



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

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LOCTITE EA 9455 DC50ML EN

SDS No. : 178511
V003.0

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Replaces version from: 24.05.2021

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

1.1. Product identifier

LOCTITE EA 9455 DC50ML EN

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

Intended use:
Epoxy adhesive

1.3. Details of the supplier of the safety data sheet

Henkel AG & Co. KGaA
Henkelstr. 67
40589 Düsseldorf

Germany

Phone: +49 211 797 0

SDSinfo.Adhesive@henkel.com

For Safety Data Sheet updates please visit our website <https://mysds.henkel.com/index.html#/appSelection> or www.henkel-adhesives.com.

1.4. Emergency telephone number

The Henkel information service also provides an around-the-clock telephone service on phone no.+49-(0)211-797-3350 for exceptional cases.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (CLP):

Skin irritation	Category 2
H315 Causes skin irritation.	
Serious eye irritation	Category 2
H319 Causes serious eye irritation.	
Skin sensitizer	Category 1
H317 May cause an allergic skin reaction.	
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 of hydrogenated Bisphenol A and epichlorohydrin

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

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:	P273 Avoid release to the environment.
Prevention	P280 Wear protective gloves.
Precautionary statement:	P302+P352 IF ON SKIN: Wash with plenty of soap and water.
Response	P333+P313 If skin irritation or rash occurs: Get medical advice/attention. P337+P313 If eye irritation persists: Get medical advice/attention.

2.3. Other hazards

None if used properly.
Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

Following substances are present in a concentration \geq 0,1% and fulfill the criteria for PBT/vPvB, or were identified as endocrine disruptor (ED):

This mixture does not contain any substances in concentration \geq the concentration limit that are assessed to be a PBT, vPvB or ED.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

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

Hazardous components CAS-No. EC Number REACH-Reg No.	Concentration	Classification	Specific Conc. Limits, M-factors and ATEs	Add. Information
Reaction product of hydrogenated Bisphenol A and epichlorohydrin 30583-72-3 500-070-7 01-2119959495-22	50- 100 %	Skin Sens. 1, H317 Aquatic Chronic 3, H412	oral:ATE = 2.500 mg/kg	
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight \leq 700) 25068-38-6	25- 50 %	Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Chronic 2, H411 Eye Irrit. 2, H319	Skin Irrit. 2; H315; C \geq 5 % Eye Irrit. 2; H319; C \geq 5 %	
Neopentyl glycol diglycidyl ether 17557-23-2 241-536-7	1- < 5 %	Skin Irrit. 2, H315 Skin Sens. 1, H317		

**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

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.

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

SKIN: Rash, Urticaria.

SKIN: Redness, inflammation.

EYE: Irritation, conjunctivitis.

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:**

water, carbon dioxide, foam, powder

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), carbon dioxide (CO₂) and nitrogen oxides (NO_x) can be released.

5.3. Advice for firefighters

Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.

Additional information:

In case of fire, keep containers cool with water spray.

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

Avoid contact with skin and eyes.

Wear protective equipment.

Ensure adequate ventilation.

6.2. Environmental precautions

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

6.3. Methods and material for containment and cleaning up

Dispose of contaminated material as waste according to Section 13.

For small spills wipe up with paper towel and place in container for disposal.

For large spills absorb onto inert absorbent material and place in sealed container for disposal.

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.
See advice in section 8

Hygiene measures:

Good industrial hygiene practices should be observed.
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

Ensure good ventilation/extraction.
Store in a cool, well-ventilated place.
Refer to Technical Data Sheet

7.3. Specific end use(s)

Epoxy adhesive

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

Valid for
Germany

None

Biological Exposure Indices:

None

8.2. Exposure controls:

Engineering controls:
Ensure good ventilation/extraction.

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; \geq 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; \geq 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.

Skin protection:

Wear 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

Physical state	liquid
Delivery form	liquid
Colour	colourless
Odor	odourless
Melting point	Not applicable, Product is a liquid
Solidification temperature	< 10 °C (< 50 °F)
Initial boiling point	> 148 °C (> 298.4 °F)
Flammability	Not applicable Non flammable product (flash point is greater than 93°C)
Explosive limits	Not applicable, The product is not flammable.
Flash point	> 93 °C (> 199.4 °F)
Auto-ignition temperature	Not applicable, The product is not flammable.
Decomposition temperature	> 150 °C (> 302 °F);
pH	Not applicable, Product is non-soluble (in water).
Viscosity (kinematic) (25 °C (77 °F);)	1.100 mm ² /s
Solubility (qualitative) (Conc.: 20 ; Solvent: Water)	Insoluble
Partition coefficient: n-octanol/water	Not applicable Mixture
Vapour pressure (50 °C (122 °F))	< 700 mbar;no method
Density ()	1,15 g/cm ³ None
Relative vapour density: (20 °C)	> 1
Particle characteristics	Not applicable Product is a liquid

9.2. Other information

Other information not applicable for this product

SECTION 10: Stability and reactivity
10.1. Reactivity

Reacts with strong oxidants.

Reaction with strong acids.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

See section reactivity

10.4. Conditions to avoid

Stable under normal conditions of storage and use.

10.5. Incompatible materials

See section reactivity.

10.6. Hazardous decomposition products

carbon oxides.

SECTION 11: Toxicological information**1.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008****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 of hydrogenated Bisphenol A and epichlorohydrin 30583-72-3	LD50	> 5.300 mg/kg	rat	not specified
Reaction product of hydrogenated Bisphenol A and epichlorohydrin 30583-72-3	Acute toxicity estimate (ATE)	2.500 mg/kg		Expert judgement
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight≤700) 25068-38-6	LD50	> 2.000 mg/kg	rat	OECD Guideline 420 (Acute Oral Toxicity)
Neopentyl glycol diglycidyl ether 17557-23-2	LD50	4.500 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
Reaction product of hydrogenated Bisphenol A and epichlorohydrin 30583-72-3	LD50	> 2.000 mg/kg	rat	OECD Guideline 402 (Acute Dermal Toxicity)
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight≤700) 25068-38-6	LD50	> 2.000 mg/kg	rat	OECD Guideline 402 (Acute Dermal Toxicity)
Neopentyl glycol diglycidyl ether 17557-23-2	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≤700) 25068-38-6	not irritating	4 h	rabbit	not specified

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≤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≤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≤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)

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≤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≤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 \leq 700) 25068-38-6	NOAEL P \geq 50 mg/kg NOAEL F1 \geq 750 mg/kg NOAEL F2 \geq 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 \leq 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.

11.2 Information on other hazards

not applicable

SECTION 12: Ecological information

General ecological information:

Do not empty into drains / surface water / ground 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 of hydrogenated Bisphenol A and epichlorohydrin 30583-72-3	LC50	11,5 mg/l	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
reaction product: bisphenol-A-(epichlorohydrin); epoxy resin (number average molecular weight≤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 of hydrogenated Bisphenol A and epichlorohydrin 30583-72-3	EC50	18,3 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
reaction product: bisphenol-A-(epichlorohydrin); epoxy resin (number average molecular weight≤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-(epichlorohydrin); epoxy resin (number average molecular weight≤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 of hydrogenated Bisphenol A and epichlorohydrin 30583-72-3	EC50	> 100 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Reaction product of hydrogenated Bisphenol A and epichlorohydrin 30583-72-3	NOEC	> 100 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
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 of hydrogenated Bisphenol A and epichlorohydrin 30583-72-3	not readily biodegradable.	aerobic	0,1 %	28 d	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
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 substance data available.
No data available.

12.4. Mobility in soil

Hazardous substances CAS-No.	LogPow	Temperature	Method
Reaction product of hydrogenated Bisphenol A and epichlorohydrin 30583-72-3	3,84	20 °C	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
reaction product: bisphenol-A-(epichlorohydrin); 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 of hydrogenated Bisphenol A and epichlorohydrin 30583-72-3	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
reaction product: bisphenol-A-(epichlorohydrin); 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. Endocrine disrupting properties

not applicable

12.7. Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product disposal:

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

Dispose of in accordance with local and national regulations.

Disposal of uncleaned packages:

After use, tubes, cartons and bottles containing residual product should be disposed of as chemically contaminated waste in an authorised legal land fill site or incinerated.

Waste code

08 04 09* waste adhesives and sealants containing organic solvents and other dangerous substances

The valid EWC waste code numbers are source-related. The manufacturer is therefore unable to specify EWC waste codes for the articles or products used in the various sectors. The EWC codes listed are intended as a recommendation for users. We will be happy to advise you.

SECTION 14: Transport information
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14.1. UN number or ID 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 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), A197 (IATA), 2.10.2.7 (IMDG) may be applied, which can result in a deviation from the transport classification for packed goods.

14.7. Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

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

Ozone Depleting Substance (ODS) (Regulation (EC) No 1005/2009):	Not applicable
Prior Informed Consent (PIC) (Regulation (EU) No 649/2012):	Not applicable
Persistent organic pollutants (Regulation (EU) 2019/1021):	Not applicable
VOC content (2010/75/EC)	< 3,00 %

15.2. Chemical safety assessment

A chemical safety assessment has not been carried out.

National regulations/information (Germany):

WGK: WGK 2: significantly water endangering (Ordinance on facilities for handling substances that are hazardous to water (AwSV))
Classification according to AwSV, Annex 1 (5.2)

Storage class according to TRGS 510: 10

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.
H412 Harmful to aquatic life with long lasting effects.

ED:	Substance identified as having endocrine disrupting properties
EU OEL:	Substance with a Union workplace exposure limit
EU EXPLD 1:	Substance listed in Annex I, Reg (EC) No. 2019/1148
EU EXPLD 2	Substance listed in Annex II, Reg (EC) No. 2019/1148
SVHC:	Substance of very high concern (REACH Candidate List)
PBT:	Substance fulfilling persistent, bioaccumulative and toxic criteria
PBT/vPvB:	Substance fulfilling persistent, bioaccumulative and toxic plus very persistent and very bioaccumulative criteria
vPvB:	Substance fulfilling very persistent and very bioaccumulative criteria

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 (SDSinfo.Adhesive@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.

Dear Customer,

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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.



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SDS No. : 152804
V003.0

Revision: 07.11.2022
printing date: 23.12.2022

Replaces version from: 02.11.2022

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

1.1. Product identifier

LOCTITE EA 9455 DC50ML EN

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

Intended use:
Epoxy Hardener

1.3. Details of the supplier of the safety data sheet

Henkel AG & Co. KGaA
Henkelstr. 67
40589 Düsseldorf

Germany

Phone: +49 211 797 0

SDSinfo.Adhesive@henkel.com

For Safety Data Sheet updates please visit our website <https://mysds.henkel.com/index.html#/appSelection> or www.henkel-adhesives.com.

1.4. Emergency telephone number

The Henkel information service also provides an around-the-clock telephone service on phone no.+49-(0)211-797-3350 for exceptional cases.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (CLP):

Acute toxicity	Category 4
H332 Harmful if inhaled. Route of Exposure: Inhalation	
Skin corrosion	Sub-category 1B
H314 Causes severe skin burns and eye damage. Serious eye damage	Category 1
H318 Causes serious eye damage.	
Skin sensitizer	Category 1
H317 May cause an allergic skin reaction. Chronic hazards to the aquatic environment	Category 3
H412 Harmful to aquatic life with long lasting effects.	

2.2. Label elements

Label elements (CLP):

Hazard pictogram:**Contains**

Pentaerythritol-PO-mercaptoglycerol

Benzyltrimethylamine

2-aminoethanol

Signal word:

Danger

Hazard statement:

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H332 Harmful if inhaled.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statement:

P261 Avoid breathing vapors.

Prevention

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statement:**Response**

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing.

Rinse skin with water [or shower].

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER or doctor.

2.3. Other hazards

None if used properly.

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

Following substances are present in a concentration $\geq 0,1\%$ and fulfill the criteria for PBT/vPvB, or were identified as endocrine disruptor (ED):This mixture does not contain any substances in concentration \geq the concentration limit that are assessed to be a PBT, vPvB or ED.**SECTION 3: Composition/information on ingredients****3.2. Mixtures**

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

Hazardous components CAS-No. EC Number REACH-Reg No.	Concentration	Classification	Specific Conc. Limits, M-factors and ATEs	Add. Information
Pentaerythritol-PO-mercaptoglycerol 72244-98-5 701-196-7 01-2120118957-46	50- 100 %	Skin Sens. 1B, H317 Aquatic Chronic 3, H412		
Benzyltrimethylamine 103-83-3 203-149-1 01-2119529232-48	5- < 10 %	Acute Tox. 4, Dermal, H312 Skin Corr. 1B, H314 Flam. Liq. 3, H226 Aquatic Chronic 2, H411 Acute Tox. 4, Oral, H302 Acute Tox. 3, Inhalation, H331		
2-aminoethanol 141-43-5 205-483-3 01-2119486455-28	1- < 5 %	Acute Tox. 4, Oral, H302 Acute Tox. 4, Dermal, H312 Skin Corr. 1B, H314 Eye Dam. 1, H318 Acute Tox. 4, Inhalation, H332 STOT SE 3, H335 Aquatic Chronic 3, H412	STOT SE 3; H335; C >= 5 % ===== inhalation:ATE = 1,5 mg/l;dust/mist	EU OEL
1,8-Diazabicyclo[5.4.0]undec-7-ene 6674-22-2 229-713-7 01-2119977097-24	0,1- < 1 %	Acute Tox. 3, Oral, H301 Skin Corr. 1B, H314 Eye Dam. 1, H318 Met. Corr. 1, H290	oral:ATE = 215 mg/kg	

**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

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.

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

Causes burns.

SKIN: Rash, Urticaria.

RESPIRATORY: Irritation, coughing, shortness of breath, chest tightness.

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:

water, carbon dioxide, foam, powder

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), carbon dioxide (CO₂) and nitrogen oxides (NO_x) can be released.

5.3. Advice for firefighters

Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.

Additional information:

In case of fire, keep containers cool with water spray.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid contact with skin and eyes.

Wear protective equipment.

Ensure adequate ventilation.

Keep away from sources of ignition.

6.2. Environmental precautions

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

6.3. Methods and material for containment and cleaning up

Dispose of contaminated material as waste according to Section 13.

For small spills wipe up with paper towel and place in container for disposal.

For large spills absorb onto inert absorbent material and place in sealed container for disposal.

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.

See advice in section 8

Hygiene measures:

Wash hands before work breaks and after finishing work.

Do not eat, drink or smoke while working.

Good industrial hygiene practices should be observed.

7.2. Conditions for safe storage, including any incompatibilities

Store in sealed original container.

Ensure good ventilation/extraction.

Store in a cool, well-ventilated place.

Refer to Technical Data Sheet

7.3. Specific end use(s)

Epoxy Hardener

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure Limits

Valid for
Germany

Ingredient [Regulated substance]	ppm	mg/m ³	Value type	Short term exposure limit category / Remarks	Regulatory list
2-Aminoethanol 141-43-5 [2-AMINOETHANOL]	3	7,6	Short Term Exposure Limit (STEL):	Indicative	ECLTV
2-Aminoethanol 141-43-5 [2-AMINOETHANOL]	1	2,5	Time Weighted Average (TWA):	Indicative	ECLTV
2-Aminoethanol 141-43-5			Short Term Exposure Classification:	Category I: substances for which the localized effect has an assigned OEL or for substances with a sensitizing effect in respiratory passages.	TRGS 900
2-Aminoethanol 141-43-5	0,2	0,5	Exposure limit(s):	1 If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7).	TRGS 900
2-Aminoethanol 141-43-5			Skin designation:	Can be absorbed through the skin.	TRGS 900

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-hydro- w-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-hydro- w-hydroxy-, ether with 2,2- bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptop 72244-98-5	Freshwater - intermittent		0,12 mg/l				
Poly[oxy(methyl-1,2-ethanediyl)], a-hydro- w-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-hydro- w-hydroxy-, ether with 2,2- bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptop 72244-98-5	sediment (freshwater)				0,322 mg/kg		
Poly[oxy(methyl-1,2-ethanediyl)], a-hydro- w-hydroxy-, ether with 2,2- bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptop 72244-98-5	sediment (marine water)				0,032 mg/kg		
Poly[oxy(methyl-1,2-ethanediyl)], a-hydro- w-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				
Benzyl dimethylamine 103-83-3	aqua (freshwater)		0,0048 mg/l				
Benzyl dimethylamine 103-83-3	aqua (marine water)		0,00048 mg/l				
Benzyl dimethylamine 103-83-3	aqua (intermittent releases)		0,0134 mg/l				
Benzyl dimethylamine 103-83-3	sewage treatment plant (STP)		534 mg/l				
Benzyl dimethylamine 103-83-3	sediment (freshwater)				0,071 mg/kg		
Benzyl dimethylamine 103-83-3	sediment (marine water)				0,0071 mg/kg		
Benzyl dimethylamine 103-83-3	Soil				0,0114 mg/kg		
2-Aminoethanol 141-43-5	aqua (freshwater)		0,07 mg/l				
2-Aminoethanol 141-43-5	aqua (marine water)		0,007 mg/l				
2-Aminoethanol 141-43-5	aqua (intermittent releases)		0,028 mg/l				
2-Aminoethanol 141-43-5	sediment (freshwater)				0,357 mg/kg		
2-Aminoethanol 141-43-5	sediment (marine water)				0,036 mg/kg		
2-Aminoethanol 141-43-5	Soil				1,29 mg/kg		
2-Aminoethanol 141-43-5	sewage treatment plant (STP)		100 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)		0,5 mg/l				

	releases)						
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)				1,46 mg/kg		
1,8-Diazabicyclo[5.4.0]undec-7-ene 6674-22-2	sediment (marine water)				0,146 mg/kg		
1,8-Diazabicyclo[5.4.0]undec-7-ene 6674-22-2	Soil				0,152 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-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptop 72244-98-5	Workers	inhalation	Long term exposure - systemic effects		22 mg/m3	
Poly[oxy(methyl-1,2-ethanediyl)], a-hydroxy-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptop 72244-98-5	Workers	dermal	Long term exposure - systemic effects		2,7 mg/kg	
Poly[oxy(methyl-1,2-ethanediyl)], a-hydroxy-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptop 72244-98-5	General population	inhalation	Long term exposure - systemic effects		6,52 mg/m3	
Poly[oxy(methyl-1,2-ethanediyl)], a-hydroxy-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptop 72244-98-5	General population	dermal	Long term exposure - systemic effects		1,61 mg/kg	
Poly[oxy(methyl-1,2-ethanediyl)], a-hydroxy-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), 2-hydroxy-3-mercaptop 72244-98-5	General population	oral	Long term exposure - systemic effects		1,9 mg/kg	
Benzyl dimethylamine 103-83-3	Workers	dermal	Long term exposure - systemic effects		2,3 mg/kg	
Benzyl dimethylamine 103-83-3	Workers	inhalation	Long term exposure - systemic effects		14,6 mg/m3	
Benzyl dimethylamine 103-83-3	Workers	inhalation	Long term exposure - local effects		1 mg/m3	
Benzyl dimethylamine 103-83-3	General population	dermal	Long term exposure - systemic effects		1,25 mg/kg	
Benzyl dimethylamine 103-83-3	General population	oral	Long term exposure - systemic effects		1,25 mg/kg	
Benzyl dimethylamine 103-83-3	General population	inhalation	Long term exposure - systemic effects		43,75 mg/m3	
2-Aminoethanol 141-43-5	Workers	inhalation	Long term exposure - systemic effects		1 mg/m3	
2-Aminoethanol 141-43-5	Workers	inhalation	Long term exposure - local effects		0,51 mg/m3	
2-Aminoethanol 141-43-5	Workers	dermal	Long term exposure - systemic effects		3 mg/kg	
2-Aminoethanol 141-43-5	General population	dermal	Long term exposure - systemic effects		1,5 mg/kg	
2-Aminoethanol 141-43-5	General population	oral	Long term exposure - systemic effects		1,5 mg/kg	
2-Aminoethanol 141-43-5	General population	inhalation	Long term exposure - systemic effects		0,18 mg/m3	
2-Aminoethanol 141-43-5	General population	inhalation	Long term exposure - local effects		0,28 mg/m3	
1,8-Diazabicyclo[5.4.0]undec-7-ene 6674-22-2	Workers	inhalation	Long term exposure - systemic effects		10,6 mg/m3	
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:

Engineering controls:

Ensure good ventilation/extraction.

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.

Skin protection:

Wear 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**

Physical state	liquid
Delivery form	liquid
Colour	colourless
Odor	amine-like
Melting point	Not applicable, Product is a liquid
Initial boiling point	> 180 °C (> 356 °F)no method
Flammability	Currently under determination

Explosive limits	Currently under determination
Flash point	80 °C (176 °F)
Auto-ignition temperature	Currently under determination
Decomposition temperature	Currently under determination
pH	Not applicable, Product is non-soluble (in water).
Viscosity (kinematic)	Currently under determination
Solubility (qualitative)	Currently under determination
Partition coefficient: n-octanol/water	Not applicable
	Mixture
Vapour pressure (50 °C (122 °F))	< 700 mbar;no method
Density ()	1,15 g/cm ³ None
Relative vapour density:	Currently under determination
Particle characteristics	Not applicable Product is a liquid

9.2. Other information

Other information not applicable for this product

SECTION 10: Stability and reactivity

10.1. Reactivity

Reacts with strong oxidants.
Acids.
Strong bases.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

See section reactivity

10.4. Conditions to avoid

Stable under normal conditions of storage and use.

10.5. Incompatible materials

See section reactivity.

10.6. Hazardous decomposition products

Rapid polymerisation may generate excessive heat and pressure.
May produce fumes when heated to decomposition. Fumes may contain carbon monoxide and other toxic fumes.

SECTION 11: Toxicological information

1.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

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	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity)
Benzylidimethylamine 103-83-3	LD50	353 mg/kg	rat	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity)
2-aminoethanol 141-43-5	LD50	1.515 mg/kg	rat	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity)
1,8-Diazabicyclo[5.4.0]undec-7-ene 6674-22-2	Acute toxicity estimate (ATE)	215 mg/kg		Expert judgement

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	equivalent or similar to OECD Guideline 402 (Acute Dermal Toxicity)
Benzylidimethylamine 103-83-3	LD50	1.477 mg/kg	rabbit	not specified
2-aminoethanol 141-43-5	LD50	1.025 mg/kg	rabbit	not specified

Acute inhalative 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	Test atmosphere	Exposure time	Species	Method
Benzylidimethylamine 103-83-3	LC50	2,052 mg/l	vapour	4 h	rat	not specified
2-aminoethanol 141-43-5	Acute toxicity estimate (ATE)	1,5 mg/l	dust/mist			Expert judgement
2-aminoethanol 141-43-5	LC50	1 - 5 mg/l		4 h	rat	not specified

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
Pentaerythritol-PO-mercaptoglycerol 72244-98-5	not irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
2-aminoethanol 141-43-5	corrosive	4 h	rabbit	equivalent or similar to OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

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
Pentaerythritol-PO- mercaptoglycerol 72244-98-5	not irritating		rabbit	equivalent or similar to OECD Guideline 405 (Acute Eye Irritation / Corrosion)
2-aminoethanol 141-43-5	corrosive		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
Pentaerythritol-PO- mercaptoglycerol 72244-98-5	sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
2-aminoethanol 141-43-5	not sensitising	Guinea pig maximisation test	guinea pig	not specified

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
2-aminoethanol 141-43-5	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		equivalent or similar to OECD Guideline 471 (Bacterial Reverse Mutation Assay)
2-aminoethanol 141-43-5	negative	in vitro mammalian chromosome aberration test	without		equivalent or similar to OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
2-aminoethanol 141-43-5	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)

Carcinogenicity

No data available.

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
2-aminoethanol 141-43-5	NOAEL P 300 mg/kg NOAEL F1 1.000 mg/kg NOAEL F2 1.000 mg/kg	Two generation study	oral: feed	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
2-aminoethanol 141-43-5	NOAEL 300 mg/kg	oral: feed	> 75 d daily	rat	other guideline:

Aspiration hazard:

No data available.

11.2 Information on other hazards

not applicable

SECTION 12: Ecological information

General ecological information:

Do not empty into drains / surface water / ground 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)
Benzylidimethylamine 103-83-3	LC50	37,8 mg/l	96 h	Pimephales promelas	OECD Guideline 203 (Fish, Acute Toxicity Test)
2-aminoethanol 141-43-5	LC50	349 mg/l	96 h	Cyprinus carpio	EU Method C.1 (Acute Toxicity for Fish)
2-aminoethanol 141-43-5	NOEC	1,24 mg/l	41 d	Oryzias latipes	OECD Guideline 210 (fish early lite stage 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)
Benzylidimethylamine 103-83-3	EC50	> 100 mg/l	48 h	Daphnia magna	EU Method C.2 (Acute Toxicity for Daphnia)
2-aminoethanol 141-43-5	EC50	27,04 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)
Benzylidimethylamine 103-83-3	NOEC	0,789 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
2-aminoethanol 141-43-5	NOEC	0,85 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)
Benzylidimethylamine 103-83-3	EC50	1,34 mg/l	72 h	Desmodesmus subspicatus (reported as Scenedesmus subspicatus)	EU Method C.3 (Algal Inhibition test)
Benzylidimethylamine 103-83-3	NOEC	0,24 mg/l	72 h	Desmodesmus subspicatus (reported as Scenedesmus subspicatus)	EU Method C.3 (Algal Inhibition test)
2-aminoethanol 141-43-5	EC50	2,8 mg/l	72 h	Pseudokirchneriella subcapitata (reported as Raphidocelis subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
2-aminoethanol 141-43-5	EC10	0,7 mg/l	72 h	Pseudokirchneriella subcapitata (reported as Raphidocelis subcapitata)	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)
Benzylidimethylamine 103-83-3	EC10	534 mg/l	17 h	Pseudomonas putida	DIN 38412, part 8 (Pseudomonas Zellvermehrungshemm- Test)
2-aminoethanol 141-43-5	EC 50	> 1.000 mg/l	3 h		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)
Benzylidimethylamine 103-83-3	not readily biodegradable.	aerobic	0 - 2 %	28 d	OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I))
2-aminoethanol 141-43-5	readily biodegradable	aerobic	> 80 %	19 d	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)
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.	Bioconcentration factor (BCF)	Exposure time	Temperature	Species	Method
Benzyltrimethylamine 103-83-3	> 2,1 - 22	42 d		Cyprinus carpio	OECD Guideline 305 C (Bioaccumulation: Test for the Degree of Bioconcentration in Fish)
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)
Benzyltrimethylamine 103-83-3	1,98		EU Method A.8 (Partition Coefficient)
2-aminoethanol 141-43-5	-1,91	25 °C	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)

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.
Benzyltrimethylamine 103-83-3	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
2-aminoethanol 141-43-5	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. Endocrine disrupting properties

not applicable

12.7. Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product disposal:

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

Dispose of in accordance with local and national regulations.

Disposal of uncleaned packages:

After use, tubes, cartons and bottles containing residual product should be disposed of as chemically contaminated waste in an authorised legal land fill site or incinerated.

Waste code

08 04 09* waste adhesives and sealants containing organic solvents and other dangerous substances

The valid EWC waste code numbers are source-related. The manufacturer is therefore unable to specify EWC waste codes for the articles or products used in the various sectors. The EWC codes listed are intended as a recommendation for users. We will be happy to advise you.

SECTION 14: Transport information

14.1. UN number or ID number

ADR	2735
RID	2735
ADN	2735
IMDG	2735
IATA	2735

14.2. UN proper shipping name

ADR	AMINES, LIQUID, CORROSIVE, N.O.S. (Benzyl dimethylamine, Ethanolamine)
RID	AMINES, LIQUID, CORROSIVE, N.O.S. (Benzyl dimethylamine, Ethanolamine)
ADN	AMINES, LIQUID, CORROSIVE, N.O.S. (Benzyl dimethylamine, Ethanolamine)
IMDG	AMINES, LIQUID, CORROSIVE, N.O.S. (Benzyl dimethylamine, Ethanolamine)
IATA	Amines, liquid, corrosive, n.o.s. (Benzyl dimethylamine, Ethanolamine)

14.3. Transport hazard class(es)

ADR	8
RID	8
ADN	8
IMDG	8
IATA	8

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	not applicable
IATA	not applicable

14.6. Special precautions for user

ADR	not applicable Tunnelcode: (E)
RID	not applicable
ADN	not applicable
IMDG	not applicable
IATA	not applicable

14.7. Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

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

Ozone Depleting Substance (ODS) (Regulation (EC) No 1005/2009):	Not applicable
Prior Informed Consent (PIC) (Regulation (EU) No 649/2012):	Not applicable
Persistent organic pollutants (Regulation (EU) 2019/1021):	Not applicable
VOC content (2010/75/EC)	< 3,00 % Combined A/B

15.2. Chemical safety assessment

A chemical safety assessment has not been carried out.

National regulations/information (Germany):

WGK: WGK 2: significantly water endangering (Ordinance on facilities for handling substances that are hazardous to water (AwSV))
Classification according to AwSV, Annex 1 (5.2)

Storage class according to TRGS 510: 8A

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:

H226 Flammable liquid and vapour.
H290 May be corrosive to metals.
H301 Toxic if swallowed.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H331 Toxic if inhaled.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.

ED:	Substance identified as having endocrine disrupting properties
EU OEL:	Substance with a Union workplace exposure limit
EU EXPLD 1:	Substance listed in Annex I, Reg (EC) No. 2019/1148
EU EXPLD 2	Substance listed in Annex II, Reg (EC) No. 2019/1148
SVHC:	Substance of very high concern (REACH Candidate List)
PBT:	Substance fulfilling persistent, bioaccumulative and toxic criteria
PBT/vPvB:	Substance fulfilling persistent, bioaccumulative and toxic plus very persistent and very bioaccumulative criteria
vPvB:	Substance fulfilling very persistent and very bioaccumulative criteria

Further information:

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