



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

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LOCTITE ECCOBOND UF 1173

SDS No. : 587592

V006.0

Revision: 05.05.2025

printing date: 12.08.2025

Replaces version from: 01.07.2024

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

1.1. Product identifier

LOCTITE ECCOBOND UF 1173

UFI: 9NPF-8X3M-T20W-HM7C

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

Intended use:

Adhesive

1.3. Details of the supplier of the safety data sheet

Henkel Ireland

Operations and Research Limited

Tallaght Business Park, Whitestown

24 Dublin

Ireland

Phone: +353 (0353) 1 404 6444

SDSinfo.Adhesive@henkel.com

For Safety Data Sheet updates please visit our website www.mysds.henkel.com or www.henkel-adhesives.com.

1.4. Emergency telephone number

00353 14046280

National Poisons Information Centre: Members of Public: +353 (1) 809 2166. (8.00 a.m. to 10.00 p.m. 7 days a week)

Healthcare Professionals: +353 (1) 809 2566 (24-hour service)

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 3

H412 Harmful to aquatic life with long lasting effects.

2.2. Label elements

Label elements (CLP):

Hazard pictogram:



Contains

Bisphenol A Diglycidyl Ether

Reaction mass of 2-(3-ethylphenyl)oxirane and 2,2'-(1,3-phenylene) dioxirane and 2,2'-(1,4-phenylene)dioxirane
Bisphenol-F epichlorhydrin resin; MW<700
2-(Ethylphenyl)oxirane

1H-Imidazole, 2-ethyl-4-methyl-

Signal word:

Warning

Hazard statement:

H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statement:
Prevention

P273 Avoid release to the environment.
P280 Wear protective gloves.

Precautionary statement:
Response

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.

2.3. Other hazards

None if used properly.

Following substances are present in a concentration $\geq$ the concentration limit for depiction in Section 3 and fulfill the criteria for PBT/vPvB, or were identified as endocrine disruptor (ED):

This mixture does not contain any substances in a concentration $\geq$ the concentration limit for depiction in Section 3 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
Bisphenol A Diglycidyl Ether 1675-54-3 216-823-5 01-2119456619-26	10- < 20 %	Eye Irrit. 2, H319 Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Chronic 2, H411	Eye Irrit. 2; H319; C >= 5 % Skin Irrit. 2; H315; C >= 5 %	
Reaction mass of 2-(3-ethylphenyl)oxirane and 2,2'-(1,3-phenylene) dioxirane and 2,2'-(1,4-phenylene)dioxirane -----	10- < 20 %	Aquatic Chronic 2, H411 Skin Irrit. 2, H315 Skin Sens. 1A, H317 Eye Irrit. 2, H319	dermal:ATE = 2.500 mg/kg oral:ATE = 2.500 mg/kg	
Reaction mass of 2-ethyl-4-methyl-1H-imidazole-1-propionitrile and 2-ethyl-5-methyl-1H-imidazole-1-propionitrile 568591-00-4	1- < 5 %	Acute Tox. 4, Oral, H302 Eye Irrit. 2, H319 STOT RE 2, H373 Aquatic Chronic 3, H412		
Bisphenol-F epichlorhydrin resin; MW<700 ----- 01-2119454392-40	1- < 5 %	Skin Irrit. 2, H315 Skin Sens. 1A, H317 Aquatic Chronic 2, H411		
2-(Ethylphenyl)oxirane 58220-88-5	0,1- < 1 %	Skin Sens. 1, H317 Aquatic Chronic 2, H411		
1H-Imidazole, 2-ethyl-4-methyl- 931-36-2 213-234-5 01-2119980935-21	0,1- < 1 %	Acute Tox. 4, Oral, H302 Eye Dam. 1, H318 Skin Irrit. 2, H315 Skin Sens. 1B, H317		

If no ATE values are displayed, please refer to LD/LC50 values in Section 11.

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

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

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.

Dispose of contaminated material as waste according to Section 13.

6.4. Reference to other sections

See advice in section 8

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid skin and eye contact.

See advice in section 8

Hygiene measures:

Good industrial hygiene practices should be observed.

Wash hands before work breaks and after finishing work.

Do not eat, drink or smoke while working.

7.2. Conditions for safe storage, including any incompatibilities

Ensure good ventilation/extraction.

Keep container tightly sealed.

Refer to Technical Data Sheet.

7.3. Specific end use(s)

Adhesive

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

Ingredient [Regulated substance]	ppm	mg/m ³	Value type	Short term exposure limit category / Remarks	Regulatory list
Silica, vitreous 60676-86-0 [SILICA, FUSED]		0,08	Time Weighted Average (TWA):		IR_OEL
Silicon dioxide 7631-86-9 [SILICA, AMORPHOUS]		6	Time Weighted Average (TWA):		IR_OEL
Silicon dioxide 7631-86-9 [SILICA, AMORPHOUS]		2,4	Time Weighted Average (TWA):		IR_OEL

Occupational Exposure LimitsValid for
Great Britain

Ingredient [Regulated substance]	ppm	mg/m ³	Value type	Short term exposure limit category / Remarks	Regulatory list
Silica, vitreous 60676-86-0 [SILICA, FUSED, RESPIRABLE DUST]		0,08	Time Weighted Average (TWA):		EH40 WEL
Si-oxide amorphous (fumed) 7631-86-9 [Dust, respirable dust]		4	Time Weighted Average (TWA):		EH40 WEL
Si-oxide amorphous (fumed) 7631-86-9 [Dust, inhalable dust]		10	Time Weighted Average (TWA):		EH40 WEL
Si-oxide amorphous (fumed) 7631-86-9 [Silica, amorphous, inhalable dust]		6	Time Weighted Average (TWA):		EH40 WEL
Si-oxide amorphous (fumed) 7631-86-9 [Silica, amorphous, respirable dust]		2,4	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	
Biphenyl-4-(2,3-epoxypropoxy)propane 1675-54-3	aqua (freshwater)		0,006 mg/l				
Biphenyl-4-(2,3-epoxypropoxy)propane 1675-54-3	Freshwater - intermittent		0,018 mg/l				
Biphenyl-4-(2,3-epoxypropoxy)propane 1675-54-3	aqua (marine water)		0,001 mg/l				
Biphenyl-4-(2,3-epoxypropoxy)propane 1675-54-3	Marine water - intermittent		0,002 mg/l				
Biphenyl-4-(2,3-epoxypropoxy)propane 1675-54-3	sewage treatment plant (STP)		10 mg/l				
Biphenyl-4-(2,3-epoxypropoxy)propane 1675-54-3	sediment (freshwater)				0,341 mg/kg		
Biphenyl-4-(2,3-epoxypropoxy)propane 1675-54-3	sediment (marine water)				0,034 mg/kg		
Biphenyl-4-(2,3-epoxypropoxy)propane 1675-54-3	Air						no hazard identified
Biphenyl-4-(2,3-epoxypropoxy)propane 1675-54-3	Soil				0,065 mg/kg		
Biphenyl-4-(2,3-epoxypropoxy)propane 1675-54-3	oral				11 mg/kg		
Reaction mass bisphenol-F-(epichlorhydrin) -----	aqua (freshwater)		0,003 mg/l				
Reaction mass bisphenol-F-(epichlorhydrin) -----	aqua (marine water)		0,0003 mg/l				
Reaction mass bisphenol-F-(epichlorhydrin) -----	sewage treatment plant (STP)		10 mg/l				
Reaction mass bisphenol-F-(epichlorhydrin) -----	sediment (freshwater)				0,294 mg/kg		
Reaction mass bisphenol-F-(epichlorhydrin) -----	sediment (marine water)				0,0294 mg/kg		
Reaction mass bisphenol-F-(epichlorhydrin) -----	Soil				0,237 mg/kg		
Reaction mass bisphenol-F-(epichlorhydrin) -----	aqua (intermittent releases)		0,0254 mg/l				
Reaction mass bisphenol-F-(epichlorhydrin) -----	Air						no hazard identified
Reaction mass bisphenol-F-(epichlorhydrin) -----	Predator						no potential for bioaccumulation
2-Ethyl-4-methylimidazole 931-36-2	aqua (freshwater)		0,0681 mg/l				
2-Ethyl-4-methylimidazole 931-36-2	aqua (marine water)		0,00681 mg/l				
2-Ethyl-4-methylimidazole 931-36-2	aqua (intermittent releases)		0,681 mg/l				
2-Ethyl-4-methylimidazole 931-36-2	sewage treatment plant (STP)		65 mg/l				
2-Ethyl-4-methylimidazole 931-36-2	sediment (freshwater)				34,9 mg/kg		
2-Ethyl-4-methylimidazole 931-36-2	sediment (marine water)				3,49 mg/kg		
2-Ethyl-4-methylimidazole 931-36-2	Soil				6,91 mg/kg		

Derived No-Effect Level (DNEL):

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
Biphenyl-4-(2,3-epoxypropoxy)propane 1675-54-3	Workers	inhalation	Long term exposure - systemic effects		4,93 mg/m3	no hazard identified
Biphenyl-4-(2,3-epoxypropoxy)propane 1675-54-3	Workers	dermal	Long term exposure - systemic effects		0,75 mg/kg	no hazard identified
Biphenyl-4-(2,3-epoxypropoxy)propane 1675-54-3	General population	inhalation	Long term exposure - systemic effects		0,87 mg/m3	no hazard identified
Biphenyl-4-(2,3-epoxypropoxy)propane 1675-54-3	General population	dermal	Long term exposure - systemic effects		0,0893 mg/kg	no hazard identified
Biphenyl-4-(2,3-epoxypropoxy)propane 1675-54-3	General population	oral	Long term exposure - systemic effects		0,5 mg/kg	no hazard identified
Biphenyl-4-(2,3-epoxypropoxy)propane 1675-54-3	Workers	Inhalation	Long term exposure - local effects			no hazard identified
Biphenyl-4-(2,3-epoxypropoxy)propane 1675-54-3	Workers	Inhalation	Acute/short term exposure - local effects			no hazard identified
Biphenyl-4-(2,3-epoxypropoxy)propane 1675-54-3	Workers	dermal	Long term exposure - local effects			no hazard identified
Biphenyl-4-(2,3-epoxypropoxy)propane 1675-54-3	Workers	dermal	Acute/short term exposure - local effects			no hazard identified
Biphenyl-4-(2,3-epoxypropoxy)propane 1675-54-3	General population	Inhalation	Long term exposure - local effects			no hazard identified
Biphenyl-4-(2,3-epoxypropoxy)propane 1675-54-3	General population	Inhalation	Acute/short term exposure - local effects			no hazard identified
Biphenyl-4-(2,3-epoxypropoxy)propane 1675-54-3	General population	dermal	Long term exposure - local effects			no hazard identified
Biphenyl-4-(2,3-epoxypropoxy)propane 1675-54-3	General population	dermal	Acute/short term exposure - local effects			no hazard identified
Reaction mass bisphenol-F-(epichlorhydrin) -----	Workers	Inhalation	Long term exposure - systemic effects		29,39 mg/m3	no hazard identified
Reaction mass bisphenol-F-(epichlorhydrin) -----	Workers	dermal	Long term exposure - systemic effects		104,15 mg/kg	no hazard identified
Reaction mass bisphenol-F-(epichlorhydrin) -----	Workers	dermal	Acute/short term exposure - local effects		0,0083 mg/cm2	no hazard identified
Reaction mass bisphenol-F-(epichlorhydrin) -----	General population	Inhalation	Long term exposure - systemic effects		8,7 mg/m3	no hazard identified
Reaction mass bisphenol-F-(epichlorhydrin) -----	General population	dermal	Long term exposure - systemic effects		62,5 mg/kg	no hazard identified
Reaction mass bisphenol-F-(epichlorhydrin) -----	General population	oral	Long term exposure - systemic effects		6,25 mg/kg	no hazard identified
2-Ethyl-4-methylimidazole 931-36-2	Workers	inhalation	Long term exposure - systemic effects		2,8 mg/m3	
2-Ethyl-4-methylimidazole 931-36-2	Workers	dermal	Long term exposure - local effects		0,289 mg/cm2	
2-Ethyl-4-methylimidazole 931-36-2	Workers	dermal	Long term exposure - systemic effects		1,6 mg/kg	
2-Ethyl-4-methylimidazole 931-36-2	General population	inhalation	Long term exposure -		0,7 mg/m3	

			systemic effects			
2-Ethyl-4-methylimidazole 931-36-2	General population	dermal	Long term exposure - systemic effects		0,8 mg/kg	
2-Ethyl-4-methylimidazole 931-36-2	General population	dermal	Long term exposure - local effects		0,289 mg/cm2	
2-Ethyl-4-methylimidazole 931-36-2	General population	oral	Long term exposure - systemic effects		0,4 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**

Delivery form	liquid
Colour	Black
Odor	slightly
Physical state	liquid
Melting point	Not applicable, Product is a liquid
Initial boiling point	Not available.
Flammability	The product is not flammable.
Explosive limits	Not applicable, The product is not flammable.
Flash point	> 110 °C (> 230 °F)

Auto-ignition temperature	Not applicable, The product is not flammable.
Decomposition temperature	Not applicable, Substance/mixture is not self-reactive, no organic peroxide and does not decompose under foreseen conditions of use
pH	Not applicable, Product is non-soluble (in water).
Viscosity (kinematic)	Currently under determination
Viscosity, dynamic (Brookfield; speed of rotation: 5 min-1)	12.000 - 16.000 mPa.s no method / method unknown
Solubility (qualitative) (20 °C (68 °F); Solvent: Water)	Insoluble
Partition coefficient: n-octanol/water	Not applicable
Vapour pressure	Mixture
Density (20 °C (68 °F))	Currently under determination
Relative vapour density:	1,68 g/cm3 no method / method unknown
Particle characteristics	Currently under determination
	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

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 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.

Based on available data, the classification criteria are not met.

Hazardous substances CAS-No.	Value type	Value	Species	Method
Bisphenol A Diglycidyl Ether 1675-54-3	LD50	> 2.000 mg/kg	rat	OECD Guideline 420 (Acute Oral Toxicity)
Reaction mass of 2-(3- ethylphenyl)oxirane and 2,2'-(1,3-phenylene) dioxirane and 2,2'-(1,4- phenylene)dioxirane -----	LD50	> 2.000 mg/kg	rat	OECD Guideline 420 (Acute Oral Toxicity)
Reaction mass of 2-(3- ethylphenyl)oxirane and 2,2'-(1,3-phenylene) dioxirane and 2,2'-(1,4- phenylene)dioxirane -----	Acute toxicity estimate (ATE)	2.500 mg/kg		Expert judgement
Reaction mass of 2-ethyl- 4-methyl-1H-imidazole-1- propionitrile and 2- ethyl-5-methyl-1H- imidazole-1- propionitrile 568591-00-4	LD50	500 mg/kg	rat	OECD Guideline 423 (Acute Oral toxicity)
Bisphenol-F epichlorhydrin resin; MW<700 -----	LD50	> 5.000 mg/kg	rat	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity)
2-(Ethylphenyl)oxirane 58220-88-5	LD50	> 2.000 mg/kg	rat	not specified
1H-Imidazole, 2-ethyl-4- methyl- 931-36-2	LD50	622 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.

Based on available data, the classification criteria are not met.

Hazardous substances CAS-No.	Value type	Value	Species	Method
Bisphenol A Diglycidyl Ether 1675-54-3	LD50	> 2.000 mg/kg	rat	OECD Guideline 402 (Acute Dermal Toxicity)
Reaction mass of 2-(3- ethylphenyl)oxirane and 2,2'-(1,3-phenylene) dioxirane and 2,2'-(1,4- phenylene)dioxirane -----	LD50	> 2.000 mg/kg	rat	OECD Guideline 402 (Acute Dermal Toxicity)
Reaction mass of 2-(3- ethylphenyl)oxirane and 2,2'-(1,3-phenylene) dioxirane and 2,2'-(1,4- phenylene)dioxirane -----	Acute toxicity estimate (ATE)	2.500 mg/kg		Expert judgement
Bisphenol-F epichlorhydrin resin; MW<700 -----	LD50	> 2.000 mg/kg	rat	equivalent or similar to OECD Guideline 402 (Acute Dermal Toxicity)
2-(Ethylphenyl)oxirane 58220-88-5	LD50	> 2.000 mg/kg	rat	not specified

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
Bisphenol A Diglycidyl Ether 1675-54-3	moderately irritating	24 h	rabbit	Draize Test
Reaction mass of 2-(3- ethylphenyl)oxirane and 2,2'-(1,3-phenylene) dioxirane and 2,2'-(1,4- phenylene)dioxirane -----	irritating or corrosive	15 min	Human, EpiSkin™ (SM), Reconstructed Human Epidermis (RHE)	EU Method B.46 (In vitro skin irrit.: reconstructed human epidermis model test)
Reaction mass of 2-(3- ethylphenyl)oxirane and 2,2'-(1,3-phenylene) dioxirane and 2,2'-(1,4- phenylene)dioxirane -----	not corrosive	240 min	Human, EpiSkin™ (SM), Reconstructed Human Epidermis (RHE)	OECD Guideline 431 (In Vitro Skin Corrosion: Reconstructed Human Epidermis (RHE) Test Method)
Reaction mass of 2-ethyl- 4-methyl-1H-imidazole-1- propionitrile and 2- ethyl-5-methyl-1H- imidazole-1- propionitrile 568591-00-4	not irritating		Human, EpiDerm™ SIT (EPI-200), Reconstructed Human Epidermis (RHE)	OECD Guideline 439 (In Vitro Skin Irritation: Reconstructed Human Epidermis (RHE) Test Method)
Reaction mass of 2-ethyl- 4-methyl-1H-imidazole-1- propionitrile and 2- ethyl-5-methyl-1H- imidazole-1- propionitrile 568591-00-4	not corrosive		Human, EpiDerm™ SIT (EPI-200), Reconstructed Human Epidermis (RHE)	OECD Guideline 431 (In Vitro Skin Corrosion: Reconstructed Human Epidermis (RHE) Test Method)
Bisphenol-F epichlorhydrin resin; MW<700 -----	irritating	4 h	rabbit	equivalent or similar to OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
1H-Imidazole, 2-ethyl-4- methyl- 931-36-2	not irritating		rabbit	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
Bisphenol A Diglycidyl Ether 1675-54-3	slightly irritating		rabbit	Draize Test
Reaction mass of 2-(3-ethylphenyl)oxirane and 2,2'-(1,3-phenylene)dioxirane and 2,2'-(1,4-phenylene)dioxirane -----	irritating			expert judgment
Reaction mass of 2-ethyl-4-methyl-1H-imidazole-1-propionitrile and 2-ethyl-5-methyl-1H-imidazole-1-propionitrile 568591-00-4	Category 2B (mildly irritating to eyes)		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Bisphenol-F epichlorhydrin resin; MW<700 -----	not irritating		rabbit	equivalent or similar to OECD Guideline 405 (Acute Eye Irritation / Corrosion)
1H-Imidazole, 2-ethyl-4-methyl- 931-36-2	highly 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
Bisphenol A Diglycidyl Ether 1675-54-3	sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
Reaction mass of 2-(3-ethylphenyl)oxirane and 2,2'-(1,3-phenylene)dioxirane and 2,2'-(1,4-phenylene)dioxirane -----	Sub-Category 1A (sensitising)	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
Reaction mass of 2-ethyl-4-methyl-1H-imidazole-1-propionitrile and 2-ethyl-5-methyl-1H-imidazole-1-propionitrile 568591-00-4	negative	Direct peptide reactivity assay (DPRA)	cysteine and lysine, in chemico test	OECD Guideline 442C (Direct Peptide Reactivity Assay (DPRA))
Reaction mass of 2-ethyl-4-methyl-1H-imidazole-1-propionitrile and 2-ethyl-5-methyl-1H-imidazole-1-propionitrile 568591-00-4	negative	Activation of keratinocytes	human keratinocytes, in vitro test	OECD Guideline 442D (ARE-Nrf2 Luciferase Test Method)
Reaction mass of 2-ethyl-4-methyl-1H-imidazole-1-propionitrile and 2-ethyl-5-methyl-1H-imidazole-1-propionitrile 568591-00-4	negative	activation of dendritic cells	human monocytes, in vitro test	OECD Guideline 442E (H-CLAT: Human Cell Line Activation Test)
Bisphenol-F epichlorhydrin resin; MW<700 -----	Sub-Category 1A (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.

Based on available data, the classification criteria are not met.

Hazardous substances CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
Bisphenol A Diglycidyl Ether 1675-54-3	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		EU Method B.13/14 (Mutagenicity)
Bisphenol A Diglycidyl Ether 1675-54-3	negative with metabolic activation	mammalian cell gene mutation assay	with and without		not specified
Reaction mass of 2-ethyl- 4-methyl-1H-imidazole-1- propionitrile and 2- ethyl-5-methyl-1H- imidazole-1- propionitrile 568591-00-4	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Bisphenol-F epichlorhydrin resin; MW<700 -----	positive	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)

Carcinogenicity

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

Based on available data, the classification criteria are not met.

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Sex	Method
Bisphenol A Diglycidyl Ether 1675-54-3	not carcinogenic	oral: gavage	24 m daily	rat	male/female	OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)
Bisphenol A Diglycidyl Ether 1675-54-3	not carcinogenic	dermal	2 y 3 times/w	mouse	male	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.

Based on available data, the classification criteria are not met.

Hazardous substances CAS-No.	Result / Value	Test type	Route of application	Species	Method
Bisphenol A Diglycidyl Ether 1675-54-3	NOAEL P >= 50 mg/kg NOAEL F1 >= 750 mg/kg NOAEL F2 >= 750 mg/kg	Two generation study	oral: gavage	rat	OECD Guideline 416 (Two- Generation Reproduction Toxicity Study)
Bisphenol-F epichlorhydrin resin; MW<700 -----	NOAEL P > 750 mg/kg NOAEL F1 750 mg/kg NOAEL F2 750 mg/kg	two- generation study	oral: gavage	rat	OECD Guideline 416 (Two- Generation Reproduction Toxicity Study)

STOT-single exposure:

No data available.

STOT-repeated exposure:

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

Based on available data, the classification criteria are not met.

Hazardous substances CAS-No.	Result / Value	Route of application	Exposure time / Frequency of treatment	Species	Method
Bisphenol A Diglycidyl Ether 1675-54-3	NOAEL 50 mg/kg	oral: gavage	14 w daily	rat	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
Bisphenol A Diglycidyl Ether 1675-54-3	NOAEL 100 mg/kg	dermal	13 w 3 times/w	mouse	OECD Guideline 411 (Subchronic Dermal Toxicity: 90-Day Study)
Reaction mass of 2-ethyl- 4-methyl-1H-imidazole-1- propionitrile and 2- ethyl-5-methyl-1H- imidazole-1- propionitrile 568591-00-4	NOAEL 50 mg/kg	oral: gavage	28 d daily	rat	OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)
Bisphenol-F epichlorhydrin resin; MW<700 -----	NOAEL 250 mg/kg	oral: gavage	13 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.

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Bisphenol A Diglycidyl Ether 1675-54-3	LC50	1,2 mg/l	96 h	Oncorhynchus mykiss	EPA-660 (Methods for Acute Toxicity Tests with Fish, Macroinvertebrates and Amphibians)
Reaction mass of 2-(3- ethylphenyl)oxirane and 2,2'- (1,3-phenylene) dioxirane and 2,2'-(1,4-phenylene)dioxirane -----	LC50	2,4 mg/l	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
Bisphenol-F epichlorhydrin resin; MW<700 -----	LC50	5,7 mg/l	96 h	Leuciscus idus	OECD Guideline 203 (Fish, Acute Toxicity Test)
2-(Ethylphenyl)oxirane 58220-88-5	LC50	2,4 mg/l	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
1H-Imidazole, 2-ethyl-4- methyl- 931-36-2	LC50	68,1 mg/l	96 h	Leuciscus idus	DIN 38412-15

Toxicity (aquatic invertebrates):

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

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Bisphenol A Diglycidyl Ether 1675-54-3	EC50	2,7 mg/l	48 h	Daphnia magna	other guideline:
Reaction mass of 2-(3- ethylphenyl)oxirane and 2,2'- (1,3-phenylene) dioxirane and 2,2'-(1,4-phenylene)dioxirane -----	EC50	1,2 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Reaction mass of 2-ethyl-4- methyl-1H-imidazole-1- propionitrile and 2-ethyl-5- methyl-1H-imidazole-1- propionitrile 568591-00-4	EC50	99,9 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Bisphenol-F epichlorhydrin resin; MW<700 -----	EC50	2,55 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
2-(Ethylphenyl)oxirane 58220-88-5	EC50	1,2 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
1H-Imidazole, 2-ethyl-4- methyl- 931-36-2	EC50	297,3 mg/l	48 h	Daphnia magna	EU Method C.2 (Acute Toxicity for Daphnia)

Chronic toxicity (aquatic invertebrates):

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Bisphenol A Diglycidyl Ether 1675-54-3	NOEC	0,3 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
Bisphenol-F epichlorhydrin resin; MW<700 -----	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.

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Bisphenol A Diglycidyl Ether 1675-54-3	EC50	> 11 mg/l	72 h	Scenedesmus capricornutum	other guideline:
Bisphenol A Diglycidyl Ether 1675-54-3	NOEC	4,2 mg/l	72 h	Scenedesmus capricornutum	other guideline:
Reaction mass of 2-(3-ethylphenyl)oxirane and 2,2'-(1,3-phenylene) dioxirane and 2,2'-(1,4-phenylene)dioxirane -----	EC50	21 mg/l	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)
Reaction mass of 2-(3-ethylphenyl)oxirane and 2,2'-(1,3-phenylene) dioxirane and 2,2'-(1,4-phenylene)dioxirane -----	NOEC	3,2 mg/l	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)
Reaction mass of 2-ethyl-4-methyl-1H-imidazole-1-propionitrile and 2-ethyl-5-methyl-1H-imidazole-1-propionitrile 568591-00-4	EC50	65 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Reaction mass of 2-ethyl-4-methyl-1H-imidazole-1-propionitrile and 2-ethyl-5-methyl-1H-imidazole-1-propionitrile 568591-00-4	EC10	27,4 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Bisphenol-F epichlorhydrin resin; MW<700 -----	EC50	1,8 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
2-(Ethylphenyl)oxirane 58220-88-5	ErC50	21 mg/l	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)
1H-Imidazole, 2-ethyl-4-methyl- 931-36-2	EC50	124,8 mg/l	72 h	Desmodesmus subspicatus	DIN 38412-09
1H-Imidazole, 2-ethyl-4-methyl- 931-36-2	EC10	56,7 mg/l	72 h	Desmodesmus subspicatus	DIN 38412-09

Toxicity (microorganisms):

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

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Bisphenol A Diglycidyl Ether 1675-54-3	IC50	> 100 mg/l	3 h	activated sludge, industrial	other guideline:
Reaction mass of 2-(3-ethylphenyl)oxirane and 2,2'-(1,3-phenylene) dioxirane and 2,2'-(1,4-phenylene)dioxirane -----	EC50	160 mg/l	3 h	activated sludge	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
Bisphenol-F epichlorhydrin resin; MW<700 -----	IC50	> 100 mg/l	3 h	activated sludge, industrial	other guideline:
2-(Ethylphenyl)oxirane 58220-88-5	EC50	160 mg/l	3 h	activated sludge	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)

12.2. Persistence and degradability

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Test type	Degradability	Exposure time	Method
Bisphenol A Diglycidyl Ether 1675-54-3	not inherently biodegradable	not specified	12 %	28 d	OECD Guideline 302 B (Inherent biodegradability: Zahn- Wellens/EMPA Test)
Bisphenol A Diglycidyl Ether 1675-54-3	not readily biodegradable.	aerobic	5 %	28 d	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
Reaction mass of 2-(3- ethylphenyl)oxirane and 2,2'- (1,3-phenylene) dioxirane and 2,2'-(1,4-phenylene)dioxirane -----	not readily biodegradable.	aerobic	16 %	28 d	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)
Reaction mass of 2-ethyl-4- methyl-1H-imidazole-1- propionitrile and 2-ethyl-5- methyl-1H-imidazole-1- propionitrile 568591-00-4	not readily biodegradable.	aerobic	0 %	28 d	OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I))
Bisphenol-F epichlorhydrin resin; MW<700 -----	not readily biodegradable.	aerobic	0 %	28 d	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
2-(Ethylphenyl)oxirane 58220-88-5	not readily biodegradable.	aerobic	16 %	28 d	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)
1H-Imidazole, 2-ethyl-4- methyl- 931-36-2	readily biodegradable	aerobic	86 %	28 d	OECD Guideline 301 A (new version) (Ready Biodegradability: DOC Die Away Test)

12.3. Bioaccumulative potential

No data available.

12.4. Mobility in soil

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	LogPow	Temperature	Method
Bisphenol A Diglycidyl Ether 1675-54-3	> 2,64 - 3,78	25 °C	OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)
Reaction mass of 2-(3-ethylphenyl)oxirane and 2,2'-(1,3-phenylene) dioxirane and 2,2'-(1,4-phenylene)dioxirane -----	1,36 - 2,68		OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
Reaction mass of 2-ethyl-4-methyl-1H-imidazole-1-propionitrile and 2-ethyl-5-methyl-1H-imidazole-1-propionitrile 568591-00-4	< 0,3	25 °C	OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)
Bisphenol-F epichlorhydrin resin; MW<700 -----	2,7 - 3,6		OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)
1H-Imidazole, 2-ethyl-4-methyl- 931-36-2	1,13	25 °C	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)

12.5. Results of PBT and vPvB assessment

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	PBT / vPvB
Bisphenol A Diglycidyl Ether 1675-54-3	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Bisphenol-F epichlorhydrin resin; MW<700 -----	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
1H-Imidazole, 2-ethyl-4-methyl- 931-36-2	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:

Dispose of in accordance with local and national regulations.

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

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**
Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.
- 14.2. UN proper shipping name**
Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.
- 14.3. Transport hazard class(es)**
Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.
- 14.4. Packing group**
Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.
- 14.5. Environmental hazards**
Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.
- 14.6. Special precautions for user**
Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.
- 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 2024/590):	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 %

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.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H373 May cause damage to organs through prolonged or repeated exposure.
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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