



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

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SDS No. : 390844  
V002.0

LOCTITE ABLESTIK 2053S known as Ablebond 2053S (10g),

Revision: 27.03.2019  
printing date: 17.10.2019

Replaces version from: 14.03.2018

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

#### 1.1. Product identifier

LOCTITE ABLESTIK 2053S known as Ablebond 2053S (10g),

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

Intended use:

Adhesive

#### 1.3. Details of the supplier of the safety data sheet

Henkel AG & Co. KGaA

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40589 Düsseldorf

Germany

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#### 1.4. Emergency telephone number

The Henkel information service also provides an around-the-clock telephone service on phone no.+49-(0)211-797-3350 for exceptional cases.

### 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.

**Toxic to reproduction**

**Category 2**

**H361d Suspected of damaging the unborn child.**

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-Propenoic acid, 2-phenoxyethyl ester

Epoxy Acrylate Oligomer

RP Bisphenol F-epichlorohydrin resin, MW&lt;=700

t-Butylcyclohexylpercarbonate

reaction product: bisphenol-A-(epichlorohydrin); epoxy resin (number average molecular weight≤700)

**Signal word:****Warning****Hazard statement:****H315 Causes skin irritation.****H317 May cause an allergic skin reaction.****H319 Causes serious eye irritation.****H361d Suspected of damaging the unborn child.****H412 Harmful to aquatic life with long lasting effects.****Precautionary statement:****P273 Avoid release to the environment.****Prevention****P280 Wear protective gloves/protective clothing/eye protection/face protection.****Precautionary statement:****P302+P352 IF ON SKIN: Wash with plenty of soap and water.****Response****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.

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

Adhesive

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

Hazardous components CAS-No.	EC Number REACH-Reg No.	content	Classification
2-Propenoic acid, 2-phenoxyethyl ester 48145-04-6	256-360-6 01-2119980532-35	5- < 10 %	Skin Sens. 1A H317 Repr. 2 H361d Aquatic Chronic 2 H411
2,2-dimethyl-1,3-propanediyl bismethacrylate 1985-51-9	217-856-8	5- < 10 %	STOT SE 3 H335 Skin Irrit. 2 H315 Eye Irrit. 2 H319
Epoxy Acrylate Oligomer 55818-57-0	500-130-2 01-2119490020-53	5- < 10 %	Skin Sens. 1 H317
RP Bisphenol F-epichlorohydrin resin, MW<=700 28064-14-4		1- < 5 %	Skin Irrit. 2 H315 Skin Sens. 1A H317 Eye Irrit. 2 H319 Aquatic Chronic 2 H411
t-Butylcyclohexylpercarbonate 15520-11-3	239-557-1 01-2119966122-42	0,25- < 2,5 %	Org. Perox. C H242 Skin Sens. 1 H317 Aquatic Chronic 4 H413
reaction product: bisphenol-A- (epichlorohydrin); epoxy resin (number average molecular weight≤700) 25068-38-6	01-2119456619-26	0,1- < 1 %	Skin Irrit. 2 H315 Skin Sens. 1 H317 Eye Irrit. 2 H319 Aquatic Chronic 2 H411

**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:**

Should not be a problem as product is of low volatility. However, if feeling unwell remove patient to fresh air.

**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) and carbon dioxide (CO<sub>2</sub>) can be released.

In case of fire toxic gases 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.

**6.2. Environmental precautions**

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

**6.3. Methods and material for containment and cleaning up**

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

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

Dispose of contaminated material as waste according to Section 13.

**6.4. Reference to other sections**

See advice in section 8

**SECTION 7: Handling and storage****7.1. Precautions for safe handling**

Avoid skin and eye contact.

See advice in section 8

**Hygiene measures:**

Good industrial hygiene practices should be observed.

Wash hands before work breaks and after finishing work.

Do not eat, drink or smoke while working.

**7.2. Conditions for safe storage, including any incompatibilities**

Ensure good ventilation/extraction.

Keep container tightly sealed.

Refer to Technical Data Sheet

**7.3. Specific end use(s)**

Adhesive

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**SECTION 8: Exposure controls/personal protection**

**8.1. Control parameters**

**Occupational Exposure Limits**

Valid for  
Germany

None

**Predicted No-Effect Concentration (PNEC):**

Name on list	Environmental Compartment	Exposure period	Value				Remarks
			mg/l	ppm	mg/kg	others	
2-Phenoxyethyl acrylate 48145-04-6	aqua (freshwater)		0,002 mg/l				
2-Phenoxyethyl acrylate 48145-04-6	Soil				0,006 mg/kg		
2-Phenoxyethyl acrylate 48145-04-6	sewage treatment plant (STP)		1,77 mg/l				
2-Phenoxyethyl acrylate 48145-04-6	aqua (intermittent releases)		0,0121 mg/l				
2-Phenoxyethyl acrylate 48145-04-6	aqua (marine water)		0,0002 mg/l				
2-Phenoxyethyl acrylate 48145-04-6	sediment (marine water)				0,002 mg/kg		
2-Phenoxyethyl acrylate 48145-04-6	sediment (freshwater)				0,02 mg/kg		
4,4'-isopropylidenediphenol-, polymer with (chloromethyl)oxirane, acrylate 55818-57-0	aqua (freshwater)		0,1 mg/l				
4,4'-isopropylidenediphenol-, polymer with (chloromethyl)oxirane, acrylate 55818-57-0	aqua (marine water)		0,01 mg/l				
4,4'-isopropylidenediphenol-, polymer with (chloromethyl)oxirane, acrylate 55818-57-0	aqua (intermittent releases)		1 mg/l				
4,4'-isopropylidenediphenol-, polymer with (chloromethyl)oxirane, acrylate 55818-57-0	Soil				7,1 mg/kg		
4,4'-isopropylidenediphenol-, polymer with (chloromethyl)oxirane, acrylate 55818-57-0	sewage treatment plant (STP)		10 mg/l				
4,4'-isopropylidenediphenol-, polymer with (chloromethyl)oxirane, acrylate 55818-57-0	sediment (freshwater)				35,8 mg/kg		
4,4'-isopropylidenediphenol-, polymer with (chloromethyl)oxirane, acrylate 55818-57-0	sediment (marine water)				3,58 mg/kg		
Bis(4-tert-butylcyclohexyl) peroxydicarbonate 15520-11-3	aqua (freshwater)		0,39 mg/l				
Bis(4-tert-butylcyclohexyl) peroxydicarbonate 15520-11-3	aqua (marine water)		0,039 mg/l				
Bis(4-tert-butylcyclohexyl) peroxydicarbonate 15520-11-3	aqua (intermittent releases)		0,39 mg/l				
Bis(4-tert-butylcyclohexyl) peroxydicarbonate 15520-11-3	aqua (freshwater)				4685 mg/kg		
Bis(4-tert-butylcyclohexyl) peroxydicarbonate 15520-11-3	sediment (marine water)				468,5 mg/kg		
Bis(4-tert-butylcyclohexyl) peroxydicarbonate 15520-11-3	Soil				936,8 mg/kg		
Bis(4-tert-butylcyclohexyl) peroxydicarbonate 15520-11-3	sewage treatment plant (STP)		2 mg/l				
Reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	aqua (freshwater)		0,006 mg/l				
Reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	aqua (marine water)		0,001 mg/l				
Reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	sewage treatment plant (STP)		10 mg/l				

Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	sediment (freshwater)				0,996 mg/kg		
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	sediment (marine water)				0,1 mg/kg		
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	Soil				0,196 mg/kg		
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	oral				11 mg/kg		
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	aqua (intermittent releases)		0,018 mg/l				

**Derived No-Effect Level (DNEL):**

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
2-Phenoxyethyl acrylate 48145-04-6	Workers	inhalation	Long term exposure - systemic effects		12 mg/m3	
2-Phenoxyethyl acrylate 48145-04-6	Workers	inhalation	Long term exposure - local effects		77 mg/m3	
2-Phenoxyethyl acrylate 48145-04-6	Workers	dermal	Long term exposure - systemic effects		3,5 mg/kg	
4,4'-isopropylidenediphenol-, polymer with (chloromethyl)oxirane, acrylate 55818-57-0	Workers	inhalation	Long term exposure - systemic effects		1,17 mg/m3	
4,4'-isopropylidenediphenol-, polymer with (chloromethyl)oxirane, acrylate 55818-57-0	Workers	dermal	Long term exposure - systemic effects		33 mg/kg	
4,4'-isopropylidenediphenol-, polymer with (chloromethyl)oxirane, acrylate 55818-57-0	General population	inhalation	Long term exposure - systemic effects		0,29 mg/m3	
4,4'-isopropylidenediphenol-, polymer with (chloromethyl)oxirane, acrylate 55818-57-0	General population	dermal	Long term exposure - systemic effects		16,67 mg/kg	
4,4'-isopropylidenediphenol-, polymer with (chloromethyl)oxirane, acrylate 55818-57-0	General population	oral	Long term exposure - systemic effects		0,17 mg/kg	
Bis(4-tert-butylcyclohexyl) peroxydicarbonate 15520-11-3	Workers	inhalation	Long term exposure - systemic effects		5,87 mg/m3	
Bis(4-tert-butylcyclohexyl) peroxydicarbonate 15520-11-3	Workers	dermal	Long term exposure - systemic effects		16,67 mg/kg	
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	Workers	dermal	Acute/short term exposure - systemic effects		8,33 mg/kg	
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	Workers	Inhalation	Acute/short term exposure - systemic effects		12,25 mg/m3	
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	Workers	dermal	Long term exposure - systemic effects		8,33 mg/kg	
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	Workers	Inhalation	Long term exposure - systemic effects		12,25 mg/m3	
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	General population	dermal	Acute/short term exposure - systemic effects		3,571 mg/kg	
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	General population	dermal	Long term exposure - systemic effects		3,571 mg/kg	
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	General population	oral	Acute/short term exposure - systemic effects		0,75 mg/kg	
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	General population	oral	Long term exposure - systemic effects		0,75 mg/kg	
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	General population	inhalation	Acute/short term exposure - systemic effects		0,75 mg/m3	
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	General population	inhalation	Long term exposure - systemic effects		0,75 mg/m3	



**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 &gt; 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 &gt; 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**

Appearance	paste
Colour	red
Odor	Slight
Odour threshold	No data available / Not applicable
pH	No data available / Not applicable
Melting point	No data available / Not applicable
Solidification temperature	No data available / Not applicable
Initial boiling point	No data available / Not applicable
Flash point	> 93 °C (> 199.4 °F)
Evaporation rate	No data available / Not applicable
Flammability	No data available / Not applicable
Explosive limits	No data available / Not applicable
Vapour pressure	Not applicable
Relative vapour density:	No data available / Not applicable
Density	No data available / Not applicable
Bulk density	No data available / Not applicable

Solubility	No data available / Not applicable
Solubility (qualitative) (Solvent: Water)	Insoluble
Partition coefficient: n-octanol/water	No data available / Not applicable
Auto-ignition temperature	No data available / Not applicable
Decomposition temperature	No data available / Not applicable
Viscosity	No data available / Not applicable
Viscosity (kinematic)	No data available / Not applicable
Explosive properties	No data available / Not applicable
Oxidising properties	No data available / Not applicable

## 9.2. Other information

No data available / Not applicable

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Reacts with alcohols and amines.

Reacts with oxidants, acids and lyes

Reaction with some curing agents may produce an exothermic reaction which in large masses could cause runaway polymerization.

### 10.2. Chemical stability

Stable under recommended storage conditions.

### 10.3. Possibility of hazardous reactions

See section reactivity

### 10.4. Conditions to avoid

No decomposition if stored and applied as directed.

### 10.5. Incompatible materials

See section reactivity.

### 10.6. Hazardous decomposition products

Hydrocarbons

carbon oxides.

nitrogen oxides

Rapid polymerisation may generate excessive heat and pressure.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

#### 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-Propenoic acid, 2-phenoxyethyl ester 48145-04-6	LD50	> 5.000 mg/kg	rat	OECD Guideline 401 (Acute Oral Toxicity)
Epoxy Acrylate Oligomer 55818-57-0	LD0	> 2.000 mg/kg	rat	OECD Guideline 401 (Acute Oral Toxicity)
Epoxy Acrylate Oligomer 55818-57-0	LD50	> 2.000 mg/kg	rat	OECD Guideline 401 (Acute Oral Toxicity)
RP Bisphenol F-epichlorohydrin resin, MW<=700 28064-14-4	LD50	> 5.000 mg/kg	rat	OECD Guideline 401 (Acute Oral Toxicity)
t-Butylcyclohexylpercarbonate 15520-11-3	LD50	> 5.000 mg/kg	rat	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity)
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)

#### 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-Propenoic acid, 2-phenoxyethyl ester 48145-04-6	LD50	> 2.000 mg/kg	rat	EU Method B.3 (Acute Toxicity (Dermal))
Epoxy Acrylate Oligomer 55818-57-0	LD0	> 2.000 mg/kg	rat	OECD Guideline 402 (Acute Dermal Toxicity)
Epoxy Acrylate Oligomer 55818-57-0	LD50	> 2.000 mg/kg	rat	OECD Guideline 402 (Acute Dermal Toxicity)
RP Bisphenol F-epichlorohydrin resin, MW<=700 28064-14-4	LD50	> 2.000 mg/kg	rat	OECD Guideline 402 (Acute Dermal Toxicity)
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)

**Acute inhalative toxicity:**

No data available.

**Skin corrosion/irritation:**

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

Hazardous substances CAS-No.	Result	Exposure time	Species	Method
Epoxy Acrylate Oligomer 55818-57-0	not irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
RP Bisphenol F- epichlorohydrin resin, MW<=700 28064-14-4	irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
reaction product: bisphenol-A- (epichlorohydrin); epoxy resin (number average molecular weight<=700) 25068-38-6	moderately irritating	24 h	rabbit	Draize Test

**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
Epoxy Acrylate Oligomer 55818-57-0	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
RP Bisphenol F- epichlorohydrin resin, MW<=700 28064-14-4	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
reaction product: bisphenol-A- (epichlorohydrin); epoxy resin (number average molecular weight<=700) 25068-38-6	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
2-Propenoic acid, 2- phenoxyethyl ester 48145-04-6	sensitising	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)
Epoxy Acrylate Oligomer 55818-57-0	sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
Epoxy Acrylate Oligomer 55818-57-0	sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
RP Bisphenol F- epichlorohydrin resin, MW<=700 28064-14-4	sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
t- Butylcyclohexylpercarbon ate 15520-11-3	sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
reaction product: bisphenol-A- (epichlorohydrin); 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)

**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-Propenoic acid, 2-phenoxyethyl ester 48145-04-6	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
2-Propenoic acid, 2-phenoxyethyl ester 48145-04-6	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
2-Propenoic acid, 2-phenoxyethyl ester 48145-04-6	negative	in vitro mammalian chromosome aberration test	with and without		OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
RP Bisphenol F-epichlorohydrin resin, MW<=700 28064-14-4	positive	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
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)
RP Bisphenol F-epichlorohydrin resin, MW<=700 28064-14-4	negative	oral: gavage		mouse	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
RP Bisphenol F-epichlorohydrin resin, MW<=700 28064-14-4	negative	oral: gavage		rat	OECD Guideline 486 (Unscheduled DNA Synthesis (UDS) Test with Mammalian Liver Cells in vivo)
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight≤700) 25068-38-6	negative	oral: gavage		mouse	not specified

**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)

**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
RP Bisphenol F-epichlorohydrin resin, MW<=700 28064-14-4	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)
reaction product: bisphenol-A-(epichlorohydrin); 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)

**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
RP Bisphenol F-epichlorohydrin resin, MW<=700 28064-14-4	NOAEL 250 mg/kg	oral: gavage	13 w daily	rat	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
reaction product: bisphenol-A-(epichlorohydrin); 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)

**Aspiration hazard:**

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.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
2-Propenoic acid, 2-phenoxyethyl ester 48145-04-6	LC50	10 mg/l	96 h	Leuciscus idus	OECD Guideline 203 (Fish, Acute Toxicity Test)
RP Bisphenol F-epichlorohydrin resin, MW<=700 28064-14-4	LC 50	5,7 mg/l	96 h	Ide, silver or golden orfe (Leuciscus idus)	
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)

#### 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
2-Propenoic acid, 2-phenoxyethyl ester 48145-04-6	EC50	1,21 mg/l	48 d	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Epoxy Acrylate Oligomer 55818-57-0	EC50	> 100 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
RP Bisphenol F-epichlorohydrin resin, MW<=700 28064-14-4	EC50	3,5 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
t-Butylcyclohexylpercarbonate 15520-11-3	EC50		48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
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)

#### 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
RP Bisphenol F-epichlorohydrin resin, MW<=700 28064-14-4	NOEC	0,3 mg/l	21 day	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
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)

#### 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
2-Propenoic acid, 2-phenoxyethyl ester 48145-04-6	EC10	0,71 mg/l	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	ISO 8692 (Water Quality)
2-Propenoic acid, 2-phenoxyethyl ester 48145-04-6	EC50	4,4 mg/l	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	ISO 8692 (Water Quality)
Epoxy Acrylate Oligomer 55818-57-0	NOEC	1,2 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Epoxy Acrylate Oligomer 55818-57-0	EC50	105 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
RP Bisphenol F-epichlorohydrin resin, MW<=700 28064-14-4	EC50	9,4 mg/l	72 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	not specified
t-Butylcyclohexylpercarbonate 15520-11-3	EC50		72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)
t-Butylcyclohexylpercarbonate 15520-11-3	NOEC		72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)
reaction product: bisphenol-A-(epichlorohydrin); 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-(epichlorohydrin); 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)

#### 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
RP Bisphenol F-epichlorohydrin resin, MW<=700 28064-14-4	IC50	> 100 mg/l	3 h	activated sludge	not specified
reaction product: bisphenol-A-(epichlorohydrin); epoxy resin (number average molecular weight<=700) 25068-38-6	IC50	> 100 mg/l	3 h	activated sludge, industrial	other guideline:

#### 12.2. Persistence and degradability

The product is not biodegradable.

Hazardous substances CAS-No.	Result	Test type	Degradability	Exposure time	Method
2-Propenoic acid, 2-phenoxyethyl ester 48145-04-6		aerobic	22,3 %	28 d	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
Epoxy Acrylate Oligomer 55818-57-0		aerobic	42 %	28 d	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
RP Bisphenol F-epichlorohydrin resin, MW<=700 28064-14-4	not readily biodegradable.	no data	5 %	28 day	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
t-Butylcyclohexylpercarbonate 15520-11-3	not readily biodegradable.	aerobic	3 %	28 d	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)
reaction product: bisphenol-A-(epichlorohydrin); 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)



**12.3. Bioaccumulative potential**

No data available.

Hazardous substances CAS-No.	Bioconcentration factor (BCF)	Exposure time	Temperature	Species	Method
RP Bisphenol F-epichlorohydrin resin, MW<=700 28064-14-4	31			no data	not specified

**12.4. Mobility in soil**

Cured adhesives are immobile.

Hazardous substances CAS-No.	LogPow	Temperature	Method
2-Propenoic acid, 2-phenoxyethyl ester 48145-04-6	2,58		OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)
Epoxy Acrylate Oligomer 55818-57-0	1,6 - 3,8	23 °C	OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)
RP Bisphenol F-epichlorohydrin resin, MW<=700 28064-14-4	3,242		OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)
t-Butylcyclohexylpercarbonate 15520-11-3	8,34		QSAR (Quantitative Structure Activity Relationship)
reaction product: bisphenol-A-(epichlorohydrin); epoxy resin (number average molecular weight<=700) 25068-38-6	3,242	25 °C	EU Method A.8 (Partition Coefficient)

**12.5. Results of PBT and vPvB assessment**

Hazardous substances CAS-No.	PBT / vPvB
2-Propenoic acid, 2-phenoxyethyl ester 48145-04-6	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Epoxy Acrylate Oligomer 55818-57-0	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
t-Butylcyclohexylpercarbonate 15520-11-3	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
reaction product: bisphenol-A-(epichlorohydrin); epoxy resin (number average molecular weight<=700) 25068-38-6	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

**12.6. Other adverse effects**

No data available.

**SECTION 13: Disposal considerations****13.1. Waste treatment methods**

Product disposal:

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**  
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. Transport in bulk according to Annex II of Marpol and the IBC Code**  
not applicable

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

VOC content < 3 %  
(2010/75/EC)

**15.2. Chemical safety assessment**

A chemical safety assessment has not been carried out.

**National regulations/information (Germany):**

WGK: WGK = 3, highly water endangering mixture. Classification according to the mixture rules in German AwSV regulation annex 1, number 5.2 from 18. April 2017.

Storage class according to TRGS 510: 12

**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:

- H242 Heating may cause a fire.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H335 May cause respiratory irritation.
- H361d Suspected of damaging the unborn child.
- H411 Toxic to aquatic life with long lasting effects.
- H413 May cause long lasting harmful effects to aquatic life.

**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.

**Relevant changes in this safety data sheet are indicated by vertical lines at the left margin in the body of this document. Corresponding text is displayed in a different color on shadowed fields.**