



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

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LOCTITE ABLESTIK 285

SDS No. : 373698

V004.0

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

1.1. Product identifier

LOCTITE ABLESTIK 285

UFI: GF7S-QW7U-Q20J-9M8G

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

Intended use:

Epoxy adhesive

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

Intended use:

Epoxy resin

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.	
Germ cell mutagenicity	Category 2
H341 Suspected of causing genetic defects.	
Carcinogenicity	Category 2
H351 Suspected of causing cancer.	
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

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane

Bisphenol-F epichlorhydrin resin; MW<700
butyl glycidyl ether

Signal word:

Warning

Hazard statement:

H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H341 Suspected of causing genetic defects.
H351 Suspected of causing cancer.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statement: Prevention

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

Precautionary statement: Response

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

2.3. Other hazards

None if used properly.

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
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane 1675-54-3 216-823-5 01-2119456619-26	2,5- < 25 %	Eye Irrit. 2, H319 Aquatic Chronic 2, H411 Skin Sens. 1, H317 Skin Irrit. 2, H315	Eye Irrit. 2; H319; C >= 5 % Skin Irrit. 2; H315; C >= 5 %	
Bisphenol-F epichlorohydrin resin; MW<700 ----- 500-006-8 01-2119454392-40	0,25- < 2,5 %	Skin Irrit. 2, H315 Skin Sens. 1A, H317 Aquatic Chronic 2, H411		
butyl glycidyl ether 2426-08-6 219-376-4 01-2120756799-30	1- < 3 %	Muta. 2, H341 Carc. 2, H351 Flam. Liq. 3, H226 Aquatic Chronic 3, H412 Skin Sens. 1, H317 STOT SE 3, H335 Acute Tox. 4, Oral, H302 Acute Tox. 4, Inhalation, H332 Repr. 2, H361		

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:

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

Ensure good ventilation/extraction.

Keep container tightly sealed.

Refer to Technical Data Sheet.

7.3. Specific end use(s)

Epoxy adhesive

Epoxy resin

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
Aluminium oxide 1344-28-1 [ALUMINIUM OXIDES]		4	Time Weighted Average (TWA):		IR_OEL
Aluminium oxide 1344-28-1 [ALUMINIUM OXIDES]		10	Time Weighted Average (TWA):		IR_OEL
Butyl 2,3-epoxypropyl ether 2426-08-6 [BUTYL-2,3-EPOXYPROPYL ETHER (BGE)]	3		Time Weighted Average (TWA):		IR_OEL
Butyl 2,3-epoxypropyl ether 2426-08-6 [BUTYL-2,3-EPOXYPROPYL ETHER(BGE)]			Skin designation:	Can be absorbed through the skin.	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
Aluminium oxide 1344-28-1 [ALUMINIUM OXIDES, INHALABLE DUST]		10	Time Weighted Average (TWA):		EH40 WEL
Aluminium oxide 1344-28-1 [ALUMINIUM OXIDES, RESPIRABLE DUST]		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	
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700 1675-54-3	aqua (freshwater)		0,006 mg/l				
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700 1675-54-3	Freshwater - intermittent		0,018 mg/l				
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700 1675-54-3	aqua (marine water)		0,001 mg/l				
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700 1675-54-3	Marine water - intermittent		0,002 mg/l				
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700 1675-54-3	sewage treatment plant (STP)		10 mg/l				
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700 1675-54-3	sediment (freshwater)				0,341 mg/kg		
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700 1675-54-3	sediment (marine water)				0,034 mg/kg		
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700 1675-54-3	Soil				0,065 mg/kg		
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700 1675-54-3	oral				11 mg/kg		
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700 1675-54-3	Air						no hazard identified
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

butyl glycidyl ether 2426-08-6	aqua (freshwater)		0,009 mg/l				
butyl glycidyl ether 2426-08-6	Freshwater - intermittent		0,092 mg/l				
butyl glycidyl ether 2426-08-6	aqua (marine water)		0,001 mg/l				
butyl glycidyl ether 2426-08-6	sediment (freshwater)				0,054 mg/kg		
butyl glycidyl ether 2426-08-6	sediment (marine water)				0,005 mg/kg		
butyl glycidyl ether 2426-08-6	Soil				0,005 mg/kg		
butyl glycidyl ether 2426-08-6	Predator						no potential for bioaccumulation

Derived No-Effect Level (DNEL):

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700 1675-54-3	Workers	inhalation	Long term exposure - systemic effects		4,93 mg/m ³	no hazard identified
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700 1675-54-3	Workers	dermal	Long term exposure - systemic effects		0,75 mg/kg	no hazard identified
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700 1675-54-3	General population	inhalation	Long term exposure - systemic effects		0,87 mg/m ³	no hazard identified
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700 1675-54-3	General population	dermal	Long term exposure - systemic effects		0,0893 mg/kg	no hazard identified
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700 1675-54-3	General population	oral	Long term exposure - systemic effects		0,5 mg/kg	no hazard identified
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700 1675-54-3	Workers	inhalation	Long term exposure - local effects			no hazard identified
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700 1675-54-3	Workers	inhalation	Acute/short term exposure - local effects			no hazard identified
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700 1675-54-3	Workers	dermal	Long term exposure - local effects			no hazard identified
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700 1675-54-3	Workers	dermal	Acute/short term exposure - local effects			no hazard identified
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700 1675-54-3	General population	inhalation	Long term exposure - local effects			no hazard identified
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700 1675-54-3	General population	inhalation	Acute/short term exposure - local effects			no hazard identified
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700 1675-54-3	General population	dermal	Long term exposure - local effects			no hazard identified
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700 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/m ³	no hazard identified
Reaction mass bisphenol-F-(epichlorhydrin)	Workers	dermal	Long term		104,15 mg/kg	no hazard identified

-----			exposure - systemic effects			
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

Biological Exposure Indices:

None

8.2. Exposure controls:**Engineering controls:**

Ensure good ventilation/extraction.

Respiratory protection:

Ensure adequate ventilation.

An approved mask or respirator fitted with an organic vapour cartridge should be worn if the product is used in a poorly ventilated area

Filter type: A (EN 14387)

Hand protection:

Chemical-resistant protective gloves (EN 374).

Suitable materials for short-term contact or splashes (recommended: at least protection index 2, corresponding to > 30 minutes permeation time as per EN 374):

nitrile rubber (NBR; $\geq$ 0.4 mm thickness)

Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374):

nitrile rubber (NBR; $\geq$ 0.4 mm thickness)

This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced.

Eye protection:

Safety glasses with sideshields or chemical safety goggles should be worn if there is a risk of splashing.

Protective eye equipment should conform to EN166.

Skin protection:

Wear suitable protective clothing.

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

Advices to personal protection equipment:

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

Personal protective equipment should conform to the relevant EN standard.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Delivery form

paste

Colour

Black

Odor

Mild, Epoxy

Physical state

liquid

Melting point

Not applicable, Product is a liquid

Solidification temperature	< 15 °C (< 59 °F)
Initial boiling point	> 100 °C (> 212 °F)
Flammability	The product is not flammable.
Explosive limits	Not applicable, The product is not flammable.
Flash point	> 93 °C (> 199.4 °F)
Auto-ignition temperature	Not applicable, The product is not flammable.
Decomposition temperature	> 100 °C (> 212 °F); Substance/mixture is not self-reactive, no organic peroxide and does not decompose under foreseen conditions of use, Not applicable
pH	Not applicable, Product reacts with water.
Viscosity (kinematic) (20 °C (68 °F);)	> 20 mm ² /s
Solubility (qualitative) (20 °C (68 °F); Solvent: Water)	Not soluble. Polymerizes in presence of water.
Partition coefficient: n-octanol/water	Not applicable
Vapour pressure (25 °C (77 °F))	Mixture < 0,1 mm hg
Vapour pressure (20 °C (68 °F))	< 0,1 hPa
Density (20 °C (68 °F))	2,3 g/cm ³ no method / method unknown
Relative vapour density: (20 °C)	> 1,0
Particle characteristics	Not applicable Product is a liquid

9.2. Other information

Other information not applicable for this product

SECTION 10: Stability and reactivity

10.1. Reactivity

Reacts with strong oxidants.
Reaction with strong acids.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

See section reactivity

10.4. Conditions to avoid

Stable under normal conditions of storage and use.

10.5. Incompatible materials

See section reactivity.

10.6. Hazardous decomposition products

carbon oxides.

SECTION 11: Toxicological information**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.

Hazardous substances CAS-No.	Value type	Value	Species	Method
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)] bisoxirane 1675-54-3	LD50	> 2.000 mg/kg	rat	OECD Guideline 420 (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)
butyl glycidyl ether 2426-08-6	LD50	1.530 mg/kg	mouse	not specified

Acute dermal toxicity:

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

Hazardous substances CAS-No.	Value type	Value	Species	Method
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)] bisoxirane 1675-54-3	LD50	> 2.000 mg/kg	rat	OECD Guideline 402 (Acute Dermal Toxicity)
Bisphenol-F epichlorhydrin resin; MW<700 -----	LD50	> 2.000 mg/kg	rat	equivalent or similar to OECD Guideline 402 (Acute Dermal Toxicity)
butyl glycidyl ether 2426-08-6	LD50	2.520 mg/kg	rabbit	not specified

Acute inhalative toxicity:

No substance data available.
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
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)] bisoxirane 1675-54-3	irritating			Weight of evidence
Bisphenol-F epichlorhydrin resin; MW<700 -----	irritating	4 h	rabbit	equivalent or similar to OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

Serious eye damage/irritation:

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

Hazardous substances CAS-No.	Result	Exposure time	Species	Method
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)] bisoxirane 1675-54-3	irritating			Weight of evidence
Bisphenol-F epichlorhydrin resin; MW<700 -----	not irritating		rabbit	equivalent or similar to 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
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)] bisoxirane 1675-54-3	sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
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.

Hazardous substances CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)] bisoxirane 1675-54-3	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 472 (Genetic Toxicology: Escherichia coli, 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.

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Sex	Method
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)] bisoxirane 1675-54-3	not carcinogenic	dermal	2 y daily	mouse	male	OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)] bisoxirane 1675-54-3	not carcinogenic	oral: gavage	2 y daily	rat	male/female	OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)

Reproductive toxicity:

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

Hazardous substances CAS-No.	Result / Value	Test type	Route of application	Species	Method
2,2'-(1-methylethylidene)bis(4,1-phenyleneoxymethylene)] bisoxirane 1675-54-3	NOAEL P $\geq$ 50 mg/kg NOAEL F1 $\geq$ 750 mg/kg NOAEL F2 $\geq$ 750 mg/kg	Two generation study	oral: gavage	rat	OECD Guideline 416 (Two-Generation Reproduction Toxicity Study)
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.

Hazardous substances CAS-No.	Result / Value	Route of application	Exposure time / Frequency of treatment	Species	Method
2,2'-(1-methylethylidene)bis(4,1-phenyleneoxymethylene)] bisoxirane 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-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
2,2'-(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane 1675-54-3	LC50	1,75 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)
butyl glycidyl ether 2426-08-6	LC50	65 mg/l	96 h	Salmo gairdneri (new name: Oncorhynchus mykiss)	OECD Guideline 203 (Fish, Acute Toxicity Test)

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
2,2'-(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane 1675-54-3	EC50	1,7 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)
butyl glycidyl ether 2426-08-6	LC50	9,2 mg/l	48 h	Daphnia magna	not specified

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
2,2'-(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane 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
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane 1675-54-3	EC50	> 11 mg/l	72 h	Scenedesmus capricornutum	OECD Guideline 201 (Alga, Growth Inhibition Test)
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane 1675-54-3	NOEC	4,2 mg/l	72 h	Scenedesmus capricornutum	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)
butyl glycidyl ether 2426-08-6	EC50	35 mg/l	96 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)

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
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane 1675-54-3	IC50	> 100 mg/l	3 h	activated sludge, industrial	other guideline:
Bisphenol-F epichlorhydrin resin; MW<700 -----	IC50	> 100 mg/l	3 h	activated sludge, industrial	other guideline:

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
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane 1675-54-3	not readily biodegradable.	aerobic	5 %	28 d	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
Bisphenol-F epichlorhydrin resin; MW<700 -----	not readily biodegradable.	aerobic	0 %	28 d	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
butyl glycidyl ether 2426-08-6	not readily biodegradable.	aerobic	25 %	28 d	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle 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
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane 1675-54-3	3,242	25 °C	EU Method A.8 (Partition Coefficient)
Bisphenol-F epichlorhydrin resin; MW<700 -----	2,7 - 3,6		OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)
butyl glycidyl ether 2426-08-6	0,63		QSAR (Quantitative Structure Activity Relationship)

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
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane 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.

12.6. Endocrine disrupting properties

not applicable

12.7. Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product disposal:

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

Dispose of in accordance with local and national regulations.

Disposal of uncleaned packages:

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

Waste code

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

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

SECTION 14: Transport information

- 14.1. UN number or ID number**
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:

H226 Flammable liquid and vapour.
H302 Harmful if swallowed.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H341 Suspected of causing genetic defects.
H351 Suspected of causing cancer.
H361 Suspected of damaging fertility or the unborn child.
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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