Phenol, 4,4′-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane, reaction products with 3,3′-[oxybis(2,1-ethanediyloxy)] 68585-28-4	30- 60 %	Acute toxicity 4; Oral H302 Skin corrosion/irritation 1B H314 Serious eye damage/eye irritation 1 H318 Skin Sensitization 1 H317
3,3'-Oxybis(ethyleneoxy)bis(propylamine) 4246-51-9	30- 60 %	Acute toxicity 5; Oral H303 Acute toxicity 5; Dermal H313 Skin corrosion/irritation 1B H314 Serious eye damage/eye irritation 1 H318 Skin Sensitization 1 H317
Silane, dichlorodimethyl-, reaction products with silica 68611-44-9	1- 10 %	

Section 4. First aid measures

Inhalation: Move to fresh air. If symptoms persist, seek medical advice.

Skin contact: Rinse with running water and soap.
Obtain medical attention if irritation persists.

Eye contact:	Rinse immediately with plenty of running water (for 10 minutes), seek medical attention from a specialist.
Ingestion:	Rinse mouth, drink 1-2 glasses of water, do not induce vomiting, consult a doctor.
Indication of immediate medical attention and special treatment needed:	See section: Description of first aid measures

Section 5. Fire fighting measures

Suitable extinguishing media:	Foam, extinguishing powder, carbon dioxide.
Improper extinguishing media:	High pressure waterjet
Specific hazards arising from the chemical:	Danger of decomposition if exposed to heat. Formation of toxic gases is possible during heating or in fires. In the event of a fire, carbon monoxide (CO), carbon dioxide (CO2) and nitrogen oxides (NOx) can be released.
Special protection equipment and precautions for firefighters:	Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.
Additional fire fighting advice:	Dispose of combustion residues and contaminated fire-fighting water in accordance with statutory regulations. In case of fire, keep containers cool with water spray.

Section 6. Accidental release measures

Personal precautions:	Ensure adequate ventilation. Avoid contact with skin and eyes. Wear protective equipment. See advice in section 8
Environmental precautions:	Do not empty into drains / surface water / ground water.
Clean-up methods:	For large spills absorb onto inert absorbent material and place in sealed container for disposal. Dispose of contaminated material as waste according to Section 13.

Section 7. Handling and storage

Handling:	Use only with adequate ventilation. Extract when the product is heated. Avoid skin and eye contact. See advice in section 8
Storage:	Store in sealed original container.Store in a cool, well-ventilated place. Keep away from heat and direct sunlight.

Section 8. Exposure controls / personal protection

Components with specific control parameters for workplace:

Particles (insoluble or poorly soluble) not otherwise specified, respirable particles 68611-44-9	**Value type**	Time Weighted Average (TWA):
	mg/m³	3
	Remarks	ACGIH
Particles (insoluble or poorly soluble) not otherwise specified, inhalable particles 68611-44-9	**Value type**	Time Weighted Average (TWA):
	mg/m³	10
	Remarks	ACGIH

Respiratory protection:
Ensure adequate ventilation.
An approved mask or respirator fitted with an organic vapour cartridge should be worn if the product is used in a poorly ventilated area
Filter type: A (EN 14387)

Hand protection:
Chemical-resistant protective gloves (EN 374).
Suitable materials for short-term contact or splashes (recommended: at least protection index 2, corresponding to > 30 minutes permeation time as per EN 374):
nitrile rubber (NBR; >= 0.4 mm thickness)
Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374):
nitrile rubber (NBR; >= 0.4 mm thickness)
This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced.

Eye protection:
Safety glasses with sideshields or chemical safety goggles should be worn if there is a risk of splashing.
Protective eye equipment should conform to EN166.

Body protection:
Wear suitable protective clothing.
Protective clothing should conform to EN 14605 for liquid splashes or to EN 13982 for dusts.

Engineering controls:
Provide local and general exhaust ventilation to effectively remove and prevent buildup of any vapors or mists generated from the handling of this product.

General protection and hygiene measures:
The workplace should be equipped with an emergency shower and eye-rinsing facility.

Hygienic measures:
Wash hands before work breaks and after finishing work.
Do not eat, drink or smoke while working.
Take off contaminated clothing and wash before reuse.

Section 9. Physical and chemical properties

Appearance: Light yellow
liquid
Odor: Mild
Odor threshold (CA): No data available.
pH: Not applicable, Product is non-soluble (in water).
Melting point / freezing point: No data available.
Specific gravity: 0.9 - 1.1
Boiling point: > 93 °C (> 199.4 °F)> 93 °C (> 199.4 °F)
Flash point: > 93 °C (> 199.4 °F)

(Setaflash Closed Cup; ASTM D3828 Method B)	
Evaporation rate:	No data available.
Flammability (solid, gas):	No data available.
Lower explosive limit:	No data available.
Upper explosive limit:	No data available.
Vapor pressure:	No data available.
Vapor density:	No data available.
Density:	0.9 - 1.1 g/cm3
Solubility:	Partially miscible (20 °C)
Partition coefficient: n-octanol/water:	No data available.
Auto ignition:	No data available.
Decomposition temperature:	No data available.
Viscosity:	No data available.
VOC content: (2010/75/EC)	< 3 %

Section 10. Stability and reactivity

Reactivity/Incompatible materials:
Reaction with strong oxidants.
Reacts with acids.
Will cause some corrosion to copper alloys and aluminum.
Reaction with some curing agents may produce an exothermic reaction which in large masses could cause runaway polymerization.

Chemical stability:
Stable under recommended storage conditions.

Conditions to avoid:
Excessive heat.
Danger of decomposition if exposed to heat.
Avoid mixing resin (Part A) and curing agent (Part B) unless you plan to use immediately. Failure to observe these precautions may result in excessive heat build-up causing an exotherm.

Hazardous decomposition products:
Hydrocarbons
At higher temperature ammonia or amine derivatives may be generated.
At higher temperature carbon oxides and nitrogen oxides may be generated.
May produce fumes when heated to decomposition. Fumes may contain carbon monoxide and other toxic fumes.

Section 11. Toxicological information

Oral toxicity:
Acute toxicity estimate (ATE) : 840.14 mg/kg
Method: Calculation method

Symptoms of Overexposure**:**
Causes burns.
SKIN: Rash, Urticaria.

Acute oral toxicity:

Phenol, 4,4′-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane, reaction products with 3,3′-[oxybis(2,1-ethanediyloxy)] 68585-28-4	Value type	Acute toxicity estimate (ATE)
	Value	500 mg/kg
	Species	
	Method	Expert judgement
3,3'-Oxybis(ethyleneoxy)bis(propylamine) 4246-51-9	Value type	LD50
	Value	3,160 mg/kg
	Species	rat
	Method	OECD Guideline 401 (Acute Oral Toxicity)
Silane, dichlorodimethyl-, reaction products with silica 68611-44-9	Value type	LD50
	Value	> 5,000 mg/kg
	Species	rat
	Method	OECD Guideline 401 (Acute Oral Toxicity)

Acute dermal toxicity:

3,3'-Oxybis(ethyleneoxy)bis(propylamine) 4246-51-9	Value type	Acute toxicity estimate (ATE)
	Value	2,500 mg/kg
	Species	
	Method	Expert judgement
3,3'-Oxybis(ethyleneoxy)bis(propylamine) 4246-51-9	Value type	LD50
	Value	> 2,150 mg/kg
	Species	rat
	Method	equivalent or similar to OECD Guideline 402 (Acute Dermal Toxicity)
Silane, dichlorodimethyl-, reaction products with silica 68611-44-9	Value type	LD50
	Value	> 2,000 mg/kg
	Species	rat
	Method	OECD Guideline 402 (Acute Dermal Toxicity)

Skin corrosion/irritation:

3,3'-Oxybis(ethyleneoxy)bis(propylamine) 4246-51-9	Result	Sub-Category 1B (corrosive)
	Exposure time	
	Species	rabbit
	Method	equivalent or similar to OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Silane, dichlorodimethyl-, reaction products with silica 68611-44-9	Result	not irritating
	Exposure time	4 h
	Species	rabbit
	Method	not specified

Serious eye damage/irritation:

Silane, dichlorodimethyl-, reaction products with silica 68611-44-9	Result	not irritating
	Exposure time	
	Species	rabbit
	Method	not specified

Respiratory or skin sensitization:

Silane, dichlorodimethyl-, reaction products with silica 68611-44-9	Result	not sensitising
	Test type	Patch-Test
	Species	human
	Method	human repeat insult patch test

Germ cell mutagenicity:

3,3'-Oxybis(ethyleneoxy)bis(propylamine) 4246-51-9	Result	negative
	Type of study / Route of administration	in vitro mammalian cell micronucleus test
	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 487 (In vitro Mammalian Cell Micronucleus Test)
3,3'-Oxybis(ethyleneoxy)bis(propylamine) 4246-51-9	Result	negative
	Type of study / Route of administration	mammalian cell gene mutation assay
	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
3,3'-Oxybis(ethyleneoxy)bis(propylamine) 4246-51-9	Result	negative
	Type of study / Route of administration	bacterial reverse mutation assay (e.g Ames test)
	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Silane, dichlorodimethyl-, reaction products with silica 68611-44-9	Result	negative
	Type of study / Route of administration	bacterial reverse mutation assay (e.g Ames test)
	Metabolic activation / Exposure time	with and without
	Method	Ames Test
Silane, dichlorodimethyl-, reaction products with silica 68611-44-9	Result	negative
	Type of study / Route of administration	in vitro mammalian chromosome aberration test
	Metabolic activation / Exposure time	with and without
	Method	Chromosome Aberration Test

Repeated dose toxicity:

3,3'-Oxybis(ethyleneoxy)bis(propylamine) 4246-51-9	Result	NOAEL=< 100 mg/kg
	Route of application	oral: gavage
	Exposure time / Frequency of treatment	59 daysdaily
	Species	rat
	Method	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
Silane, dichlorodimethyl-, reaction products with silica 68611-44-9	Result	NOAEL=500 mg/kg
	Route of application	oral: feed
	Exposure time / Frequency of treatment	5-8 wdaily
	Species	rat
	Method	not specified

Section 12. Ecological information

General ecological information: Do not empty into drains / surface water / ground water.

Ecotoxicity:

Toxicity:

3,3'-Oxybis(ethyleneoxy)bis(propylamine) 4246-51-9	Value type	LC50
	Value	> 215 - 464 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Leuciscus idus
	Method	DIN 38412-15
3,3'-Oxybis(ethyleneoxy)bis(propylamine) 4246-51-9	Value type	EC50
	Value	218 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	EU Method C.2 (Acute Toxicity for Daphnia)
3,3'-Oxybis(ethyleneoxy)bis(propylamine) 4246-51-9	Value type	EC50
	Value	666 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)
	Method	DIN 38412-09
	Value type	NOEC
	Value	15.6 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)
	Method	DIN 38412-09
3,3'-Oxybis(ethyleneoxy)bis(propylamine) 4246-51-9	Value type	EC10
	Value	152.5 mg/l
	Acute Toxicity Study	Bacteria
	Exposure time	17 h
	Species	Pseudomonas putida
	Method	DIN 38412, part 8 (Pseudomonas Zellvermehrungshemm-Test)
Silane, dichlorodimethyl-, reaction products with silica 68611-44-9	Value type	LC50
	Value	> 10,000 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Brachydanio rerio (new name: Danio rerio)
	Method	OECD Guideline 203 (Fish, Acute Toxicity Test)
Silane, dichlorodimethyl-, reaction products with silica 68611-44-9	Value type	EC50
	Value	> 10,000 mg/l
	Acute Toxicity Study	Daphnia

	Exposure time	24 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

Persistence and degradability:

3,3'-Oxybis(ethyleneoxy)bis(propylamine) 4246-51-9	Result	not inherently biodegradable
	Route of application	aerobic
	Degradability	< 20 %
	Method	OECD Guideline 302 B (Inherent biodegradability: Zahn-Wellens/EMPA Test)
	Result	not readily biodegradable.
	Route of application	aerobic
	Degradability	0 %
	Method	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)

Bioaccumulative potential / Mobility in soil:

3,3'-Oxybis(ethyleneoxy)bis(propylamine) 4246-51-9	LogPow	-1.25
	Temperature	25 °C
	Method	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)

Section 13. Disposal considerations

Product

Method of disposal: Dispose of in accordance with local and national regulations.

Packaging

Disposal of uncleaned packages: Packaging that cannot be cleaned are to be disposed of in the same manner as the product.

Section 14. Transport information

Road transport ADR:

Class:	8
Packing group:	II
Classification code:	C7
Hazard ident. number:	80
UN no.:	2735
Label:	8
Technical name:	AMINES, LIQUID, CORROSIVE, N.O.S. (Polyglycol diamine)

Railroad transport RID:

Class:	8
Packing group:	II
Classification code:	C7
Hazard ident. number:	80
UN no.:	2735
Label:	8
Technical name:	AMINES, LIQUID, CORROSIVE, N.O.S. (Polyglycol diamine)

Inland water transport ADN:

Class:	8
Packing group:	II
Classification code:	C7
Hazard ident. number:	80
UN no.:	2735
Label:	8
Technical name:	AMINES, LIQUID, CORROSIVE, N.O.S. (Polyglycol diamine)

Marine transport IMDG:

Class:	8
Packing group:	II
UN no.:	2735
Label:	8
EmS:	F-A ,S-B
Seawater pollutant:	-
Proper shipping name:	AMINES, LIQUID, CORROSIVE, N.O.S. (Polyglycol diamine)

Air transport IATA:

Class:	8
Packing group:	II
Packaging instructions (passenger):	851
Packaging instructions (cargo):	855
UN no.:	2735
Label:	8
Proper shipping name:	Amines, liquid, corrosive, n.o.s. (Polyglycol diamine)

Section 15. Regulatory information

Regulatory Information: This Safety Data Sheet has been generated based on

LAW ON CHEMICALS No. 69/2025/QH15, issued on June 14, 2025;

Decree No. 24/2026/NĐ-CP, issued on January 17, 2026, ON THE LISTS OF CHEMICALS GOVERNED BY THE LAW ON CHEMICALS;

Decree No. 25/2026/NĐ-CP, issued on January 17, 2026, DETAILED REGULATIONS AND MEASURES FOR ORGANIZING AND GUIDING THE IMPLEMENTATION OF CERTAIN ARTICLES OF THE LAW ON CHEMICALS CONCERNING THE DEVELOPMENT OF THE CHEMICAL INDUSTRY AND CHEMICAL SAFETY AND SECURITY;

Decree No. 26/2026/NĐ-CP, issued on January 17, 2026, DETAILED REGULATIONS AND GUIDELINES FOR IMPLEMENTING CERTAIN ARTICLES OF THE LAW ON CHEMICALS REGARDING THE MANAGEMENT OF CHEMICAL ACTIVITIES AND HAZARDOUS CHEMICALS IN PRODUCTS AND GOODS;

Circular No. 01/2026/TT-BCT, issued on January 17, 2026, DETAILED REGULATIONS AND GUIDELINES FOR IMPLEMENTING CERTAIN ARTICLES OF THE LAW ON CHEMICALS AND GOVERNMENT DECREE NO. 26/2026/ND-CP DETAILING AND GUIDING THE IMPLEMENTATION OF CERTAIN ARTICLES OF THE LAW ON CHEMICALS REGARDING THE MANAGEMENT OF CHEMICAL ACTIVITIES AND HAZARDOUS CHEMICALS IN PRODUCTS AND GOODS;

Circular No. 02/2026/TT-BCT, issued on January 17, 2026, REGULATIONS ON SOME IMPLEMENTATION MEASURES OF THE LAW ON CHEMICALS AND GOVERNMENT DECREE NO. 25/2026/ND-CP DETAILING AND PROVIDING MEASURES FOR ORGANIZING AND GUIDING THE IMPLEMENTATION OF SOME ARTICLES OF THE LAW ON CHEMICALS CONCERNING THE DEVELOPMENT OF THE CHEMICAL INDUSTRY AND CHEMICAL SAFETY AND SECURITY;

Decree No. 161/2024/ND-CP, issued on December 18, 2024, ON LIST OF DANGEROUS

GOODS, TRANSPORT OF DANGEROUS GOODS AND PROCEDURES FOR ISSUANCE OF LICENSES OR CERTIFICATES OF COMPLETION OF TRAINING PROGRAMS FOR DRIVERS OR ESCORTS TRANSPORTING DANGEROUS GOODS BY ROAD;

Decree No. 34/2024/NĐ-CP, issued on March 31, 2024, ON LIST OF DANGEROUS GOODS, TRANSPORT OF DANGEROUS GOODS BY INLAND WATERCRAFT;

Decree No. 33/2024/NĐ-CP, issued on March 27, 2024, IMPLEMENTING THE CONVENTION ON THE PROHIBITION OF THE DEVELOPMENT, PRODUCTION, STOCKPILING AND USE OF CHEMICAL WEAPONS AND ON THEIR;

Decree No. 37/2026/NĐ-CP, issued on January 23, 2026, ELABORATING CERTAIN ARTICLES AND MEASURES FOR ORGANIZING AND GUIDING THE IMPLEMENTATION OF THE LAW ON PRODUCT AND GOODS QUALITY.

If other regulatory information applies that is not already provided or updated elsewhere in this Safety Data Sheet, then it is described in this subsection.

Global inventory status:

Regulatory list	Notification
TCSI	yes
TSCA	yes
DSL	yes
IECSC	yes

Section 16. Other information

Disclaimer:

This Safety Data Sheet has been generated based on Law On Chemicals No. 69/2025/QH15; Decree No. 24/2026/NĐ-CP; Decree No. 25/2026/NĐ-CP; Decree No. 26/2026/NĐ-CP; Circular No. 01/2026/TT-BCT; Circular No. 02/2026/TT-BCT; Decree No. 161/2024/ND-CP; Decree No. 34/2024/NĐ-CP; Decree No. 33/2024/NĐ-CP, and Decree No. 37/2026/NĐ-CP.
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This information is based on our current level of knowledge and relates to the product in the state in which it is delivered. It is intended to describe our products from the point of view of safety requirements and is not intended to guarantee any particular properties.
Dear Customer,
Henkel is committed to creating a sustainable future by promoting opportunities along the entire value chain. If you would like to contribute by switching from a paper to the electronic version of SDS, please contact the local Customer Service representative. We recommend to use a non-personal email address (e.g. SDS@your_company.com).