



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

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LOCTITE ABLESTIK 45LV MOD known as ECCOBOND 45 LV MOD 3
KG

SDS No. : 328812
V007.1

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

1.1. Product identifier

LOCTITE ABLESTIK 45LV MOD known as ECCOBOND 45 LV MOD 3 KG

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

Intended use:

Epoxy adhesive

1.3. Details of the supplier of the safety data sheet

Henkel Ltd

Adhesives

Wood Lane End

HP2 4RQ Hemel Hempstead

Great Britain

Phone: +44 (1442) 278000

ua-productsafety.uk@henkel.com

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

1.4. Emergency telephone number

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

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (CLP):

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

2.2. Label elements

Label elements (CLP):

Hazard pictogram:



Contains

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

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.
H411 Toxic to aquatic life with long lasting effects.

Supplemental information

Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.

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

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

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

SECTION 3: Composition/information on ingredients

3.2. Mixtures

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

Hazardous components CAS-No. EC Number REACH-Reg No.	Concentration	Classification	Specific Conc. Limits, M- factors and ATEs	Add. Information
reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight≤700) 25068-38-6	50- 100 %	Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Chronic 2, H411 Eye Irrit. 2, H319	Eye Irrit. 2; H319; C >= 5 % Skin Irrit. 2; H315; C >= 5 %	
Bisphenol-F epichlorhydrin resin; MW<700 9003-36-5 01-2119454392-40	10- 20 %	Skin Irrit. 2, Dermal, H315 Skin Sens. 1, H317 Aquatic Chronic 2, H411		
butyl glycidyl ether 2426-08-6 219-376-4 01-2120756799-30	1- < 5 %	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		
Titanium dioxide 13463-67-7 236-675-5 01-2119489379-17	1- < 5 %	Carc. 2, Inhalation, H351		

**For full text of the H - statements and other abbreviations see section 16 "Other information".
 Substances without classification may have community workplace exposure limits available.**

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:

Move to fresh air. If symptoms persist, seek medical advice.

Skin contact:

Rinse with running water and soap.

Obtain medical attention if irritation persists.

Eye contact:

Rinse immediately with plenty of running water (for 10 minutes), seek medical attention from a specialist.

Ingestion:

Rinse mouth, drink 1-2 glasses of water, do not induce vomiting, consult a doctor.

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

EYE: Irritation, conjunctivitis.

SKIN: Redness, inflammation.

SKIN: Rash, Urticaria.

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

See section: Description of first aid measures

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

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

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure Limits

Valid for
 Great Britain

Ingredient [Regulated substance]	ppm	mg/m ³	Value type	Short term exposure limit category / Remarks	Regulatory list
Titanium dioxide 13463-67-7 [TITANIUM DIOXIDE, RESPIRABLE]		4	Time Weighted Average (TWA):		EH40 WEL
Titanium dioxide 13463-67-7 [TITANIUM DIOXIDE, TOTAL INHALABLE]		10	Time Weighted Average (TWA):		EH40 WEL

Occupational Exposure Limits

Valid for
 Ireland

Ingredient [Regulated substance]	ppm	mg/m ³	Value type	Short term exposure limit category / Remarks	Regulatory list
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
Titanium dioxide 13463-67-7 [TITANIUM DIOXIDE]		10	Time Weighted Average (TWA):		IR_OEL
Titanium dioxide 13463-67-7 [TITANIUM DIOXIDE]		4	Time Weighted Average (TWA):		IR_OEL

Predicted No-Effect Concentration (PNEC):

Name on list	Environmental Compartment	Exposure period	Value				Remarks
			mg/l	ppm	mg/kg	others	
Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700) (old) 9003-36-5	aqua (freshwater)		0,003 mg/l				
Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700) (old) 9003-36-5	aqua (marine water)		0,0003 mg/l				
Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700) (old) 9003-36-5	sewage treatment plant (STP)		10 mg/l				
Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700) (old) 9003-36-5	sediment (freshwater)				0,294 mg/kg		
Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700) (old) 9003-36-5	sediment (marine water)				0,0294 mg/kg		
Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700) (old) 9003-36-5	Soil				0,237 mg/kg		
Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700) (old) 9003-36-5	aqua (intermittent releases)		0,0254 mg/l				
Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700) (old) 9003-36-5	Air						no hazard identified
Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700) (old) 9003-36-5	Predator						no potential for bioaccumulation

Derived No-Effect Level (DNEL):

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700) (old) 9003-36-5	Workers	Inhalation	Long term exposure - systemic effects		29,39 mg/m3	no hazard identified
Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700) (old) 9003-36-5	Workers	dermal	Long term exposure - systemic effects		104,15 mg/kg	no hazard identified
Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700) (old) 9003-36-5	Workers	dermal	Acute/short term exposure - local effects		0,0083 mg/cm2	no hazard identified
Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700) (old) 9003-36-5	General population	Inhalation	Long term exposure - systemic effects		8,7 mg/m3	no hazard identified
Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700) (old) 9003-36-5	General population	dermal	Long term exposure - systemic effects		62,5 mg/kg	no hazard identified
Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700) (old) 9003-36-5	General population	oral	Long term exposure - systemic effects		6,25 mg/kg	no hazard identified
Titanium dioxide 13463-67-7	Workers	inhalation	Long term exposure - local effects		10 mg/m3	
Titanium dioxide 13463-67-7	General population	oral	Long term exposure - systemic effects		700 mg/kg	

Biological Exposure Indices:

None

8.2. Exposure controls:

Engineering controls:

Ensure good ventilation/extraction.

Respiratory protection:

Ensure adequate ventilation.

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

Filter type: A (EN 14387)

Hand protection:

Chemical-resistant protective gloves (EN 374).

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

nitrile rubber (NBR; ≥ 0.4 mm thickness)

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

nitrile rubber (NBR; ≥ 0.4 mm thickness)

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

Eye protection:

Safety glasses with sideshields or chemical safety goggles should be worn if there is a risk of splashing.
Protective eye equipment should conform to EN166.

Skin protection:

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

Advices to personal protection equipment:

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

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	liquid
Delivery form	liquid
Colour	white
Odor	Slight
Solidification temperature	< 10 °C (< 50 °F)
Initial boiling point	Not determined
Flammability	Not applicable Non flammable product (flash point is greater than 93°C)
Explosive limits	Not applicable, The product is not flammable.
Flash point	> 100 °C (> 212 °F); no method
Auto-ignition temperature	Not applicable, The product is not flammable.
Decomposition temperature	Currently under determination
pH	Not applicable
Viscosity (kinematic)	Currently under determination
Solubility (qualitative) (20 °C (68 °F); Solvent: Water)	Insoluble
Partition coefficient: n-octanol/water	Currently under determination
Vapour pressure	Not determined
Density (20 °C (68 °F))	1,17 g/cm ³ no method
Relative vapour density: (20 °C)	> 1
Particle characteristics	Currently under determination

9.2. Other information

Other information not applicable for this product

SECTION 10: Stability and reactivity

10.1. Reactivity

Reacts with strong oxidants.
Reaction with strong acids.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

See section reactivity

10.4. Conditions to avoid

Stable under normal conditions of storage and use.

10.5. Incompatible materials

See section reactivity.

10.6. Hazardous decomposition products

carbon oxides.

SECTION 11: Toxicological information

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

Acute oral toxicity:

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

Hazardous substances CAS-No.	Value type	Value	Species	Method
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight≤700) 25068-38-6	LD50	> 2.000 mg/kg	rat	OECD Guideline 420 (Acute Oral Toxicity)
Bisphenol-F epichlorhydrin resin; MW<700 9003-36-5	LD50	> 5.000 mg/kg	rat	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity)
butyl glycidyl ether 2426-08-6	LD50	1.000 mg/kg	rat	not specified
Titanium dioxide 13463-67-7	LD50	> 5.000 mg/kg	rat	OECD Guideline 425 (Acute Oral Toxicity: Up-and-Down Procedure)

Acute dermal toxicity:

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

Hazardous substances CAS-No.	Value type	Value	Species	Method
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight≤700) 25068-38-6	LD50	> 2.000 mg/kg	rat	OECD Guideline 402 (Acute Dermal Toxicity)
Bisphenol-F epichlorhydrin resin; MW<700 9003-36-5	LD50	> 2.000 mg/kg	rat	equivalent or similar to OECD Guideline 402 (Acute Dermal Toxicity)
Titanium dioxide 13463-67-7	LD50	> 10.000 mg/kg	rabbit	not specified

Acute inhalative toxicity:

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

Hazardous substances CAS-No.	Value type	Value	Test atmosphere	Exposure time	Species	Method
Titanium dioxide 13463-67-7	LC50	> 6,82 mg/l	dust	4 h	rat	not specified

Skin corrosion/irritation:

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

Hazardous substances CAS-No.	Result	Exposure time	Species	Method
reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight≤700) 25068-38-6	not irritating	4 h	rabbit	not specified
Bisphenol-F epichlorhydrin resin; MW<700 9003-36-5	irritating	4 h	rabbit	equivalent or similar to OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Titanium dioxide 13463-67-7	not 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
reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight≤700) 25068-38-6	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Bisphenol-F epichlorhydrin resin; MW<700 9003-36-5	not irritating		rabbit	equivalent or similar to OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Titanium dioxide 13463-67-7	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)

Respiratory or skin sensitization:

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

Hazardous substances CAS-No.	Result	Test type	Species	Method
reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight≤700) 25068-38-6	sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
Bisphenol-F epichlorhydrin resin; MW<700 9003-36-5	sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
Titanium dioxide 13463-67-7	not sensitising	Mouse local lymphnode assay (LLNA)	mouse	equivalent or similar to OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
Titanium dioxide 13463-67-7	not sensitising	Buehler 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.

Hazardous substances CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight≤700) 25068-38-6	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 472 (Genetic Toxicology: Escherichia coli, Reverse Mutation Assay)
Bisphenol-F epichlorhydrin resin; MW<700 9003-36-5	positive	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Titanium dioxide 13463-67-7	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Titanium dioxide 13463-67-7	negative	in vitro mammalian chromosome aberration test	with and without		OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
Titanium dioxide 13463-67-7	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Titanium dioxide 13463-67-7	negative	in vitro mammalian cell micronucleus test	without		equivalent or similar to OECD Guideline 487 (In vitro Mammalian Cell Micronucleus Test)
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight≤700) 25068-38-6	negative	oral: gavage		mouse	not specified
Bisphenol-F epichlorhydrin resin; MW<700 9003-36-5	negative	oral: gavage		mouse	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
Bisphenol-F epichlorhydrin resin; MW<700 9003-36-5	negative	oral: gavage		rat	OECD Guideline 486 (Unscheduled DNA Synthesis (UDS) Test with Mammalian Liver Cells in vivo)
Titanium dioxide 13463-67-7	negative	oral: gavage		rat	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)

Carcinogenicity

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

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Sex	Method
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight≤700) 25068-38-6	not carcinogenic	dermal	2 y daily	mouse	male	OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight≤700) 25068-38-6	not carcinogenic	oral: gavage	2 y daily	rat	male/female	OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)
Titanium dioxide 13463-67-7	not carcinogenic	oral: feed	103 w daily	rat	male/female	not specified

Reproductive toxicity:

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

Hazardous substances CAS-No.	Result / Value	Test type	Route of application	Species	Method
reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight≤700) 25068-38-6	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 9003-36-5	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)
Titanium dioxide 13463-67-7	NOAEL P >= 1.000 mg/kg NOAEL F1 >= 1.000 mg/kg	one- generation study	oral: feed	rat	OECD Guideline 443 (Extended One-Generation Reproductive Toxicity Study)

STOT-single exposure:

No data available.

STOT-repeated exposure::

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

Hazardous substances CAS-No.	Result / Value	Route of application	Exposure time / Frequency of treatment	Species	Method
reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight≤700) 25068-38-6	NOAEL 50 mg/kg	oral: gavage	14 w daily	rat	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
Bisphenol-F epichlorhydrin resin; MW<700 9003-36-5	NOAEL 250 mg/kg	oral: gavage	13 w daily	rat	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
Titanium dioxide 13463-67-7	NOAEL > 1.000 mg/kg	oral: gavage	92 d daily	rat	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)

Aspiration hazard:

No data available.

11.2 Information on other hazards

not applicable

SECTION 12: Ecological information

General ecological information:

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

12.1. Toxicity

Toxicity (Fish):

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

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight≤700) 25068-38-6	LC50	1,75 mg/l	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
Bisphenol-F epichlorhydrin resin; MW<700 9003-36-5	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)
Titanium dioxide 13463-67-7	LC50	Toxicity > Water solubility	48 h	Leuciscus idus	OECD Guideline 203 (Fish, Acute Toxicity Test)

Toxicity (Daphnia):

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

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight≤700) 25068-38-6	EC50	1,7 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Bisphenol-F epichlorhydrin resin; MW<700 9003-36-5	EC50	2,55 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Titanium dioxide 13463-67-7	EC50	Toxicity > Water solubility	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

Chronic toxicity to aquatic invertebrates

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

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight≤700) 25068-38-6	NOEC	0,3 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
Bisphenol-F epichlorhydrin resin; MW<700 9003-36-5	NOEC	0,3 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
Titanium dioxide 13463-67-7	NOEC	Toxicity > Water solubility	21 d	Daphnia magna	OECD Guideline 202 (Daphnia sp. Chronic Immobilisation Test)

Toxicity (Algae):

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

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight≤700) 25068-38-6	EC50	> 11 mg/l	72 h	Scenedesmus capricornutum	OECD Guideline 201 (Alga, Growth Inhibition Test)
reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight≤700) 25068-38-6	NOEC	4,2 mg/l	72 h	Scenedesmus capricornutum	OECD Guideline 201 (Alga, Growth Inhibition Test)
Bisphenol-F epichlorhydrin resin; MW<700 9003-36-5	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)
Titanium dioxide 13463-67-7	EC50	Toxicity > Water solubility	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Titanium dioxide 13463-67-7	NOEC	Toxicity > Water solubility	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)

Toxicity to microorganisms

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

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight≤700) 25068-38-6	IC50	> 100 mg/l	3 h	activated sludge, industrial	other guideline:
Bisphenol-F epichlorhydrin resin; MW<700 9003-36-5	IC50	> 100 mg/l	3 h	activated sludge, industrial	other guideline:
Titanium dioxide 13463-67-7	EC0	Toxicity > Water solubility	24 h	Pseudomonas fluorescens	DIN 38412, part 8 (Pseudomonas Zellvermehrungshemm- Test)

12.2. Persistence and degradability

Hazardous substances CAS-No.	Result	Test type	Degradability	Exposure time	Method
reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight≤700) 25068-38-6	not readily biodegradable.	aerobic	5 %	28 d	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
Bisphenol-F epichlorhydrin resin; MW<700 9003-36-5	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 substance data available.
 No data available.

12.4. Mobility in soil

Hazardous substances CAS-No.	LogPow	Temperature	Method
reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight≤700) 25068-38-6	3,242	25 °C	EU Method A.8 (Partition Coefficient)
Bisphenol-F epichlorhydrin resin; MW<700 9003-36-5	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

Hazardous substances CAS-No.	PBT / vPvB
Bisphenol-F epichlorhydrin resin; MW<700 9003-36-5	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Titanium dioxide 13463-67-7	According to Annex XIII of regulation (EC) 1907/2006 a PBT and vPvB assessment shall not be conducted for inorganic substances.

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

ADR	3082
RID	3082
ADN	3082
IMDG	3082
IATA	3082

14.2. UN proper shipping name

ADR	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy resin)
RID	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy resin)
ADN	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy resin)
IMDG	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy resin)
IATA	Environmentally hazardous substance, liquid, n.o.s. (Epoxy resin)

14.3. Transport hazard class(es)

ADR	9
RID	9
ADN	9
IMDG	9
IATA	9

14.4. Packing group

ADR	III
RID	III
ADN	III
IMDG	III
IATA	III

14.5. Environmental hazards

ADR	not applicable
RID	not applicable
ADN	not applicable
IMDG	Marine pollutant
IATA	not applicable

14.6. Special precautions for user

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

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

14.7. Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

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

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

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.
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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This information is based on our current level of knowledge and relates to the product in the state in which it is delivered. It is intended to describe our products from the point of view of safety requirements and is not intended to guarantee any particular properties.

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