



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

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LOCTITE EA 9480 A 10L

SDS No. : 282493
V004.1

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Replaces version from: 26.01.2015

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

1.1. Product identifier

LOCTITE EA 9480 A 10L

Contains:

Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700)
1,4-Bis(2,3-epoxypropoxy)butane

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 Ltd
Wood Lane End
HP2 4RQ Hemel Hempstead

Great Britain

Phone: +44 1442 278000
Fax-no.: +44 1442 278071

ua-productsafety.uk@uk.henkel.com

1.4. Emergency telephone number

24 Hours Emergency Tel: +44 (0)1442 278497

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (CLP):

Skin irritation	Category 2
H315 Causes skin irritation.	
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 2
H411 Toxic to aquatic life with long lasting effects.	

2.2. Label elements

Label elements (CLP):

Hazard pictogram:**Signal word:**

Danger

Hazard statement:

H315 Causes skin irritation.
 H317 May cause an allergic skin reaction.
 H318 Causes serious eye damage.
 H411 Toxic to aquatic life with long lasting effects.

**Precautionary statement:
Prevention**

P273 Avoid release to the environment.
 P280 Wear protective gloves/eye protection.

**Precautionary statement:
Response**

P302+P352 IF ON SKIN: Wash with plenty of water.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

2.3. Other hazards

None if used properly.

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

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	500-033-5 500-033-5 01-2119456619-26	60- 80 %	Skin Irrit. 2 H315 Skin Sens. 1 H317 Eye Irrit. 2 H319 Aquatic Chronic 2 H411
1,4-Bis(2,3-epoxypropoxy)butane 2425-79-8	219-371-7 01-2119494060-45	3- < 10 %	Acute Tox. 4 H302 Acute Tox. 4 H312 Acute Tox. 4 H332 Skin Irrit. 2 H315 Skin Sens. 1 H317 Eye Dam. 1 H318 Aquatic Chronic 3 H412

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: Redness, inflammation.

SKIN: Rash, Urticaria.

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:

Carbon dioxide, foam, powder

Extinguishing media which must not be used for safety reasons:

None known

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.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid skin and eye contact.

6.2. Environmental precautions

Do not let product enter drains.

6.3. Methods and material for containment and cleaning up

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.

Wash spillage site thoroughly with soap and water or detergent solution.

6.4. Reference to other sections

See advice in section 8

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Use only in well-ventilated areas.

Avoid skin and eye contact.

Prolonged or repeated skin contact should be avoided to minimise any risk of sensitisation.

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 a cool, well-ventilated place.

7.3. Specific end use(s)

Epoxy adhesive

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

Valid for
Great Britain

Ingredient [Regulated substance]	ppm	mg/m ³	Value type	Short term exposure limit category / Remarks	Regulatory list
Mica 12001-26-2 [MICA, RESPIRABLE]		0.8	Time Weighted Average (TWA):		EH40 WEL
Mica 12001-26-2 [MICA, TOTAL INHALABLE]		10	Time Weighted Average (TWA):		EH40 WEL
Kaolin 1332-58-7 [KAOLIN, RESPIRABLE DUST]		2	Time Weighted Average (TWA):		EH40 WEL
Titanium dioxide 13463-67-7 [TITANIUM DIOXIDE, TOTAL INHALABLE]		10	Time Weighted Average (TWA):		EH40 WEL
Titanium dioxide 13463-67-7 [TITANIUM DIOXIDE, RESPIRABLE]		4	Time Weighted Average (TWA):		EH40 WEL

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)					0,0006 mg/L	
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	aqua (intermittent releases)					0,018 mg/L	
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	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)				0,0996 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 food	

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 bw/day	
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 bw/day	
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 bw/day	
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 bw/day	
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	
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 bw/day	
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 bw/day	

Biological Exposure Indices:

None

8.2. Exposure controls:**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

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:
Wear protective glasses.

Skin protection:
Wear suitable protective clothing.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	liquid white
Odor	mild
Odour threshold	No data available / Not applicable
pH	No data available / Not applicable
Initial boiling point	> 250 °C (> 482 °F)
Flash point	> 147 °C (> 296.6 °F)
Decomposition temperature	No data available / Not applicable
Vapour pressure (50 °C (122 °F))	< 700 mbar
Density (ρ)	1,38 g/cm ³
Bulk density	No data available / Not applicable
Viscosity	No data available / Not applicable
Viscosity (kinematic)	No data available / Not applicable
Explosive properties	No data available / Not applicable
Solubility (qualitative) (Solvent: Water)	Insoluble
Solidification temperature	No data available / Not applicable
Melting point	No data available / Not applicable
Flammability	No data available / Not applicable
Auto-ignition temperature	No data available / Not applicable
Explosive limits	No data available / Not applicable
Partition coefficient: n-octanol/water	No data available / Not applicable
Evaporation rate	No data available / Not applicable
Vapor density	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

Strong oxidizing agents.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

See section reactivity

10.4. Conditions to avoid

No decomposition if used according to specifications.

10.5. Incompatible materials

See section reactivity

10.6. Hazardous decomposition products

carbon oxides.

SECTION 11: Toxicological information**11.1. Information on toxicological effects****General toxicological information:**

The mixture is classified based on the available hazard information for the ingredients as defined in the classification criteria for mixtures for each hazard class or differentiation in Annex I to Regulation 1272/2008/EC. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

Oral toxicity:

May cause irritation to the digestive tract.

Skin irritation:

Causes skin irritation.

Eye irritation:

Causes serious eye damage.

Sensitizing:

May cause an allergic skin reaction.

Acute oral toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	LD50	> 2.000 mg/kg	oral		rat	OECD Guideline 401 (Acute Oral Toxicity)
1,4-Bis(2,3- epoxypropoxy)butane 2425-79-8	LD50	1.118 mg/kg	oral		rat	

Acute dermal toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	LD50	23.000 mg/kg	dermal		rabbit	

Skin corrosion/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	slightly irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

Serious eye damage/irritation:

Hazardous components 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)
1,4-Bis(2,3- epoxypropoxy)butane 2425-79-8	Category 1 (irreversible effects on the eye)		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)

Respiratory or skin sensitization:

Hazardous components 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)
1,4-Bis(2,3- epoxypropoxy)butane 2425-79-8	sensitising	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)

Germ cell mutagenicity:

Hazardous components 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)			OECD Guideline 472 (Genetic Toxicology: Escherichia coli, Reverse Mutation Assay)
1,4-Bis(2,3- epoxypropoxy)butane 2425-79-8	positive	bacterial reverse mutation assay (e.g Ames test)	with and without		

SECTION 12: Ecological information**General ecological information:**

The mixture is classified based on the available hazard information for the ingredients as defined in the classification criteria for mixtures for each hazard class or differentiation in Annex I to Regulation 1272/2008/EC. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

12.1. Toxicity**Ecotoxicity:**

Toxic to aquatic life with long lasting effects.

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

Hazardous components CAS-No.	Value type	Value	Acute Toxicity Study	Exposure time	Species	Method
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	LC50	1,750000 mg/l	Fish	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
	LC50	1,75 mg/l	Fish	96 h	Oncorhynchus mykiss (reported as Salmo gairdneri)	OECD Guideline 203 (Fish, Acute Toxicity Test)
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	NOEC	2,4 mg/l	Algae	72 h	Scenedesmus capricornutum	OECD Guideline 201 (Alga, Growth Inhibition Test)
	EC50	9,4 mg/l	Algae	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	0,3 mg/l	chronic Daphnia	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
	LC50	24 mg/l	Fish	96 h	Brachydanio rerio (new name: Danio rerio)	OECD Guideline 203 (Fish, Acute Toxicity Test)
1,4-Bis(2,3-epoxypropoxy)butane 2425-79-8	EC50	75 mg/l	Daphnia	24 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

12.2. Persistence and degradability

Persistence and Biodegradability:

The product is not biodegradable.

Hazardous components CAS-No.	Result	Route of application	Degradability	Method
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6		aerobic	5 %	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
1,4-Bis(2,3-epoxypropoxy)butane 2425-79-8		aerobic	38 %	OECD Guideline 301 E (Ready biodegradability: Modified OECD Screening Test)

12.3. Bioaccumulative potential / 12.4. Mobility in soil

Mobility:

Cured adhesives are immobile.

Bioaccumulative potential:

No data available.

Hazardous components CAS-No.	LogKow	Bioconcentration factor (BCF)	Exposure time	Species	Temperature	Method
1,4-Bis(2,3-epoxypropoxy)butane 2425-79-8	-0,269				25 °C	OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)

12.5. Results of PBT and vPvB assessment

Hazardous components 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.
1,4-Bis(2,3-epoxypropoxy)butane 2425-79-8	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 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.

Disposal must be made according to official regulations.

Waste code

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

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. Packaging 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: (E)
RID	not applicable
ADN	not applicable
IMDG	not applicable
IATA	not applicable

14.7. Transport in bulk according to Annex II of MARPOL 73/78 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 < 3,00 %

(1999/13/EC)

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:

- H302 Harmful if swallowed.
- H312 Harmful in contact with skin.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.
- H411 Toxic to aquatic life with long lasting effects.
- H412 Harmful to aquatic life with long lasting effects.

Further information:

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 (EC) No 1907/2006

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LOCTITE EA 9480 B 10L

SDS No. : 282495
V007.0

Revision: 02.05.2016

printing date: 31.01.2018

Replaces version from: 11.01.2016

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

1.1. Product identifier

LOCTITE EA 9480 B 10L

Contains:

Fatty acids, tall-oil, reaction products with diethylenetriamine

Diethylenetriamine

4,4'-Isopropylidenediphenol

4,4'-Isopropylidenediphenol, polymer with 1-chloro-2,3-epoxypropane, reaction products with diethylenetriamine

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 Ltd

Wood Lane End

HP2 4RQ Hemel Hempstead

Great Britain

Phone: +44 1442 278000

Fax-no.: +44 1442 278071

ua-productsafety.uk@uk.henkel.com

1.4. Emergency telephone number

24 Hours Emergency Tel: +44 (0)1442 278497

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (CLP):

Acute toxicity Category 4

H302 Harmful if swallowed.

Route of Exposure: Oral

Acute toxicity Category 4

H332 Harmful if inhaled.

Route of Exposure: Inhalation

Skin corrosion Category 1B

H314 Causes severe skin burns and eye damage.

Skin sensitizer

Category 1

H317 May cause an allergic skin reaction.

Acute hazards to the aquatic environment

Category 1

H400 Very toxic to aquatic life.


Chronic hazards to the aquatic environment

Category 1

H410 Very toxic to aquatic life with long lasting effects.

2.2. Label elements

Label elements (CLP):

Hazard pictogram:	
Signal word:	Danger
Hazard statement:	H302 Harmful if swallowed. H332 Harmful if inhaled. H314 Causes severe skin burns and eye damage. H317 May cause an allergic skin reaction. H410 Very toxic to aquatic life with long lasting effects.
Precautionary statement: Prevention	P261 Avoid breathing vapours. 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/ 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. P333+P313 If skin irritation or rash occurs: 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.

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.	content	Classification
Fatty acids, tall-oil, reaction products with diethylenetriamine 61790-69-0	263-160-2	25- 50 %	Skin Corr. 1B H314 Acute Tox. 4; Oral H302 Aquatic Acute 1 H400 Aquatic Chronic 1 H410
Diethylenetriamine 111-40-0	203-865-4 01-2119473793-27	1- < 5 %	Acute Tox. 4; Oral H302 Acute Tox. 4; Dermal H312 Skin Corr. 1B H314 Skin Sens. 1 H317 Acute Tox. 2; Inhalation H330 STOT SE 3 H335
4-Tert-butylphenol 98-54-4	202-679-0 01-2119489419-21	1- < 3 %	Skin Irrit. 2; Dermal H315 Eye Dam. 1 H318 Repr. 2 H361f Aquatic Chronic 2 H411
4,4'-Isopropylidenediphenol 80-05-7	201-245-8 01-2119457856-23	1- < 3 %	Repr. 2 H361f STOT SE 3 H335 Eye Dam. 1 H318 Skin Sens. 1 H317 Aquatic Chronic 2 H411
Benzyl alcohol 100-51-6	202-859-9 01-2119492630-38	1- < 3 %	Acute Tox. 4; Oral H302 Acute Tox. 4; Inhalation H332 Eye Irrit. 2 H319
4,4'-Isopropylidenediphenol, polymer with 1-chloro-2,3-epoxypropane, reaction products with diethylenetriamine 31326-29-1	500-072-8	0,1- < 1 %	Acute Tox. 4 H302 Acute Tox. 4 H312 Skin Corr. 1B H314 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
Causes burns.

INGESTION: Nausea, vomiting, diarrhea, abdominal pain.

SKIN: Rash, Urticaria.

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

Extinguishing media which must not be used for safety reasons:
None known

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 skin and eye contact.

6.2. Environmental precautions
Do not let product enter drains.

6.3. Methods and material for containment and cleaning up
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.
Wash spillage site thoroughly with soap and water or detergent solution.

6.4. Reference to other sections
See advice in section 8

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Use only in well-ventilated areas.
Avoid skin and eye contact.
Prolonged or repeated skin contact should be avoided to minimise any risk of sensitisation.

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 a cool, well-ventilated place.

7.3. Specific end use(s)

Epoxy Hardener

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure Limits

Valid for
Great Britain

Ingredient [Regulated substance]	ppm	mg/m ³	Value type	Short term exposure limit category / Remarks	Regulatory list
Kaolin 1332-58-7 [KAOLIN, RESPIRABLE DUST]		2	Time Weighted Average (TWA):		EH40 WEL
Mica 12001-26-2 [MICA, RESPIRABLE]		0,8	Time Weighted Average (TWA):		EH40 WEL
Mica 12001-26-2 [MICA, TOTAL INHALABLE]		10	Time Weighted Average (TWA):		EH40 WEL
2,2'-Iminodi(ethylamine) 111-40-0 [2,2'-IMINODI(ETHYLAMINE)]			Skin designation:	Can be absorbed through the skin.	EH40 WEL
2,2'-Iminodi(ethylamine) 111-40-0 [2,2'-IMINODI(ETHYLAMINE)]	1	4,3	Time Weighted Average (TWA):		EH40 WEL
Titanium dioxide 13463-67-7 [TITANIUM DIOXIDE, TOTAL INHALABLE]		10	Time Weighted Average (TWA):		EH40 WEL
Titanium dioxide 13463-67-7 [TITANIUM DIOXIDE, RESPIRABLE]		4	Time Weighted Average (TWA):		EH40 WEL
4,4'-Isopropylidenediphenol 80-05-7 [BISPHENOL A, INHALABLE DUST]		10	Time Weighted Average (TWA):		EH40 WEL
4,4'-Isopropylidenediphenol 80-05-7 [BISPHENOL A (INHALABLE DUST)]		10	Time Weighted Average (TWA):	Indicative	ECLTV

Occupational Exposure Limits

Valid for
Ireland

Ingredient [Regulated substance]	ppm	mg/m ³	Value type	Short term exposure limit category / Remarks	Regulatory list
Kaolin 1332-58-7 [KAOLIN, RESPIRABLE DUST]		2	Time Weighted Average (TWA):		IR_OEL
Mica 12001-26-2 [MICA, RESPIRABLE DUST]		0,8	Time Weighted Average (TWA):		IR_OEL
Mica 12001-26-2 [MICA, TOTAL INHALABLE DUST]		10	Time Weighted Average (TWA):		IR_OEL
2,2'-Iminodi(ethylamine) 111-40-0 [DIETHYLENE TRIAMINE]	1	4	Time Weighted Average (TWA):		IR_OEL
2,2'-Iminodi(ethylamine) 111-40-0 [DIETHYLENE TRIAMINE]			Skin designation:	Can be absorbed through the skin.	IR_OEL
Titanium dioxide 13463-67-7 [TITANIUM DIOXIDE, RESPIRABLE DUST]		4	Time Weighted Average (TWA):		IR_OEL
Titanium dioxide 13463-67-7 [TITANIUM DIOXIDE, TOTAL INHALABLE DUST]		10	Time Weighted Average (TWA):		IR_OEL
4,4'-Isopropylidenediphenol 80-05-7		10	Time Weighted Average (TWA):	Indicative OELV	IR_OEL

[BISPHENOL A (4,4'-ISOPROPYLIDENEDIPHENOL) (INHALABLE DUST)]					
4,4'-Isopropylidenediphenol 80-05-7 [BISPHENOL A (INHALABLE DUST)]		10	Time Weighted Average (TWA):	Indicative	ECLTV

Predicted No-Effect Concentration (PNEC):

Name on list	Environmental Compartment	Exposure period	Value				Remarks
			mg/l	ppm	mg/kg	others	
2,2'-Iminodi(ethylamine) 111-40-0	aqua (freshwater)					0,56 mg/L	
2,2'-Iminodi(ethylamine) 111-40-0	aqua (marine water)					0,056 mg/L	
2,2'-Iminodi(ethylamine) 111-40-0	aqua (intermittent releases)					0,32 mg/L	
2,2'-Iminodi(ethylamine) 111-40-0	sediment (freshwater)				1072 mg/kg		
2,2'-Iminodi(ethylamine) 111-40-0	sediment (marine water)				107,2 mg/kg		
2,2'-Iminodi(ethylamine) 111-40-0	sewage treatment plant (STP)					6 mg/L	
2,2'-Iminodi(ethylamine) 111-40-0	soil				7,97 mg/kg		
2,2'-Iminodi(ethylamine) 111-40-0	Air						
4-Tert-butylphenol 98-54-4	aqua (marine water)					0,001 mg/L	
4-Tert-butylphenol 98-54-4	aqua (freshwater)					0,01 mg/L	
4-Tert-butylphenol 98-54-4	aqua (intermittent releases)					0,048 mg/L	
4-Tert-butylphenol 98-54-4	sediment (marine water)				0,0975 mg/kg		
4-Tert-butylphenol 98-54-4	sediment (freshwater)				0,975 mg/kg		
4-Tert-butylphenol 98-54-4	sewage treatment plant (STP)					1,5 mg/L	
4-Tert-butylphenol 98-54-4	soil				0,324 mg/kg		
4-Tert-butylphenol 98-54-4	oral				46,67 mg/kg		
4,4'-Isopropylidenediphenol 80-05-7	aqua (freshwater)					0,018 mg/L	
4,4'-Isopropylidenediphenol 80-05-7	aqua (marine water)					0,016 mg/L	
4,4'-Isopropylidenediphenol 80-05-7	aqua (intermittent releases)					0,01 mg/L	
4,4'-Isopropylidenediphenol 80-05-7	sewage treatment plant (STP)					320 mg/L	
4,4'-Isopropylidenediphenol 80-05-7	sediment (freshwater)				2,2 mg/kg		
4,4'-Isopropylidenediphenol 80-05-7	sediment (marine water)				0,44 mg/kg		
4,4'-Isopropylidenediphenol 80-05-7	soil				3,7 mg/kg		
4,4'-Isopropylidenediphenol 80-05-7	oral					13,8 mg/kg food	
Benzyl alcohol 100-51-6	soil				0,456 mg/kg		
Benzyl alcohol 100-51-6	sewage treatment plant (STP)					39 mg/L	
Benzyl alcohol 100-51-6	sediment (freshwater)				5,27 mg/kg		
Benzyl alcohol 100-51-6	sediment (marine water)				0,527 mg/kg		
Benzyl alcohol 100-51-6	aqua (marine water)					0,1 mg/L	
Benzyl alcohol 100-51-6	aqua (intermittent releases)					2,3 mg/L	
Benzyl alcohol	aqua					1 mg/L	

100-51-6	(freshwater)								
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Derived No-Effect Level (DNEL):

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
2,2'-Iminodi(ethylamine) 111-40-0	Workers	dermal	Long term exposure - systemic effects		11,4 mg/kg	
2,2'-Iminodi(ethylamine) 111-40-0	Workers	dermal	Long term exposure - local effects		1,1 mg/kg	
2,2'-Iminodi(ethylamine) 111-40-0	Workers	Inhalation	Acute/short term exposure - systemic effects		92,1 mg/m ³	
2,2'-Iminodi(ethylamine) 111-40-0	Workers	Inhalation	Acute/short term exposure - local effects		2,6 mg/m ³	
2,2'-Iminodi(ethylamine) 111-40-0	Workers	Inhalation	Long term exposure - systemic effects		15,4 mg/m ³	
2,2'-Iminodi(ethylamine) 111-40-0	Workers	Inhalation	Long term exposure - local effects		0,87 mg/m ³	
2,2'-Iminodi(ethylamine) 111-40-0	general population	oral	Acute/short term exposure - local effects		4,88 mg/kg	
2,2'-Iminodi(ethylamine) 111-40-0	general population	Inhalation	Acute/short term exposure - systemic effects		27,5 mg/m ³	
2,2'-Iminodi(ethylamine) 111-40-0	general population	dermal	Long term exposure - systemic effects		4,88 mg/kg	
2,2'-Iminodi(ethylamine) 111-40-0	general population	Inhalation	Long term exposure - systemic effects		4,6 mg/m ³	
4-Tert-butylphenol 98-54-4	general population	dermal	Long term exposure - systemic effects		0,026 mg/kg	
4-Tert-butylphenol 98-54-4	general population	inhalation	Long term exposure - systemic effects		0,09 mg/m ³	
4-Tert-butylphenol 98-54-4	general population	oral	Long term exposure - systemic effects		0,026 mg/kg	
4-Tert-butylphenol 98-54-4	Workers	dermal	Long term exposure - systemic effects		0,071 mg/kg	
4-Tert-butylphenol 98-54-4	Workers	inhalation	Long term exposure - systemic effects		0,5 mg/m ³	
4,4'-Isopropylidenediphenol 80-05-7	Workers	dermal	Acute/short term exposure - systemic effects		1,4 mg/kg bw/day	
4,4'-Isopropylidenediphenol 80-05-7	Workers	Inhalation	Acute/short term exposure - local effects		10 mg/m ³	
4,4'-Isopropylidenediphenol 80-05-7	Workers	dermal	Long term exposure - systemic effects		1,4 mg/kg bw/day	
4,4'-Isopropylidenediphenol 80-05-7	Workers	Inhalation	Long term exposure - local effects		10 mg/m ³	
4,4'-Isopropylidenediphenol 80-05-7	Workers	Inhalation	Acute/short term exposure - systemic effects		10 mg/m ³	
4,4'-Isopropylidenediphenol 80-05-7	Workers	Inhalation	Long term exposure - systemic effects		10 mg/m ³	
4,4'-Isopropylidenediphenol 80-05-7	general population	dermal	Acute/short term exposure - systemic effects		0,7 mg/kg bw/day	
4,4'-Isopropylidenediphenol 80-05-7	general population	Inhalation	Acute/short term exposure - systemic effects		5,0 mg/m ³	
4,4'-Isopropylidenediphenol 80-05-7	general population	oral	Acute/short term exposure -		0,05 mg/kg bw/day	

			systemic effects		
4,4'-Isopropylidenediphenol 80-05-7	general population	dermal	Long term exposure - systemic effects		0,7 mg/kg bw/day
4,4'-Isopropylidenediphenol 80-05-7	general population	Inhalation	Long term exposure - systemic effects		0,25 mg/m ³
4,4'-Isopropylidenediphenol 80-05-7	general population	oral	Long term exposure - systemic effects		0,05 mg/kg bw/day
4,4'-Isopropylidenediphenol 80-05-7	general population	Inhalation	Long term exposure - local effects		5 mg/m ³
4,4'-Isopropylidenediphenol 80-05-7	general population	Inhalation	Acute/short term exposure - local effects		5 mg/m ³
Benzyl alcohol 100-51-6	general population	oral	Acute/short term exposure - systemic effects		20 mg/kg bw/day
Benzyl alcohol 100-51-6	general population	oral	Long term exposure - systemic effects		4 mg/kg bw/day
Benzyl alcohol 100-51-6	Workers	inhalation	Acute/short term exposure - systemic effects		110 mg/m ³
Benzyl alcohol 100-51-6	Workers	inhalation	Long term exposure - systemic effects		22 mg/m ³
Benzyl alcohol 100-51-6	general population	inhalation	Acute/short term exposure - systemic effects		27 mg/m ³
Benzyl alcohol 100-51-6	general population	inhalation	Long term exposure - systemic effects		5,4 mg/m ³
Benzyl alcohol 100-51-6	Workers	dermal	Acute/short term exposure - systemic effects		40 mg/kg bw/day
Benzyl alcohol 100-51-6	Workers	dermal	Long term exposure - systemic effects		8 mg/kg bw/day
Benzyl alcohol 100-51-6	general population	dermal	Acute/short term exposure - systemic effects		20 mg/kg bw/day
Benzyl alcohol 100-51-6	general population	dermal	Long term exposure - systemic effects		4 mg/kg bw/day

Biological Exposure Indices:
None

8.2. Exposure controls:

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:

Wear protective glasses.

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**

Appearance	liquid liquid white
Odor	ammoniacal
Odour threshold	No data available / Not applicable
pH	No data available / Not applicable
Initial boiling point	180 °C (356 °F)
Flash point	130 °C (266 °F)
Decomposition temperature	No data available / Not applicable
Vapour pressure	No data available / Not applicable
Density	1,32 g/cm ³
(ρ)	
Bulk density	No data available / Not applicable
Viscosity	No data available / Not applicable
Viscosity (kinematic)	No data available / Not applicable
Explosive properties	No data available / Not applicable
Solubility (qualitative)	No data available / Not applicable
Solidification temperature	No data available / Not applicable
Melting point	No data available / Not applicable
Flammability	No data available / Not applicable
Auto-ignition temperature	No data available / Not applicable
Explosive limits	No data available / Not applicable
Partition coefficient: n-octanol/water	No data available / Not applicable
Evaporation rate	No data available / Not applicable
Vapor density	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**

Reaction with strong acids.
Reacts with strong oxidants.

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**11.1. Information on toxicological effects****General toxicological information:**

The mixture is classified based on the available hazard information for the ingredients as defined in the classification criteria for mixtures for each hazard class or differentiation in Annex I to Regulation (EC) No 1272/2008. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

Oral toxicity:

Harmful if swallowed.

Inhalative toxicity:

Harmful if inhaled.

Skin irritation:

Causes severe skin burns and eye damage.

Eye irritation:

Corrosive
Avoid eye contact.

Sensitizing:

May cause an allergic skin reaction.

Acute oral toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Diethylenetriamine 111-40-0	LD50	1.553 mg/kg	oral		rat	OECD Guideline 401 (Acute Oral Toxicity)
4-Tert-butylphenol 98-54-4	LD50	5.660 mg/kg	oral		rat	
4,4'- Isopropylidenediphenol 80-05-7	LD50	5.000 mg/kg	oral		rat	
Benzyl alcohol 100-51-6	LD50	1.620 mg/kg	oral		rat	

Acute inhalative toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Diethylenetriamine 111-40-0	NOEL	0,07 mg/l	aerosol	4 h	rat	OECD Guideline 403 (Acute Inhalation Toxicity) Expert judgement
Benzyl alcohol 100-51-6	Acute toxicity estimate (ATE)	4,17 mg/l				
Benzyl alcohol 100-51-6	LC50	> 4,178 mg/l				

Acute dermal toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Diethylenetriamine 111-40-0	LD50	1.045 mg/kg	dermal		rabbit	OECD Guideline 402 (Acute Dermal Toxicity)
4-Tert-butylphenol 98-54-4	LD50	> 16.000 mg/kg	dermal			
4,4'- Isopropylidenediphenol 80-05-7	LD50	3.600 mg/kg	dermal			

Skin corrosion/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Diethylenetriamine 111-40-0	corrosive	15 min	rabbit	BASF Test
4-Tert-butylphenol 98-54-4	irritating	5 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Benzyl alcohol 100-51-6	not irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

Serious eye damage/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Diethylenetriamine 111-40-0	corrosive	30 s	rabbit	
4-Tert-butylphenol 98-54-4	Category I (irreversible effects on the eye)	1 s	rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Benzyl alcohol 100-51-6	Category II	24 h	rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)

Respiratory or skin sensitization:

Hazardous components CAS-No.	Result	Test type	Species	Method
Diethylenetriamine 111-40-0	sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
4-Tert-butylphenol 98-54-4	sensitising			
Benzyl alcohol 100-51-6	not sensitising	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)

Germ cell mutagenicity:

Hazardous components CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
Diethylenetriamine 111-40-0	positive	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
	negative	in vitro mammalian chromosome aberration test	with and without		Chromosome Aberration Test
Diethylenetriamine 111-40-0	negative	oral: gavage		mouse	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
	negative	oral: gavage		mouse	
4-Tert-butylphenol 98-54-4	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
4-Tert-butylphenol 98-54-4	negative	intraperitoneal		mouse	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
4,4'- Isopropylidenediphenol 80-05-7	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		
Benzyl alcohol 100-51-6	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Benzyl alcohol 100-51-6	negative	intraperitoneal		mouse	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
	negative			Drosophila melanogaster	OECD Guideline 477 (Genetic Toxicology: Sex-linked Recessive Lethal Test in Drosophila melanogaster)

Carcinogenicity:

Hazardous components CAS-No.	Result	Species	Sex	Exposure time Frequency of treatment	Route of application	Method
Diethylenetriamine 111-40-0	not carcinogenic	mouse	male	lifetime (appr. 587 d) 3 d/w	dermal	OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)

Reproductive toxicity:

Hazardous substances CAS-No.	Result / Classification	Species	Exposure time	Species	Method
Diethylenetriamine 111-40-0	NOAEL P = 100 mg/kg NOAEL F1 = 30 mg/kg	screening oral: gavage	29-54 d	rat	OECD Guideline 421 (Reproduction / Developmental Toxicity Screening Test)

Repeated dose toxicity

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Method
Diethylenetriamine 111-40-0	NOAEL=70 - 80 mg/kg	oral: feed	90 ddaily	rat	
Diethylenetriamine 111-40-0	NOAEL=0,55 mg/l	inhalation: vapour	15 d6 h/d	rat	
4-Tert-butylphenol 98-54-4	LOAEL=>= 200 mg/kg	oral: gavage	daily	rat	

SECTION 12: Ecological information

General ecological information:

The mixture is classified based on the available hazard information for the ingredients as defined in the classification criteria for mixtures for each hazard class or differentiation in Annex I to Regulation (EC) No 1272/2008. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

12.1. Toxicity

Ecotoxicity:

Very toxic to aquatic life with long lasting effects.

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

Hazardous components CAS-No.	Value type	Value	Acute Toxicity Study	Exposure time	Species	Method
Fatty acids, tall-oil, reaction products with diethylenetriamine 61790-69-0	LC50	0,63 mg/l	Fish	96 h	Salmo gairdneri (new name: Oncorhynchus mykiss)	OECD Guideline 203 (Fish, Acute Toxicity Test)
Fatty acids, tall-oil, reaction products with diethylenetriamine 61790-69-0	EC0	10 mg/l	Bacteria	30 min		
Diethylenetriamine 111-40-0	LC50	430 mg/l	Fish	96 h	Poecilia reticulata	EU Method C.1 (Acute Toxicity for Fish)
	NOEC	> 10 mg/l	Fish	28 d	Gasterosteus aculeatus	OECD 210 Guideline (fish early lite stage toxicity test)
Diethylenetriamine 111-40-0	EC50	64,6 mg/l	Daphnia	48 h	Daphnia magna	EU Method C.2 (Acute Toxicity for Daphnia)
Diethylenetriamine 111-40-0	EC50	1.164 mg/l	Algae	72 h	Selenastrum capricornutum (new name: Pseudokirchnerella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
	NOEC	10 mg/l	Algae	72 h	Selenastrum capricornutum (new name: Pseudokirchnerella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Diethylenetriamine 111-40-0	NOEC	6 mg/l	Bacteria	3 h	anaerobic bacteria	not specified
Diethylenetriamine 111-40-0	NOEC	5,6 mg/l	chronic Daphnia	21 d	Daphnia magna	EU Method C.20 (Daphnia magna Reproduction Test)
4-Tert-butylphenol 98-54-4	LC50	5,14 mg/l	Fish	96 h	Pimephales promelas	EU Method C.1 (Acute Toxicity for Fish)
	NOEC	> 0,01 - 0,1 mg/l	Fish	128 d	Pimephales promelas	OECD 210 Guideline (fish early lite stage toxicity test)
4-Tert-butylphenol 98-54-4	EC50	4,8 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
4-Tert-butylphenol 98-54-4	EC50	11,2 mg/l	Algae	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	DIN 38412-09
4-Tert-butylphenol 98-54-4	EC10	145 mg/l	Bacteria	6 h		
4-Tert-butylphenol 98-54-4	NOEC	0,73 mg/l	chronic Daphnia	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
4,4'-Isopropylidenediphenol 80-05-7	LC50	9,9 mg/l	Fish	96 h	Brachydanio rerio (new name: Danio rerio)	OECD Guideline 203 (Fish, Acute Toxicity Test)
	NOEC	16 µg/l	Fish	444 d	Pimephales promelas	EPA OPP 72-5 (Fish Life Cycle Toxicity)
4,4'-Isopropylidenediphenol 80-05-7	EC50	3,9 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
4,4'-Isopropylidenediphenol 80-05-7	EC50	2,5 mg/l	Algae	96 h	Selenastrum capricornutum (new name: Pseudokirchnerella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
4,4'-Isopropylidenediphenol 80-05-7	EC10	> 320 mg/l	Bacteria	18 h		
4,4'-Isopropylidenediphenol 80-05-7	NOEC	> 3,146 mg/l	chronic Daphnia	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
Benzyl alcohol 100-51-6	LC50	646 mg/l	Fish	48 h	Leuciscus idus	DIN 38412-15
Benzyl alcohol 100-51-6	EC50	360 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

Benzyl alcohol 100-51-6	EC50	640 mg/l	Algae	96 h	Scenedesmus quadricauda	OECD Guideline 201 (Alga. Growth Inhibition Test)
Benzyl alcohol 100-51-6	EC10	658 mg/l	Bacteria	17 h		

12.2. Persistence and degradability**Persistence and Biodegradability:**

The product is not biodegradable.

Hazardous components CAS-No.	Result	Route of application	Degradability	Method
Fatty acids, tall-oil, reaction products with diethylenetriamine 61790-69-0		aerobic	21 %	ISO 10708 (BODIS-Test)
Diethylenetriamine 111-40-0	inherently biodegradable	aerobic	83 %	EU Method C.9 (Biodegradation: Zahn-Wellens Test)
	readily biodegradable	aerobic	87 %	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
4-Tert-butylphenol 98-54-4	readily biodegradable	aerobic	98 %	OECD Guideline 301 A (new version) (Ready Biodegradability: DOC Die Away Test)
4,4'-Isopropylidenediphenol 80-05-7	readily biodegradable	aerobic	89 %	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
Benzyl alcohol 100-51-6	readily biodegradable	aerobic	92 - 96 %	OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I))

12.3. Bioaccumulative potential / 12.4. Mobility in soil**Mobility:**

Cured adhesives are immobile.

Bioaccumulative potential:

No data available.

Hazardous components CAS-No.	LogKow	Bioconcentration factor (BCF)	Exposure time	Species	Temperature	Method
Diethylenetriamine 111-40-0		> 0,3 - < 6,3	42 d	Cyprinus carpio		OECD Guideline 305 C (Bioaccumulation: Test for the Degree of Bioconcentration in Fish) QSAR (Quantitative Structure Activity Relationship)
Diethylenetriamine 111-40-0	-1,58				20 °C	
4-Tert-butylphenol 98-54-4	3				23 °C	OECD Guideline 117 (Partition Coefficient (n- octanol / water), HPLC Method)
4,4'-Isopropylidenediphenol 80-05-7		5,1 - 13,8	42 d	Cyprinus carpio	25 °C	OECD Guideline 107 (Partition Coefficient (n- octanol / water), Shake Flask Method)
4,4'-Isopropylidenediphenol 80-05-7	3,4				21,5 °C	
Benzyl alcohol 100-51-6	1,08					

12.5. Results of PBT and vPvB assessment

Hazardous components CAS-No.	PBT/vPvB

Fatty acids, tall-oil, reaction products with diethylenetriamine 61790-69-0	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Diethylenetriamine 111-40-0	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
4-Tert-butylphenol 98-54-4	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
4,4'-Isopropylidenediphenol 80-05-7	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Benzyl alcohol 100-51-6	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 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.

Disposal must be made according to official regulations.

Waste code

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

SECTION 14: Transport information**14.1. UN number**

ADR	2735
RID	2735
ADN	2735
IMDG	2735
IATA	2735

14.2. UN proper shipping name

ADR	AMINES, LIQUID, CORROSIVE, N.O.S. (Fatty acids, tall-oil, reaction products with diethylenetriamine,Diethylenetriamine)
RID	AMINES, LIQUID, CORROSIVE, N.O.S. (Fatty acids, tall-oil, reaction products with diethylenetriamine,Diethylenetriamine)
ADN	AMINES, LIQUID, CORROSIVE, N.O.S. (Fatty acids, tall-oil, reaction products with diethylenetriamine,Diethylenetriamine)
IMDG	AMINES, LIQUID, CORROSIVE, N.O.S. (Fatty acids, tall-oil, reaction products with diethylenetriamine,Diethylenetriamine)
IATA	Amines, liquid, corrosive, n.o.s. (Fatty acids, tall-oil, reaction products with diethylenetriamine,Diethylenetriamine)

14.3. Transport hazard class(es)

ADR	8
RID	8
ADN	8
IMDG	8
IATA	8

14.4. Packing group

ADR	II
RID	II
ADN	II
IMDG	II
IATA	II

14.5. Environmental hazards

ADR	Environmentally Hazardous
RID	Environmentally Hazardous
ADN	Environmentally Hazardous
IMDG	Marine pollutant
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. 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 < 3,00 %

(2010/75/EC)

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:

- H302 Harmful if swallowed.
- H312 Harmful in contact with skin.
- H314 Causes severe skin burns and eye damage.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H330 Fatal if inhaled.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation.
- H361f Suspected of damaging fertility.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.
- H411 Toxic to aquatic life with long lasting effects.

Further information:

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.