



Safety Data Sheet according to Regulation (EC) No 1907/2006

Page 1 of 13

Loctite Extreme Epoxy

SDS No. : 659485
V001.0

Revision: 12.04.2019
printing date: 02.09.2019
Replaces version from: -

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Loctite Epoxy Liq 1 Min Comp A

1.2. Relevant identified uses of the substance or mixture and uses advised against

Intended use:

2-Component epoxy adhesive
ua-productsafety.uk@henkel.com

1.4. Emergency telephone number

24 Hours Emergency Tel: +44 0 8701 906777 - For further general health & safety, technical and practical advice on this product, please call +44 (0) 1606 593933 or write to: Technical Services; Henkel Limited; Road 5; Winsford Industrial Estate; Winsford; Cheshire; CW7 3QY- Email: technical.services@henkel.co.uk

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (CLP):

Skin irritation	Category 2
H315 Causes skin irritation.	
Skin sensitizer	Category 1
H317 May cause an allergic skin reaction.	
Serious eye irritation	Category 2
H319 Causes serious eye irritation.	
Chronic hazards to the aquatic environment	Category 2
H411 Toxic to aquatic life with long lasting effects.	

2.2. Label elements

Label elements (CLP):

Hazard pictogram:



Contains

reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight \leq 700)

Signal word:

Warning

Hazard statement:	H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H411 Toxic to aquatic life with long lasting effects.
Precautionary statement:	P101 If medical advice is needed, have product container or label at hand. P102 Keep out of reach of children.
Precautionary statement: Prevention	P280 Wear protective gloves/eye protection.
Precautionary statement: Disposal	P501 Dispose of contents/container in accordance with national regulation.

2.3. Other hazards

Persons suffering from allergic reactions to epoxides should avoid contact with the product.
Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General chemical description:

Reaction resin

Base substances of preparation:

Epoxy resin

Declaration of the ingredients according to CLP (EC) No 1272/2008:

Hazardous components CAS-No.	EC Number REACH-Reg No.	content	Classification
reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight≤700) 25068-38-6	01-2119456619-26	80- < 100 %	Skin Irrit. 2 H315 Skin Sens. 1 H317 Eye Irrit. 2 H319 Aquatic Chronic 2 H411

For full text of the H - statements and other abbreviations see section 16 "Other information".

Substances without classification may have community workplace exposure limits available.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information:

In case of adverse health effects seek medical advice.

Inhalation:

Move to fresh air, consult doctor if complaint persists.

Skin contact:

Rinse with running water and soap. Apply replenishing cream. Change all contaminated clothing. If necessary, see a dermatologist.

Eye contact:

Immediately flush eyes with soft jet of water or eye rinse solution for at least 5 minutes. If pains remain (intensive smarting, sensitivity to light, visual disturbance) continue flushing and contact/seek doctor or hospital.

Ingestion:
Rinse mouth and throat. Drink 1-2 glasses of water. Seek medical advice.

4.2. Most important symptoms and effects, both acute and delayed

SKIN: Redness, inflammation.

Causes serious eye irritation.

May cause an allergic skin reaction.

4.3. Indication of any immediate medical attention and special treatment needed

See section: Description of first aid measures

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

carbon dioxide, foam, powder, water spray jet, fine water spray

Extinguishing media which must not be used for safety reasons:

High pressure waterjet

5.2. Special hazards arising from the substance or mixture

In the event of a fire, carbon monoxide (CO) and carbon dioxide (CO₂) can be released.

5.3. Advice for firefighters

Wear self-contained breathing apparatus.

Wear protective equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear protective equipment.

Danger of slipping on spilled product.

Avoid contact with skin and eyes.

6.2. Environmental precautions

Do not empty into drains / surface water / ground water.

6.3. Methods and material for containment and cleaning up

Remove with liquid-absorbing material (sand, peat, sawdust).

Dispose of contaminated material as waste according to Section 13.

6.4. Reference to other sections

See advice in section 8

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid skin and eye contact.

Hygiene measures:

Do not eat, drink or smoke while working.

Wash hands before work breaks and after finishing work.

7.2. Conditions for safe storage, including any incompatibilities

Store in sealed original container.

Store frost-free.

Temperatures between + 5 °C and + 30 °C

Store protected from heat influence.

Keep only in original container.

Do not store together with food or other consumables (coffee, tea, tobacco, etc.).

7.3. Specific end use(s)
2-Component epoxy adhesive

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure Limits

Valid for
Great Britain

None

Occupational Exposure Limits

Valid for
Ireland

None

Predicted No-Effect Concentration (PNEC):

Name on list	Environmental Compartment	Exposure period	Value				Remarks
			mg/l	ppm	mg/kg	others	
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	aqua (freshwater)		0,006 mg/l				
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	aqua (marine water)		0,001 mg/l				
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	sewage treatment plant (STP)		10 mg/l				
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	sediment (freshwater)				0,996 mg/kg		
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	sediment (marine water)				0,1 mg/kg		
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	Soil				0,196 mg/kg		
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	oral				11 mg/kg		
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	aqua (intermittent releases)		0,018 mg/l				

Derived No-Effect Level (DNEL):

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	Workers	dermal	Acute/short term exposure - systemic effects		8,33 mg/kg	
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	Workers	Inhalation	Acute/short term exposure - systemic effects		12,25 mg/m3	
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	Workers	dermal	Long term exposure - systemic effects		8,33 mg/kg	
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	Workers	Inhalation	Long term exposure - systemic effects		12,25 mg/m3	
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	General population	dermal	Acute/short term exposure - systemic effects		3,571 mg/kg	
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	General population	dermal	Long term exposure - systemic effects		3,571 mg/kg	
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	General population	oral	Acute/short term exposure - systemic effects		0,75 mg/kg	
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	General population	oral	Long term exposure - systemic effects		0,75 mg/kg	
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	General population	inhalation	Acute/short term exposure - systemic effects		0,75 mg/m3	
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	General population	inhalation	Long term exposure - systemic effects		0,75 mg/m3	

Biological Exposure Indices:

None

8.2. Exposure controls:Respiratory protection:
Not needed.

Hand protection:

In the case of longer contact protective gloves made from nitrile rubber are recommended according to EN 374. material thickness > 0.1 mm
Perforation time > 480 minutes

In the case of longer and repeated contact please note that in practice the penetration times may be considerably shorter than those determined according to EN 374. The protective gloves must always be checked for their suitability for use at the specific workplace (e.g. mechanical and thermal stress, product compatibility, antistatic effects, etc.). The gloves must be replaced immediately at the first signs of wear and tear. The information provided by the manufacturers and given in the relevant trade association regulations for industrial safety must always be observed. We recommend that a hand care plan is drawn up in cooperation with a glove manufacturer and the trade association in accordance with the local operating conditions.

Eye protection:

Goggles which can be tightly sealed.
Protective eye equipment should conform to EN166.

Skin protection:
 Suitable protective clothing
 Protective clothing should conform to EN 14605 for liquid splashes or to EN 13982 for dusts.

Advices to personal protection equipment:
 The information provided on personal protective equipment is for guidance purposes only. A full risk assessment should be conducted prior to using this product to determine the appropriate personal protective equipment to suit local conditions. Personal protective equipment should conform to the relevant EN standard.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	liquid high viscosity transparent
Odor	typical
Odour threshold	No data available / Not applicable
pH	Not available.
Melting point	No data available / Not applicable
Solidification temperature	No data available / Not applicable
Initial boiling point	No data available / Not applicable
Flash point	Not available.
Evaporation rate	No data available / Not applicable
Flammability	No data available / Not applicable
Explosive limits	No data available / Not applicable
Vapour pressure	No data available / Not applicable
Relative vapour density:	No data available / Not applicable
Density (23 °C (73.4 °F))	1,1 - 1,2 g/cm3
Bulk density	No data available / Not applicable
Solubility	No data available / Not applicable
Solubility (qualitative) (20 °C (68 °F); Solvent: Water)	Insoluble
Partition coefficient: n-octanol/water	No data available / Not applicable
Auto-ignition temperature	No data available / Not applicable
Decomposition temperature	No data available / Not applicable
Viscosity (Brookfield; 23 °C (73.4 °F))	14.000 - 24.000 mPa.s
Viscosity (kinematic)	No data available / Not applicable
Explosive properties	No data available / Not applicable
Oxidising properties	No data available / Not applicable

9.2. Other information

No data available / Not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity

None if used for intended purpose.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

See section reactivity

10.4. Conditions to avoid

None if used for intended purpose.

10.5. Incompatible materials

None if used properly.

10.6. Hazardous decomposition products

None known.

SECTION 11: Toxicological information**General toxicological information:**

Persons suffering from allergic reactions to epoxides should avoid contact with the product.
Cross-reactions with other epoxide compounds possible.

11.1. Information on toxicological effects**Acute oral toxicity:**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Species	Method
reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight \leq 700) 25068-38-6	LD50	> 2.000 mg/kg	rat	OECD Guideline 420 (Acute Oral Toxicity)

Acute dermal toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Species	Method
reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight \leq 700) 25068-38-6	LD50	> 2.000 mg/kg	rat	OECD Guideline 402 (Acute Dermal Toxicity)

Acute inhalative toxicity:

No data available.

Skin corrosion/irritation:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Exposure time	Species	Method
reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight \leq 700) 25068-38-6	moderately irritating	24 h	rabbit	Draize Test

Serious eye damage/irritation:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Exposure time	Species	Method
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight \leq 700) 25068-38-6	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)

Respiratory or skin sensitization:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Test type	Species	Method
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight \leq 700) 25068-38-6	sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)

Germ cell mutagenicity:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight \leq 700) 25068-38-6	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 472 (Genetic Toxicology: Escherichia coli, Reverse Mutation Assay)
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight \leq 700) 25068-38-6	negative	oral: gavage		mouse	not specified

Carcinogenicity

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Sex	Method
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight \leq 700) 25068-38-6	not carcinogenic	dermal	2 y daily	mouse	male	OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight \leq 700) 25068-38-6	not carcinogenic	oral: gavage	2 y daily	rat	male/female	OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)

Reproductive toxicity:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result / Value	Test type	Route of application	Species	Method
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight≤700) 25068-38-6	NOAEL P >= 50 mg/kg NOAEL F1 >= 750 mg/kg NOAEL F2 >= 750 mg/kg	Two generation study	oral: gavage	rat	OECD Guideline 416 (Two-Generation Reproduction Toxicity Study)

STOT-single exposure:

No data available.

STOT-repeated exposure::

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result / Value	Route of application	Exposure time / Frequency of treatment	Species	Method
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight≤700) 25068-38-6	NOAEL 50 mg/kg	oral: gavage	14 w daily	rat	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)

Aspiration hazard:

No data available.

SECTION 12: Ecological information

General ecological information:

Do not empty into drains, soil or bodies of water.

12.1. Toxicity

Toxicity (Fish):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight \leq 700) 25068-38-6	LC50	1,75 mg/l	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)

Toxicity (Daphnia):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight \leq 700) 25068-38-6	EC50	1,7 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

Chronic toxicity to aquatic invertebrates

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight \leq 700) 25068-38-6	NOEC	0,3 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)

Toxicity (Algae):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight≤700) 25068-38-6	EC50	> 11 mg/l	72 h	Scenedesmus capricornutum	OECD Guideline 201 (Alga, Growth Inhibition Test)
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight≤700) 25068-38-6	NOEC	4,2 mg/l	72 h	Scenedesmus capricornutum	OECD Guideline 201 (Alga, Growth Inhibition Test)

Toxicity to microorganisms

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight≤700) 25068-38-6	IC50	> 100 mg/l	3 h	activated sludge, industrial	other guideline:

12.2. Persistence and degradability

Hazardous substances CAS-No.	Result	Test type	Degradability	Exposure time	Method
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight≤700) 25068-38-6	not readily biodegradable.	aerobic	5 %	28 d	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)

12.3. Bioaccumulative potential

No data available.

12.4. Mobility in soil

Hazardous substances CAS-No.	LogPow	Temperature	Method
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight≤700) 25068-38-6	3,242	25 °C	EU Method A.8 (Partition Coefficient)

12.5. Results of PBT and vPvB assessment

Hazardous substances CAS-No.	PBT / vPvB
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight≤700) 25068-38-6	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

12.6. Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product disposal:
Dispose of waste and residues in accordance with local authority requirements.

Disposal of uncleaned packages:
Use packages for recycling only when totally empty.

Waste code
080409

SECTION 14: Transport information

14.1. UN number

ADR	3082
RID	3082
ADN	3082
IMDG	3082
IATA	3082

14.2. UN proper shipping name

ADR	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bisphenol-A Epichlorhydrin resin)
RID	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bisphenol-A Epichlorhydrin resin)
ADN	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bisphenol-A Epichlorhydrin resin)
IMDG	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bisphenol-A Epichlorhydrin resin)
IATA	Environmentally hazardous substance, liquid, n.o.s. (Bisphenol-A Epichlorhydrin resin)

14.3. Transport hazard class(es)

ADR	9
RID	9
ADN	9
IMDG	9
IATA	9

14.4. Packing group

ADR	III
RID	III
ADN	III
IMDG	III
IATA	III

14.5. Environmental hazards

ADR	not applicable
RID	not applicable
ADN	not applicable
IMDG	Marine pollutant
IATA	not applicable

14.6. Special precautions for user

ADR	not applicable
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	Tunnelcode:
RID	not applicable
ADN	not applicable
IMDG	not applicable
IATA	not applicable

The transport classifications in this section apply generally to packed and bulk goods alike. For containers with a net volume of no more than 5 L for liquid substances or a net mass of no more than 5 kg for solid substances per individual or inner package, the exemptions SP 375 (ADR), 197 (IATA), 969 (IMDG) may be applied, which can result in a deviation from the transport classification for packed goods.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

VOC content 0 %
(VOCV 814.018 VOC regulation
CH)

15.2. Chemical safety assessment

A chemical safety assessment has not been carried out.

SECTION 16: Other information

The labelling of the product is indicated in Section 2. The full text of all abbreviations indicated by codes in this safety data sheet are as follows:

- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H411 Toxic to aquatic life with long lasting effects.

Further information:

This Safety Data Sheet has been produced for sales from Henkel to parties purchasing from Henkel, is based on Regulation (EC) No 1907/2006 and provides information in accordance with applicable regulations of the European Union only. In that respect, no statement, warranty or representation of any kind is given as to compliance with any statutory laws or regulations of any other jurisdiction or territory other than the European Union. When exporting to territories other than the European Union, please consult with the respective Safety Data Sheet of the concerned territory to ensure compliance or liaise with Henkel's Product Safety and Regulatory Affairs Department (ua-productsafety.de@henkel.com) prior to export to other territories than the European Union.

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.

Relevant changes in this safety data sheet are indicated by vertical lines at the left margin in the body of this document. Corresponding text is displayed in a different color on shadowed fields.



Safety Data Sheet according to Regulation (EC) No 1907/2006

Page 1 of 14

Loctite Extreme Epoxy

SDS No. : 659481
V001.0

Revision: 12.04.2019
printing date: 02.09.2019
Replaces version from: -

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Loctite Epoxy Liq 1 Min Comp B

1.2. Relevant identified uses of the substance or mixture and uses advised against

Intended use:
Part B of 2-Component Epoxy Adhesive.
ua-productsafety.uk@henkel.com

1.4. Emergency telephone number

24 Hours Emergency Tel: +44 0 8701 906777 - For further general health & safety, technical and practical advice on this product, please call +44 (0) 1606 593933 or write to: Technical Services; Henkel Limited; Road 5; Winsford Industrial Estate; Winsford; Cheshire; CW7 3QY- Email: technical.services@henkel.co.uk

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (CLP):

Skin irritation H315 Causes skin irritation.	Category 2
Skin sensitizer H317 May cause an allergic skin reaction.	Category 1B
Serious eye damage H318 Causes serious eye damage.	Category 1
Chronic hazards to the aquatic environment H412 Harmful to aquatic life with long lasting effects.	Category 3

2.2. Label elements

Label elements (CLP):

Hazard pictogram:



Contains

Pentaerythritol-PO-mercaptopglycerol
1,3-bis[3-(dimethylamino)propyl]urea

Signal word:

Danger

Hazard statement:	H315 Causes skin irritation. H317 May cause an allergic skin reaction. H318 Causes serious eye damage. H412 Harmful to aquatic life with long lasting effects.
Precautionary statement:	P102 Keep out of reach of children. P101 If medical advice is needed, have product container or label at hand.
Precautionary statement: Prevention	P280 Wear protective gloves/eye protection.
Precautionary statement: Response	P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Precautionary statement: Disposal	P501 Dispose of contents/container in accordance with national regulation.

2.3. Other hazards

None if used properly.

Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

SECTION 3: Composition/information on ingredients**3.2. Mixtures****General chemical description:**

Hardener

Base substances of preparation:

Polymercaptan

Declaration of the ingredients according to CLP (EC) No 1272/2008:

Hazardous components CAS-No.	EC Number REACH-Reg No.	content	Classification
Pentaerythritol-PO-mercaptoglycerol 72244-98-5	701-196-7 01-2120118957-46	80- < 100 %	Skin Sens. 1B H317 Aquatic Chronic 3 H412
1,3-bis[3-(dimethylamino)propyl]urea 52338-87-1	257-861-2	5- < 10 %	Eye Dam. 1 H318
1,8-Diazabicyclo[5.4.0]undec-7-ene 6674-22-2	229-713-7 01-2119977097-24	1- < 3 %	Acute Tox. 3; Oral H301 Skin Corr. 1B H314

For full text of the H - statements and other abbreviations see section 16 "Other information".**Substances without classification may have community workplace exposure limits available.****SECTION 4: First aid measures****4.1. Description of first aid measures****General information:**

In case of adverse health effects seek medical advice.

Inhalation:

Move to fresh air, consult doctor if complaint persists.

Skin contact:

Rinse with running water and soap. Skin care. Remove contaminated clothes immediately.

Eye contact:

Immediately flush eyes with soft jet of water or eye rinse solution for at least 5 minutes. If pains remain (intensive smarting, sensitivity to light, visual disturbance) continue flushing and contact/seek doctor or hospital.

Ingestion:

Rinse mouth and throat. Drink 1-2 glasses of water. Seek medical advice.

4.2. Most important symptoms and effects, both acute and delayed

SKIN: Redness, inflammation.

After eye contact: Corrosive, may cause permanent damage to eyes (impairment of vision).

May cause an allergic skin reaction.

4.3. Indication of any immediate medical attention and special treatment needed

See section: Description of first aid measures

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media:**

carbon dioxide, foam, powder, water spray jet, fine water spray

Extinguishing media which must not be used for safety reasons:

High pressure waterjet

5.2. Special hazards arising from the substance or mixture

In the event of a fire, carbon monoxide (CO) and carbon dioxide (CO₂) can be released.

5.3. Advice for firefighters

Wear self-contained breathing apparatus.

Wear protective equipment.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Wear protective equipment.

Danger of slipping on spilled product.

Ensure adequate ventilation.

Avoid contact with skin and eyes.

6.2. Environmental precautions

Do not empty into drains / surface water / ground water.

6.3. Methods and material for containment and cleaning up

Remove with liquid-absorbing material (sand, peat, sawdust).

Dispose of contaminated material as waste according to Section 13.

6.4. Reference to other sections

See advice in section 8

SECTION 7: Handling and storage**7.1. Precautions for safe handling**

Ensure that workrooms are adequately ventilated.

Avoid skin and eye contact.

Hygiene measures:

Wash hands before work breaks and after finishing work.

Do not eat, drink or smoke while working.

7.2. Conditions for safe storage, including any incompatibilities

Keep container tightly sealed.

Temperatures between + 10 °C and + 25 °C

Store at room temperature.

Do not store together with food or other consumables (coffee, tea, tobacco, etc.).

7.3. Specific end use(s)

Part B of 2-Component Epoxy Adhesive.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Occupational Exposure Limits**

Valid for
Great Britain

None

Occupational Exposure Limits

Valid for
Ireland

None

Predicted No-Effect Concentration (PNEC):

Name on list	Environmental Compartment	Exposure period	Value				Remarks
			mg/l	ppm	mg/kg	others	
Poly[oxy(methyl-1,2-ethanediyl)], a-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptop 72244-98-5	aqua (freshwater)		0,07 mg/l				
Poly[oxy(methyl-1,2-ethanediyl)], a-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptop 72244-98-5	aqua (intermittent releases)		0,12 mg/l				
Poly[oxy(methyl-1,2-ethanediyl)], a-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptop 72244-98-5	aqua (marine water)		0,007 mg/l				
Poly[oxy(methyl-1,2-ethanediyl)], a-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptop 72244-98-5	sediment (freshwater)				322 mg/kg		
Poly[oxy(methyl-1,2-ethanediyl)], a-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptop 72244-98-5	sediment (marine water)				32 mg/kg		
Poly[oxy(methyl-1,2-ethanediyl)], a-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptop 72244-98-5	sewage treatment plant (STP)		10 mg/l				
1,8-Diazabicyclo[5.4.0]undec-7-ene 6674-22-2	aqua (freshwater)		0,24 mg/l				
1,8-Diazabicyclo[5.4.0]undec-7-ene 6674-22-2	aqua (marine water)		0,024 mg/l				
1,8-Diazabicyclo[5.4.0]undec-7-ene 6674-22-2	aqua (intermittent releases)		0,5 mg/l				
1,8-Diazabicyclo[5.4.0]undec-7-ene 6674-22-2	sewage treatment plant (STP)		13 mg/l				
1,8-Diazabicyclo[5.4.0]undec-7-ene 6674-22-2	sediment (freshwater)				137 mg/kg		
1,8-Diazabicyclo[5.4.0]undec-7-ene 6674-22-2	sediment (marine water)				13,7 mg/kg		
1,8-Diazabicyclo[5.4.0]undec-7-ene 6674-22-2	Soil				27,2 mg/kg		

Derived No-Effect Level (DNEL):

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
Poly[oxy(methyl-1,2-ethanediyl)], a-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptan 72244-98-5	Workers	inhalation	Long term exposure - systemic effects		22 mg/m ³	
Poly[oxy(methyl-1,2-ethanediyl)], a-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptan 72244-98-5	Workers	dermal	Long term exposure - systemic effects		2,7 mg/kg	
Poly[oxy(methyl-1,2-ethanediyl)], a-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptan 72244-98-5	General population	inhalation	Long term exposure - systemic effects		6,52 mg/m ³	
Poly[oxy(methyl-1,2-ethanediyl)], a-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptan 72244-98-5	General population	dermal	Long term exposure - systemic effects		1,61 mg/kg	
Poly[oxy(methyl-1,2-ethanediyl)], a-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptan 72244-98-5	General population	oral	Long term exposure - systemic effects		1,9 mg/kg	
1,8-Diazabicyclo[5.4.0]undec-7-ene 6674-22-2	Workers	inhalation	Long term exposure - systemic effects		10,6 mg/m ³	
1,8-Diazabicyclo[5.4.0]undec-7-ene 6674-22-2	Workers	dermal	Long term exposure - systemic effects		3 mg/kg	
1,8-Diazabicyclo[5.4.0]undec-7-ene 6674-22-2	General population	inhalation	Long term exposure - systemic effects		2,6 mg/m ³	
1,8-Diazabicyclo[5.4.0]undec-7-ene 6674-22-2	General population	dermal	Long term exposure - systemic effects		1,5 mg/kg	
1,8-Diazabicyclo[5.4.0]undec-7-ene 6674-22-2	General population	oral	Long term exposure - systemic effects		1,5 mg/kg	

Biological Exposure Indices:

None

8.2. Exposure controls:

Respiratory protection:

Not needed.

Hand protection:

In the case of longer contact protective gloves made from nitrile rubber are recommended according to EN 374.

material thickness > 0.1 mm

Perforation time > 480 minutes

In the case of longer and repeated contact please note that in practice the penetration times may be considerably shorter than those determined according to EN 374. The protective gloves must always be checked for their suitability for use at the specific workplace (e.g. mechanical and thermal stress, product compatibility, antistatic effects, etc.). The gloves must be replaced immediately at the first signs of wear and tear. The information provided by the manufacturers and given in the relevant trade association regulations for industrial safety must always be observed. We recommend that a hand care plan is drawn up in cooperation with a glove manufacturer and the trade association in accordance with the local operating conditions.

Eye protection:

Goggles which can be tightly sealed.

Protective eye equipment should conform to EN166.

Skin protection:

Suitable protective clothing

Protective clothing should conform to EN 14605 for liquid splashes or to EN 13982 for dusts.

Advices to personal protection equipment:

The information provided on personal protective equipment is for guidance purposes only. A full risk assessment should be conducted prior to using this product to determine the appropriate personal protective equipment to suit local conditions.

Personal protective equipment should conform to the relevant EN standard.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	liquid high viscosity transparent
Odor	typical
Odour threshold	No data available / Not applicable
pH	No data available / Not applicable
Melting point	No data available / Not applicable
Solidification temperature	No data available / Not applicable
Initial boiling point	No data available / Not applicable
Flash point	Not available.
Evaporation rate	No data available / Not applicable
Flammability	No data available / Not applicable
Explosive limits	No data available / Not applicable
Vapour pressure	No data available / Not applicable
Relative vapour density:	No data available / Not applicable
Density (20 °C (68 °F))	1,09 - 1,19 g/cm ³
Bulk density	No data available / Not applicable
Solubility	No data available / Not applicable
Solubility (qualitative) (23 °C (73.4 °F); Solvent: Water)	Insoluble
Partition coefficient: n-octanol/water	No data available / Not applicable
Auto-ignition temperature	No data available / Not applicable
Decomposition temperature	No data available / Not applicable
Viscosity (Brookfield; 23 °C (73.4 °F); speed of rotation: 20 min ⁻¹ ; Spindle No: 6)	15.000 - 20.000 Pa*s
Viscosity (kinematic)	No data available / Not applicable
Explosive properties	No data available / Not applicable
Oxidising properties	No data available / Not applicable

9.2. Other information

No data available / Not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity

None if used for intended purpose.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

See section reactivity

10.4. Conditions to avoid

None if used for intended purpose.

10.5. Incompatible materials

None if used properly.

10.6. Hazardous decomposition products

None known.

SECTION 11: Toxicological information**General toxicological information:**

Persons suffering from allergic reactions to amines should avoid contact with the product.
Cross-reactions with other epoxide compounds possible.

11.1. Information on toxicological effects**Acute oral toxicity:**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Species	Method
Pentaerythritol-PO- mercaptoglycerol 72244-98-5	LD50	2.600 mg/kg	rat	OECD Guideline 401 (Acute Oral Toxicity)
1,3-bis[3- (dimethylamino)propyl]ur ea 52338-87-1	LD50	5.126 mg/kg	rat	not specified
1,8- Diazabicyclo[5.4.0]undec -7-ene 6674-22-2	LD50	251 - 300 mg/kg	rat	not specified

Acute dermal toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Species	Method
Pentaerythritol-PO- mercaptoglycerol 72244-98-5	LD50	> 10.200 mg/kg	rabbit	OECD Guideline 402 (Acute Dermal Toxicity)

Acute inhalative toxicity:

No data available.

Skin corrosion/irritation:

No data available.

Serious eye damage/irritation:

No data available.

Respiratory or skin sensitization:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Test type	Species	Method
Pentaerythritol-PO- mercaptoglycerol 72244-98-5	sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)

Germ cell mutagenicity:

No data available.

Carcinogenicity

No data available.

Reproductive toxicity:

No data available.

STOT-single exposure:

No data available.

STOT-repeated exposure::

No data available.

Aspiration hazard:

No data available.

SECTION 12: Ecological information

General ecological information:

Do not empty into drains, soil or bodies of water.

12.1. Toxicity

Toxicity (Fish):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Pentaerythritol-PO- mercaptoglycerol 72244-98-5	LC50	87 mg/l	96 h	Danio rerio	OECD Guideline 203 (Fish, Acute Toxicity Test)
1,8-Diazabicyclo[5.4.0]undec- 7-ene 6674-22-2	LC50	> 100 - 220 mg/l	96 h	Leuciscus idus	DIN 38412-15

Toxicity (Daphnia):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Pentaerythritol-PO- mercaptoglycerol 72244-98-5	EC50	12 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
1,8-Diazabicyclo[5.4.0]undec- 7-ene 6674-22-2	EC50	50 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

Chronic toxicity to aquatic invertebrates

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Pentaerythritol-PO- mercaptoglycerol 72244-98-5	NOEC	3,5 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
1,8-Diazabicyclo[5.4.0]undec- 7-ene 6674-22-2	NOEC	> 12 mg/l	21 day	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)

Toxicity (Algae):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Pentaerythritol-PO- mercaptoglycerol 72244-98-5	EC50	> 733 mg/l	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)
Pentaerythritol-PO- mercaptoglycerol 72244-98-5	NOEC	338 mg/l	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)
1,8-Diazabicyclo[5.4.0]undec- 7-ene 6674-22-2	EC50	> 100 mg/l	72 h	Desmodesmus subspicatus (reported as Scenedesmus subspicatus)	EU Method C.3 (Algal Inhibition test)
1,8-Diazabicyclo[5.4.0]undec- 7-ene 6674-22-2	NOEC	> 100 mg/l	72 h	Desmodesmus subspicatus (reported as Scenedesmus subspicatus)	EU Method C.3 (Algal Inhibition test)

Toxicity to microorganisms

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Pentaerythritol-PO- mercaptoglycerol 72244-98-5	EC50	> 1.000 mg/l	3 h	activated sludge of a predominantly domestic sewage	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
1,8-Diazabicyclo[5.4.0]undec- 7-ene 6674-22-2	EC 50	330 mg/l	17 h		not specified

12.2. Persistence and degradability

Hazardous substances CAS-No.	Result	Test type	Degradability	Exposure time	Method
Pentaerythritol-PO- mercaptoglycerol 72244-98-5	not readily biodegradable.	aerobic	5 %	28 d	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)
1,3-bis[3- (dimethylamino)propyl]urea 52338-87-1	readily biodegradable	aerobic	> 70 %	28 d	OECD 301 A - F
1,8-Diazabicyclo[5.4.0]undec- 7-ene 6674-22-2	not inherently biodegradable	aerobic	< 20 %	28 day	OECD Guideline 302 B (Inherent biodegradability: Zahn- Wellens/EMPA Test)
1,8-Diazabicyclo[5.4.0]undec- 7-ene 6674-22-2	not readily biodegradable.	aerobic	< 20 %	28 day	OECD Guideline 301 A (new version) (Ready Biodegradability: DOC Die Away Test)

12.3. Bioaccumulative potential

Hazardous substances CAS-No.	Bioconcentratio n factor (BCF)	Exposure time	Temperature	Species	Method
1,8-Diazabicyclo[5.4.0]undec- 7-ene 6674-22-2	< 0,4	42 day		Cyprinus carpio	OECD Guideline 305 C (Bioaccumulation: Test for the Degree of Bioconcentration in Fish)

12.4. Mobility in soil

Hazardous substances CAS-No.	LogPow	Temperature	Method
Pentaerythritol-PO-mercaptoglycerol 72244-98-5	1,2	20 °C	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
1,3-bis[3-(dimethylamino)propyl]urea 52338-87-1	-0,25		EU Method A.8 (Partition Coefficient)

12.5. Results of PBT and vPvB assessment

Hazardous substances CAS-No.	PBT / vPvB
Pentaerythritol-PO-mercaptoglycerol 72244-98-5	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
1,8-Diazabicyclo[5.4.0]undec-7-ene 6674-22-2	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

12.6. Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product disposal:

Dispose of waste and residues in accordance with local authority requirements.

Disposal of uncleaned packages:

Use packages for recycling only when totally empty.

Waste code

080409

SECTION 14: Transport information

14.1. UN number

ADR	Not dangerous goods
RID	Not dangerous goods
ADN	Not dangerous goods
IMDG	Not dangerous goods
IATA	3334

14.2. UN proper shipping name

ADR	Not dangerous goods
RID	Not dangerous goods
ADN	Not dangerous goods
IMDG	Not dangerous goods
IATA	Aviation regulated liquid, n.o.s. (Mercaptan polymer)

14.3. Transport hazard class(es)

ADR	Not dangerous goods
RID	Not dangerous goods
ADN	Not dangerous goods
IMDG	Not dangerous goods
IATA	9

14.4. Packing group

ADR	Not dangerous goods
RID	Not dangerous goods
ADN	Not dangerous goods
IMDG	Not dangerous goods
IATA	III

14.5. Environmental hazards

ADR	not applicable
RID	not applicable
ADN	not applicable
IMDG	not applicable
IATA	not applicable

14.6. Special precautions for user

ADR	not applicable
RID	not applicable
ADN	not applicable
IMDG	not applicable
IATA	No dangerous good according to ADR/RID/ADN. Carriage in accordance with 1.1.4.2.1 ADR/RID/ADN.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

VOC content 0 %
(VOCV 814.018 VOC regulation
CH)

15.2. Chemical safety assessment

A chemical safety assessment has not been carried out.

SECTION 16: Other information

The labelling of the product is indicated in Section 2. The full text of all abbreviations indicated by codes in this safety data sheet are as follows:

- H301 Toxic if swallowed.
- H314 Causes severe skin burns and eye damage.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- H412 Harmful to aquatic life with long lasting effects.

Further information:

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