



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

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LOCTITE ECCOBOND EO1016 30CC

SDS No. : 213439
V005.0

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

1.1. Product identifier

LOCTITE ECCOBOND EO1016 30CC
UFI: PQSC-NW27-K201-7T2M

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

Intended use:
1-c- epoxide 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.	
Skin sensitizer	Category 1
H317 May cause an allergic skin reaction.	
Chronic hazards to the aquatic environment	Category 2
H411 Toxic to aquatic life with long lasting effects.	

2.2. Label elements

Label elements (CLP):

Hazard pictogram:



Contains

Bisphenol-F epichlorhydrin resin; MW<700

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane
Cashew (Anacardium occidentale) Nutshell Extract, Decarboxylated, Distilled

Signal word:

Warning

Hazard statement:

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

**Precautionary statement:
Prevention**

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

**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.

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 No REACH-Reg. No.	Concentration	Classification	Specific Conc. Limits, M-factors and ATEs	Add. Information
Bisphenol-F epichlorhydrin resin; MW<700 ----- 01-2119454392-40	25- < 50 %	Skin Irrit. 2, H315 Skin Sens. 1A, H317 Aquatic Chronic 2, H411		
2,2'-(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane 1675-54-3 216-823-5 01-2119456619-26	0,1- < 1 %	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 %	
Cashew (Anacardium occidentale) Nutshell Extract, Decarboxylated, Distilled 8007-24-7 01-2119502450-57	0,01- < 0,1 %	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1A, H317 Aquatic Chronic 3, H412		

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.

Prolonged or repeated contact may cause eye irritation.

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

See section: Description of first aid measures

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

water, carbon dioxide, foam, powder

Extinguishing media which must not be used for safety reasons:

High pressure waterjet

5.2. Special hazards arising from the substance or mixture

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

5.3. Advice for firefighters

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

Additional information:

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

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid contact with skin and eyes.

Wear protective equipment.

Ensure adequate ventilation.

6.2. Environmental precautions

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

6.3. Methods and material for containment and cleaning up

Dispose of contaminated material as waste according to Section 13.

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

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

6.4. Reference to other sections

See advice in section 8

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid skin and eye contact.

See advice in section 8

Hygiene measures:

Wash hands before work breaks and after finishing work.

Do not eat, drink or smoke while working.

Good industrial hygiene practices should be observed.

7.2. Conditions for safe storage, including any incompatibilities

Store in sealed original container.

Protect against contamination.

Store in a cool, dry place.

Ensure that storage and workrooms are adequately ventilated.

Must be stored in a room with spill collection facilities.

Keep away from heat and direct sunlight.

Refer to Technical Data Sheet.

7.3. Specific end use(s)

1-c- epoxide 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
Aluminium hydroxide 21645-51-2 [DUSTS NON-SPECIFIC]		4	Time Weighted Average (TWA):		IR_OEL
Aluminium hydroxide 21645-51-2 [DUSTS NON-SPECIFIC]		10	Time Weighted Average (TWA):		IR_OEL

Occupational Exposure Limits

Valid for
Great Britain

Ingredient [Regulated substance]	ppm	mg/m ³	Value type	Short term exposure limit category / Remarks	Regulatory list
Aluminium hydroxide 21645-51-2 [DUST, RESPIRABLE DUST]		4	Time Weighted Average (TWA):		EH40 WEL
Aluminium hydroxide 21645-51-2 [DUST, INHALABLE DUST]		10	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 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
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-	Air						no hazard identified

epoxypropane, number average molecular weight ≤ 700 1675-54-3							
Cashew, nutshell liq. 8007-24-7	aqua (freshwater)		0,0114 mg/l				
Cashew, nutshell liq. 8007-24-7	aqua (marine water)		0,00114 mg/l				
Cashew, nutshell liq. 8007-24-7	Sewage treatment plant		100 mg/l				
Cashew, nutshell liq. 8007-24-7	sediment (freshwater)				5 mg/kg		
Cashew, nutshell liq. 8007-24-7	sediment (marine water)				0,5 mg/kg		
Cashew, nutshell liq. 8007-24-7	Soil				171,41 mg/kg		
Cashew, nutshell liq. 8007-24-7	oral				33,3 mg/kg		

Derived No-Effect Level (DNEL):

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
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
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/m3	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/m3	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
Cashew, nutshell liq. 8007-24-7	Workers	inhalation	Long term exposure - systemic effects		7,4 mg/m ³	
Cashew, nutshell liq. 8007-24-7	Workers	dermal	Long term exposure - systemic effects		2,1 mg/kg	
Cashew, nutshell liq. 8007-24-7	General population	inhalation	Long term exposure - systemic effects		1,31 mg/m ³	
Cashew, nutshell liq. 8007-24-7	General population	dermal	Long term exposure - systemic effects		0,75 mg/kg	
Cashew, nutshell liq. 8007-24-7	General population	oral	Long term exposure - systemic effects		0,75 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	Characteristic
Physical state	liquid
Melting point	Not applicable, Product is a liquid
Initial boiling point	Not applicable, Polymerizes before boiling point is reached.
Flammability	The product is not flammable.
Explosive limits	Not applicable, The product is not flammable.
Flash point	> 93 °C (> 199.4 °F) Estimated
Auto-ignition temperature	Not applicable, The product is not flammable.
Decomposition temperature	> 55 °C (> 131 °F); Supplier method
pH	Not applicable, Product is non-soluble (in water).
Viscosity (kinematic)	Currently under determination
Viscosity, dynamic	460 - 830 poise COI OLN 0002A; Brookfield Viscosity
(Brookfield; Instrument: RVF; 25 °C (77 °F); speed of rotation: 20 min-1; Spindle No: 7)	
Solubility (qualitative)	Not miscible or difficult to mix
(20 °C (68 °F); Solvent: Water)	
Solubility (qualitative)	Partially miscible
(20 °C (68 °F); Solvent: ketones)	
Partition coefficient: n-octanol/water	Not applicable
	Mixture
Vapour pressure	Not available.
Density	1,5 - 1,6 g/cm ³ no method / method unknown
(20 °C (68 °F))	
Relative vapour density:	Not available.
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**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.

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-F epichlorhydrin resin; MW<700 -----	LD50	> 5.000 mg/kg	rat	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity)
2,2'-[(1- methylethylidene)bis(4,1- phenyleneoxymethylene)] bisoxirane 1675-54-3	LD50	> 2.000 mg/kg	rat	OECD Guideline 420 (Acute Oral Toxicity)
Cashew (Anacardium occidentale) Nutshell Extract, Decarboxylated, Distilled 8007-24-7	LD50	> 2.000 mg/kg	rat	OECD Guideline 423 (Acute Oral toxicity)

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-F epichlorhydrin resin; MW<700 -----	LD50	> 2.000 mg/kg	rat	equivalent or similar to OECD Guideline 402 (Acute Dermal Toxicity)
2,2'-[(1- methylethylidene)bis(4,1- phenyleneoxymethylene)] bisoxirane 1675-54-3	LD50	> 2.000 mg/kg	rat	OECD Guideline 402 (Acute Dermal Toxicity)
Cashew (Anacardium occidentale) Nutshell Extract, Decarboxylated, Distilled 8007-24-7	LD50	> 2.000 mg/kg	rat	OECD Guideline 402 (Acute Dermal Toxicity)

Acute inhalative toxicity:

No data available.

Skin corrosion/irritation:

Causes skin irritation.

Hazardous substances CAS-No.	Result	Exposure time	Species	Method
Bisphenol-F epichlorhydrin resin; MW<700 -----	irritating	4 h	rabbit	equivalent or similar to OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
2,2'-[(1- methylethylidene)bis(4,1- phenyleneoxymethylene)] bisoxirane 1675-54-3	irritating			Weight of evidence
Cashew (Anacardium occidentale) Nutshell Extract, Decarboxylated, Distilled 8007-24-7	irritating	24 h	rabbit	other guideline:
Cashew (Anacardium occidentale) Nutshell Extract, Decarboxylated, Distilled 8007-24-7	irritating	4 h	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-F epichlorhydrin resin; MW<700 -----	not irritating		rabbit	equivalent or similar to OECD Guideline 405 (Acute Eye Irritation / Corrosion)
2,2'-[(1- methylethylidene)bis(4,1- phenyleneoxymethylene)] bisoxirane 1675-54-3	irritating			Weight of evidence
Cashew (Anacardium occidentale) Nutshell Extract, Decarboxylated, Distilled 8007-24-7	corrosive		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)

Respiratory or skin sensitization:

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

Hazardous substances CAS-No.	Result	Test type	Species	Method
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)
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)
Cashew (Anacardium occidentale) Nutshell Extract, Decarboxylated, Distilled 8007-24-7	sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
Cashew (Anacardium occidentale) Nutshell Extract, Decarboxylated, Distilled 8007-24-7	Sub-Category 1A (sensitising)	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)

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-F epichlorhydrin resin; MW<700 -----	positive	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
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)

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
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.

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

Hazardous substances CAS-No.	Result / Value	Test type	Route of application	Species	Method
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)
2,2'-[(1- methylethylidene)bis(4,1- phenyleneoxymethylene)] bisoxirane 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)

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-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)
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)

Aspiration hazard:

No data available.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

No substance data available.

No data available.

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-F epichlorhydrin resin; MW<700 -----	LC50	5,7 mg/l	96 h	Leuciscus idus	OECD Guideline 203 (Fish, Acute Toxicity Test)
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)
Cashew (Anacardium occidentale) Nutshell Extract, Decarboxylated, Distilled 8007-24-7	LL50	> 1.000 mg/l	96 h	Cyprinodon variegatus	OECD Guideline 203 (Fish, Acute Toxicity Test)
Cashew (Anacardium occidentale) Nutshell Extract, Decarboxylated, Distilled 8007-24-7	NOEC	0,26 mg/l	30 d	Danio rerio	OECD Guideline 210 (fish early life stage 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
Bisphenol-F epichlorhydrin resin; MW<700 -----	EC50	2,55 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
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)
Cashew (Anacardium occidentale) Nutshell Extract, Decarboxylated, Distilled 8007-24-7	EL50	40,46 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

Chronic 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-F epichlorhydrin resin; MW<700 -----	NOEC	0,3 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane	NOEC	0,3 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)

1675-54-3					
Cashew (Anacardium occidentale) Nutshell Extract, Decarboxylated, Distilled 8007-24-7	NOEC	0,1135 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-F epichlorhydrin resin; MW<700 -----	EC50	1,8 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
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)
Cashew (Anacardium occidentale) Nutshell Extract, Decarboxylated, Distilled 8007-24-7	EL50	5,82 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Cashew (Anacardium occidentale) Nutshell Extract, Decarboxylated, Distilled 8007-24-7	NOELR	1 mg/l	72 h	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
Bisphenol-F epichlorhydrin resin; MW<700 -----	IC50	> 100 mg/l	3 h	activated sludge, industrial	other guideline:
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane 1675-54-3	IC50	> 100 mg/l	3 h	activated sludge, industrial	other guideline:
Cashew (Anacardium occidentale) Nutshell Extract, Decarboxylated, Distilled 8007-24-7	EC50	> 1.000 mg/l	3 h	activated sludge	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)

12.2. Persistence and degradability

Biodegradability (Screening Tests):

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-F epichlorhydrin resin; MW<700 -----	not readily biodegradable.	aerobic	0 %	28 d	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
2,2'-[(1- methylethylidene)bis(4,1- phenyleneoxymethylene)]biso xirane 1675-54-3	not readily biodegradable.	aerobic	5 %	28 d	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
Cashew (Anacardium occidentale) Nutshell Extract, Decarboxylated, Distilled 8007-24-7	readily biodegradable	aerobic	83,8 %	28 d	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)

No substance data available.

(Bio)degradability (Simulation Tests):

No data available.

12.3. Bioaccumulative potential**Partition Coefficient (octanol/water)**

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

Hazardous substances CAS-No.	LogPow	Temperature	Method
Bisphenol-F epichlorhydrin resin; MW<700 -----	2,7 - 3,6		OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)
2,2'-[(1- methylethylidene)bis(4,1- phenyleneoxymethylene)]biso xirane 1675-54-3	3,242	25 °C	EU Method A.8 (Partition Coefficient)

No substance data available.

Bioconcentration factor (BCF)

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.	LogKoc	pH	Method
Bisphenol-F epichlorhydrin resin; MW<700 -----	3,65		OECD Guideline 121 (OECD 121: Estimation of the Koc on Soil and on Sewage Sludge using HPLC)
Cashew (Anacardium occidentale) Nutshell Extract, Decarboxylated, Distilled 8007-24-7	2,088		QSAR (Quantitative Structure Activity Relationship)

12.5. Results of PBT / vPvB / PMT / vPvM assessment**PBT/vPvB**

This mixture does not contain any substances that are assessed to be a PBT or vPvB.
Based on available data, the classification criteria are not met.

PMT/vPvM

This mixture does not contain any substances that are assessed to be a PMT or vPvM.
Based on available data, the classification criteria are not met.

12.6. Endocrine disrupting properties

No substance data available.

No data available.

12.7. Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product disposal:

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

Dispose of in accordance with local and national regulations.

Disposal of uncleaned packages:

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

Waste code

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

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

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

ADR	3082
RID	3082
IMDG	3082
IATA	3082

14.2. UN proper shipping name

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

14.3. Transport hazard class(es)

ADR	9
RID	9
IMDG	9
IATA	9

14.4. Packing group

ADR	III
RID	III
IMDG	III
IATA	III

14.5. Environmental hazards

ADR	Environmentally Hazardous
RID	Environmentally Hazardous
ADN	Environmentally Hazardous
IMDG	Marine Pollutant
IATA	Environmentally Hazardous

14.6. Special precautions for user

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

The transport classifications in this section apply generally to packed and bulk goods alike. For containers with a net volume of no more than 5 L for liquid substances or a net mass of no more than 5 kg for solid substances per individual or inner package, the exemptions SP 375 (ADR), A197 (IATA), 2.10.2.7 (IMDG), NZ 4.3(10) may be applied, which can result in a deviation from the transport classification for packed goods.

14.7. Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

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

Ozone Depleting Substance (ODS) (Regulation (EC) No 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 < 3 %
(2010/75/EC)

Seveso III (2012/18/EU): E2, Hazardous to the Aquatic Environment in Category Chronic 2

15.2. Chemical safety assessment

A chemical safety assessment has not been carried out.

SECTION 16: Other information

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

- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H411 Toxic to aquatic life with long lasting effects.
- H412 Harmful to aquatic life with long lasting effects.

Abbreviations and acronyms:

- ADG(-Code): Australian Dangerous Goods (Code)
- ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
- ADR : European Agreement concerning the International Carriage of Dangerous Goods by Road
- ASTM: American Society for Testing and Materials
- ATE: acute toxicity estimate
- AS: Australian Standard
- AwSV: Ordinance on Installations for the Handling of Substances Hazardous to Water
- CAS: Chemical Abstract Service
- CLP: Regulation (EC) No 1272/2008
- CMR: cancerogenic, mutagenic or reprotoxic
- DIN: German Institute for Standardization
- ECx: Effective concentration (x% effective level)
- ECHA: European Chemicals Agency
- EC-Nummer: Substance number in the EU-inventories EINECS/ELINCS
- ECLTV: European community threshold limit value
- ED: Substance identified as having endocrine disrupting properties
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- EN : European Standard
- ENCS: Japanese chemical inventory
- EPA: US Environmental Protection Agency
- EU: European Union
- EU EXPLD1: Substance listed in Annex I, Reg (EC) No. 2019/1148
- EU EXPLD2: Substance listed in Annex II, Reg (EC) No. 2019/1148
- EWC: European Waste Catalogue
- GHS: Globally Harmonised System for Classification and Labelling of Chemicals
- GLP: Good Laboratory Practice
- HSNO: Hazardous Substances and New Organisms
- IARC: International Agency for Research of Cancer
- IATA: International Air Transport Association
- IBC-Code: International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
- IC50: half maximal inhibitory concentration
- ICAO: International Civil Aviation Organization
- IMDG-Code: International Maritime Code for Dangerous Goods
- IMO: International Maritime Organization
- ISO: International Standardization Organisation
- LC50: Median lethal concentration
- LD50: Median lethal dose
- MARPOL: International Convention for the Prevention of Marine Pollution from Ships
- n.o.s.: not otherwise specified
- NO(A)EC: No (adverse) effect concentration
- NO(A)EL: No (adverse) effect level
- NZS: New Zealand Standard
- OECD: Organisation for Economic Co-operation and Development
- OEL: Occupational Exposure Limit
- OPPT: US EPA Office of Pollution Prevention and Toxics
- OPPTS: US EPA Office of Prevention, Pesticides and Toxic Substances
- PBT: Persistent, bioaccumulative, toxic
- (Q)SAR: (Quantitative) structure–activity relationship
- REACH: Regulation (EC) No. 1907/2006
- RID: Regulations concerning the International Transport of Dangerous Goods by Rail
- SADT: Self Accelerating Decomposition Temperature

SDS: Safety Data Sheet
STOT: Specific Target Organ Toxicity
STOT SE: Specific Target Organ Toxicity - single exposure
STOT RE: Specific Target Organ Toxicity - repeated exposure
SUSMP: Standard for the Uniform Scheduling of Medicines and Poisons
SVHC: Substance of very high concern (REACH Candidate List)
TRGS: German Technical Rules for hazardous substances
UN: United Nations
VOC: Volatile Organic Compound
814.018 VOC Reg CH: Swiss Ordinance 814.018 on the Incentive Tax on Volatile Organic Compounds
vPvB: Very persistent, very bioaccumulative
VwVwS: Administrative Regulation on Substances Hazardous to Waters
WGK: Water hazard class

Further information:

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