



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

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LOCTITE ECCOBOND UF 3810 known as Hysol UF3810(-20DC)30cc E/C/J

SDS No. : 397711

V001.0

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Replaces version from: -

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

#### 1.1. Product identifier

LOCTITE ECCOBOND UF 3810 known as Hysol UF3810(-20DC)30cc E/C/J

#### Contains:

Epoxy resin (number average molecular weight  $\leq 700$ )  
Bisphenol-F epichlorhydrin resin; MW<700  
Dicyclopentylidimethylene diacrylate  
Epoxy Acrylate Oligomer  
p-tert-Butylphenyl 1-(2,3-epoxy)propyl ether  
2,3-Epoxypropyl methacrylate  
Bisphenol A Diglycidyl Ether  
RP Bisphenol F-epichlorohydrin resin, MW $\leq 700$   
Hydroquinone

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

Intended use:

Sample only.

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

Henkel AG & Co. KGaA  
Henkelstr. 67  
40589 Düsseldorf

Germany

Phone: +49 211 797 0

Fax-no.: +49 211 798 2009

ua-productsafety.de@henkel.com

#### 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.	
Germ cell mutagenicity	Category 2
H341 Suspected of causing genetic defects.	
Carcinogenicity	Category 1B
H350 May cause cancer.	
Toxic to reproduction	Category 1B
H360F May damage fertility.	
Specific target organ toxicity - single exposure	Category 2
H371 May cause damage to organs.	
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:



##### Signal word:

Danger

##### Hazard statement:

H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.  
H341 Suspected of causing genetic defects.  
H350 May cause cancer.  
H360F May damage fertility.  
H371 May cause damage to organs.  
H411 Toxic to aquatic life with long lasting effects.

##### Supplemental information

Restricted to professional users.

##### Precautionary statement: Prevention

P201 Obtain special instructions before use.  
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.  
P308+P313 IF exposed or concerned: Get medical advice/attention.  
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.

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**SECTION 3: Composition/information on ingredients**

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**3.2. Mixtures****General chemical description:**

Resin

**Base substances of preparation:**

Epoxy resin

Acrylate

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

<b>Hazardous components CAS-No.</b>	<b>EC Number REACH-Reg No.</b>	<b>content</b>	<b>Classification</b>
Epoxy resin (number average molecular weight $\leq$ 700) 25068-38-6	500-033-5 500-033-5 01-2119456619-26	20- 40 %	Skin Irrit. 2 H315 Skin Sens. 1 H317 Eye Irrit. 2 H319 Aquatic Chronic 2 H411
Bisphenol-F epichlorhydrin resin; MW<700 9003-36-5	500-006-8 500-006-8 01-2119454392-40	10- 20 %	Skin Irrit. 2; Dermal H315 Skin Sens. 1; Dermal H317 Aquatic Chronic 2 H411
Dicyclopentylidimethylene diacrylate 42594-17-2	255-901-3	10- 20 %	Skin Sens. 1 H317 Aquatic Chronic 2 H411
Epoxy Acrylate Oligomer 55818-57-0	500-130-2 01-2119490020-53	5- < 10 %	Skin Sens. 1 H317
p-tert-Butylphenyl 1-(2,3-epoxy)propyl ether 3101-60-8	221-453-2 01-2119959496-20	5- < 10 %	Skin Irrit. 2; Dermal H315 Skin Sens. 1; Dermal H317 Eye Irrit. 2 H319 Aquatic Chronic 2 H411
2,3-Epoxypropyl methacrylate 106-91-2	203-441-9 01-2119444916-30	5- < 10 %	Acute Tox. 4; Inhalation H332 Acute Tox. 3; Dermal H311 Acute Tox. 4; Oral H302 Eye Irrit. 2 H319 Skin Sens. 1 H317 Skin Irrit. 2 H315 STOT SE 1; Inhalation H370 Carc. 1B H350 Muta. 2 H341 Repr. 1B H360F
Isobornyl methacrylate 7534-94-3	231-403-1 01-2119886505-27	1- < 5 %	Aquatic Chronic 3 H412
tert-Butyl peroxy(2-ethyl)-hexanoate 3006-82-4	221-110-7 01-2119498310-40	0,1- < 2,5 %	Aquatic Acute 1 H400 Aquatic Chronic 1 H410 Org. Perox. C H242
Bisphenol A Diglycidyl Ether 1675-54-3	216-823-5	0,1- < 1 %	Eye Irrit. 2 H319 Skin Irrit. 2 H315 Skin Sens. 1 H317 Aquatic Chronic 2 H411

RP Bisphenol F-epichlorohydrin resin, MW<=700 28064-14-4		0,1- < 1 %	Skin Irrit. 2 H315 Skin Sens. 1 H317 Aquatic Chronic 2 H411
Hydroquinone 123-31-9	204-617-8 01-2119524016-51	0,1- < 0,25 %	Aquatic Acute 1 H400 Aquatic Chronic 1 H410 Carc. 2 H351 Muta. 2 H341 Acute Tox. 4; Oral H302 Eye Dam. 1 H318 Skin Sens. 1 H317 M factor (Acute Aquat Tox): 10

**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, consult doctor if complaint persists.

#### 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: Redness, inflammation.

SKIN: Rash, Urticaria.

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:

Foam, extinguishing powder, carbon dioxide.

Fine water spray

#### Extinguishing media which must not be used for safety reasons:

High pressure waterjet

#### **5.2. Special hazards arising from the substance or mixture**

Danger of decomposition if exposed to heat.

The product may undergo spontaneous polymerization at high temperatures. Polymerization is exothermic and may cause damage to the container and/or release of thermal decomposition products.

May produce fumes when heated to decomposition. Fumes may contain carbon monoxide and other toxic fumes.

#### **5.3. Advice for firefighters**

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

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

#### **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**

Ensure adequate ventilation.

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**

Ensure good ventilation/suction at the workplace.

Extract when the product is heated.

See advice in section 8

Avoid skin and eye contact.

Do not spray onto flame or red-hot objects.

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.

Store protected from heat influence.

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.

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

Sample only.

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

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**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	
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	aqua (intermittent releases)		0,018 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-F- (epichlorhydrin); epoxy resin (number average molecular weight <= 700) 9003-36-5	aqua (freshwater)		0,003 mg/l				
Reaction product: bisphenol-F- (epichlorhydrin); epoxy resin (number average molecular weight <= 700) 9003-36-5	aqua (marine water)		0,0003 mg/l				
Reaction product: bisphenol-F- (epichlorhydrin); epoxy resin (number average molecular weight <= 700) 9003-36-5	sewage treatment plant (STP)		10 mg/l				
Reaction product: bisphenol-F- (epichlorhydrin); epoxy resin (number average molecular weight <= 700) 9003-36-5	sediment (freshwater)				0,294 mg/kg		
Reaction product: bisphenol-F- (epichlorhydrin); epoxy resin (number average molecular weight <= 700) 9003-36-5	sediment (marine water)				0,0294 mg/kg		
Reaction product: bisphenol-F- (epichlorhydrin); epoxy resin (number average molecular weight <= 700) 9003-36-5	soil				0,237 mg/kg		
Reaction product: bisphenol-F- (epichlorhydrin); epoxy resin (number average molecular weight <= 700) 9003-36-5	aqua (intermittent releases)		0,0254 mg/l				
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		
2,3-Epoxypropyl methacrylate 106-91-2	aqua (freshwater)					0,01 mg/L	
2,3-Epoxypropyl methacrylate 106-91-2	aqua (marine water)					0,001 mg/L	
2,3-Epoxypropyl methacrylate 106-91-2	sewage treatment plant (STP)					10 mg/L	
2,3-Epoxypropyl methacrylate 106-91-2	aqua (intermittent releases)					0,1 mg/L	
2,3-Epoxypropyl methacrylate 106-91-2	sediment (freshwater)				0,09 mg/kg		
2,3-Epoxypropyl methacrylate 106-91-2	sediment (marine water)				0,009 mg/kg		
2,3-Epoxypropyl methacrylate 106-91-2	soil				0,09 mg/kg		
Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate 7534-94-3	aqua (freshwater)					4,66 µg/L	
Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate 7534-94-3	soil				0,118 mg/kg		
Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate 7534-94-3	sewage treatment plant (STP)					2,45 mg/L	
Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate 7534-94-3	sediment (freshwater)				0,604 mg/kg		
tert-Butyl 2-ethylperoxyhexanoate 3006-82-4	aqua (freshwater)					0,00044 mg/L	
tert-Butyl 2-ethylperoxyhexanoate 3006-82-4	aqua (marine water)					0,000044 mg/L	
tert-Butyl 2-ethylperoxyhexanoate 3006-82-4	aqua (intermittent releases)					0,0044 mg/L	
tert-Butyl 2-ethylperoxyhexanoate 3006-82-4	sewage treatment plant (STP)					0,64 mg/L	
tert-Butyl 2-ethylperoxyhexanoate 3006-82-4	sediment (freshwater)				0,145 mg/kg		
tert-Butyl 2-ethylperoxyhexanoate 3006-82-4	sediment (marine water)				0,0145 mg/kg		
tert-Butyl 2-ethylperoxyhexanoate 3006-82-4	soil				0,05 mg/kg		
tert-Butyl 2-ethylperoxyhexanoate 3006-82-4	oral					6,67 mg/kg food	
Hydroquinone 123-31-9	aqua (freshwater)		0,114 µg/l				
Hydroquinone 123-31-9	aqua (marine water)		0,0114 µg/l				
Hydroquinone 123-31-9	sediment (freshwater)				0,98 µg/kg		
Hydroquinone 123-31-9	sediment (marine water)				0,097 µg/kg		
Hydroquinone 123-31-9	aqua (intermittent releases)		0,00134 mg/l				
Hydroquinone 123-31-9	soil				0,129 µg/kg		
Hydroquinone 123-31-9	sewage treatment plant (STP)		0,71 mg/l				



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

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
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 bw/day	
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	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	
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-F-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 9003-36-5	Workers	dermal	Acute/short term exposure - local effects		0,0083 mg/cm2	
Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 9003-36-5	Workers	dermal	Long term exposure - systemic effects		104,15 mg/kg	
Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 9003-36-5	Workers	Inhalation	Long term exposure - systemic effects		29,39 mg/m3	
Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 9003-36-5	General population	dermal	Long term exposure - systemic effects		62,5 mg/kg	
Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 9003-36-5	General population	Inhalation	Long term exposure - systemic effects		8,7 mg/m3	
Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 9003-36-5	General population	oral	Long term exposure - systemic effects		6,25 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	
2,3-Epoxypropyl methacrylate 106-91-2	Workers	dermal	Acute/short term exposure - local effects		0,00672 mg/m3	
2,3-Epoxypropyl methacrylate 106-91-2	Workers	Inhalation	Acute/short term exposure - local effects		0,72 mg/m3	
2,3-Epoxypropyl methacrylate 106-91-2	Workers	dermal	Long term exposure - systemic effects		0,12 mg/kg bw/day	
2,3-Epoxypropyl methacrylate 106-91-2	Workers	Inhalation	Long term exposure - systemic effects		0,045 mg/m3	
2,3-Epoxypropyl methacrylate 106-91-2	Workers	dermal	Long term exposure - local effects		0,00224 mg/m3	
2,3-Epoxypropyl methacrylate 106-91-2	Workers	Inhalation	Long term exposure - local effects		0,24 mg/m3	
2,3-Epoxypropyl methacrylate 106-91-2	General population	dermal	Acute/short term exposure - local effects		0,00336 mg/cm2	
2,3-Epoxypropyl methacrylate 106-91-2	General population	Inhalation	Acute/short term exposure - local effects		0,18 mg/m3	
2,3-Epoxypropyl methacrylate 106-91-2	General population	dermal	Long term exposure - systemic effects		0,0023 mg/kg bw/day	
2,3-Epoxypropyl methacrylate 106-91-2	General population	Inhalation	Long term exposure - systemic effects		0,004 mg/m3	
2,3-Epoxypropyl methacrylate 106-91-2	General population	oral	Long term exposure - systemic effects		0,0023 mg/kg bw/day	
2,3-Epoxypropyl methacrylate 106-91-2	General population	dermal	Long term exposure - local effects		0,00112 mg/cm2	
2,3-Epoxypropyl methacrylate 106-91-2	General population	Inhalation	Long term exposure - local effects		0,06 mg/m3	
2,3-Epoxypropyl methacrylate 106-91-2	Workers	dermal	Long term exposure - systemic effects			
Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate 7534-94-3	Workers	dermal	Long term exposure - systemic effects		1,04 mg/kg	
Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate 7534-94-3	General population	dermal	Long term exposure - systemic effects		0,625 mg/kg bw/day	
tert-Butyl 2-ethylperoxyhexanoate 3006-82-4	Workers	inhalation	Long term exposure - systemic effects		2,92 mg/m3	
tert-Butyl 2-ethylperoxyhexanoate 3006-82-4	Workers	dermal	Long term exposure - systemic effects		1,66 mg/kg bw/day	
tert-Butyl 2-ethylperoxyhexanoate 3006-82-4	General population	inhalation	Long term exposure - systemic effects		0,63 mg/m3	
tert-Butyl 2-ethylperoxyhexanoate 3006-82-4	General population	dermal	Long term exposure - systemic effects		0,84 mg/kg bw/day	
tert-Butyl 2-ethylperoxyhexanoate 3006-82-4	General population	oral	Long term exposure - systemic effects		0,42 mg/kg bw/day	
Hydroquinone 123-31-9	Workers	dermal	Long term exposure - systemic effects		128 mg/kg	

Hydroquinone 123-31-9	Workers	Inhalation	Long term exposure - systemic effects		7 mg/m3	
Hydroquinone 123-31-9	Workers	Inhalation	Long term exposure - local effects		1 mg/m3	
Hydroquinone 123-31-9	General population	dermal	Long term exposure - systemic effects		64 mg/kg	
Hydroquinone 123-31-9	General population	Inhalation	Long term exposure - systemic effects		1,74 mg/m3	
Hydroquinone 123-31-9	General population	Inhalation	Long term exposure - local effects		0,5 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	liquid liquid black
Odor	mild
Odour threshold	No data available / Not applicable
pH	No data available / Not applicable
Initial boiling point	Polymerization may occur at elevated temperature.
Flash point	> 93 °C (> 199.4 °F)
Decomposition temperature	23 °C (73.4 °F)
Vapour pressure	No data available / Not applicable
Density	Not determined
(20 °C (68 °F))	
Bulk density	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
Solubility (qualitative)	Not miscible or difficult to mix
(20 °C (68 °F); Solvent: Water)	
Solidification temperature	No data available / Not applicable
Melting point	No data available / Not applicable
Flammability	No data available / Not applicable
Auto-ignition temperature	No data available / Not applicable
Explosive limits	No data available / Not applicable
Partition coefficient: n-octanol/water	No data available / Not applicable
Evaporation rate	No data available / Not applicable
Vapor density	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 oxidants, acids and lyes

Reaction with reducing agents.

Heavy metals.

Reacts with alcohols and amines.

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**

Danger of decomposition if exposed to heat.

Do not heat mixed adhesive unless you plan to use immediately.

Failure to observe these precautions may result in excessive heat build-up causing an exotherm.

#### **10.5. Incompatible materials**

See section reactivity.

#### **10.6. Hazardous decomposition products**

Hydrocarbons

Irritating vapors.

At higher temperature carbon oxides and nitrogen oxides may be generated.

Polymerization may occur at elevated temperature or in the presence of incompatible materials.

Rapid polymerisation may generate excessive heat and pressure.

May produce fumes when heated to decomposition. Fumes may contain carbon monoxide and other toxic fumes.

See section 5.

### **SECTION 11: Toxicological information**

#### **11.1. Information on toxicological effects**

##### **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.

##### **STOT-single exposure:**

May cause damage to organs.

##### **Skin irritation:**

Causes skin irritation.

##### **Eye irritation:**

Causes serious eye irritation.

##### **Sensitizing:**

May cause an allergic skin reaction.

**Mutagenicity:**

Suspected of causing genetic defects

**Carcinogenicity:**

May cause cancer

**Reproductive toxicity:**

May damage fertility.

**Acute oral toxicity:**

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Epoxy resin (number average molecular weight ≤ 700) 25068-38-6	LD50	> 2.000 mg/kg	oral		rat	OECD Guideline 420 (Acute Oral Toxicity)
Bisphenol-F epichlorhydrin resin; MW<700 9003-36-5	LD50	> 5.000 mg/kg	oral		rat	OECD Guideline 401 (Acute Oral Toxicity)
Epoxy Acrylate Oligomer 55818-57-0	LD50	> 2.000 mg/kg	oral		rat	not specified
p-tert-Butylphenyl 1-(2,3- epoxy)propyl ether 3101-60-8	LD50	> 10.000 mg/kg	oral		rat	not specified
2,3-Epoxypropyl methacrylate 106-91-2	LD50	597 mg/kg	oral		rat	not specified
Isobornyl methacrylate 7534-94-3	LD50	3.160 mg/kg	oral		rat	not specified
tert-Butyl peroxy(2- ethyl)-hexanoate 3006-82-4	LD50	> 10.000 mg/kg	oral		rat	not specified
RP Bisphenol F- epichlorohydrin resin, MW≤700 28064-14-4	LD50	> 5.000 mg/kg	oral		rat	OECD Guideline 401 (Acute Oral Toxicity)
Hydroquinone 123-31-9	LD50	367 mg/kg	oral		rat	OECD Guideline 401 (Acute Oral Toxicity)

**Acute inhalative toxicity:**

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Epoxy Acrylate Oligomer 55818-57-0	LC50	> 5 mg/l	aerosol	4 h	rat	OECD Guideline 403 (Acute Inhalation Toxicity)
tert-Butyl peroxy(2- ethyl)-hexanoate 3006-82-4	LC50	42,2 mg/l	aerosol	4 h	rat	not specified

**Acute dermal toxicity:**

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Epoxy resin (number average molecular weight ≤ 700) 25068-38-6	LD50	> 2.000 mg/kg	dermal		rat	not specified
Bisphenol-F epichlorhydrin resin; MW<700 9003-36-5	LD50	> 2.000 mg/kg	dermal		rat	OECD Guideline 402 (Acute Dermal Toxicity)
Epoxy Acrylate Oligomer 55818-57-0	LD50	> 2.000 mg/kg	dermal		rabbit	not specified
p-tert-Butylphenyl 1-(2,3- epoxy)propyl ether 3101-60-8	LD50	> 46.400 mg/kg	dermal		rat	not specified
Isobornyl methacrylate 7534-94-3	LD50	> 3.000 mg/kg	dermal		rabbit	not specified
tert-Butyl peroxy(2- ethyl)-hexanoate 3006-82-4	LD50	14.142 mg/kg	dermal		rabbit	not specified



**Skin corrosion/irritation:**

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Epoxy resin (number average molecular weight ≤ 700) 25068-38-6	moderately irritating	24 h	rabbit	Draize Test
Dicyclopentylidimethylene diacrylate 42594-17-2	not irritating		In vitro	OECD Guideline 439 (In Vitro Skin Irritation: Reconstructed Human Epidermis (RHE) Test Method)
Epoxy Acrylate Oligomer 55818-57-0	not irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Isobornyl methacrylate 7534-94-3	mildly irritating		rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

**Serious eye damage/irritation:**

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Epoxy resin (number average molecular weight ≤ 700) 25068-38-6	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Dicyclopentylidimethylene diacrylate 42594-17-2	not irritating		In vitro	OECD Guideline 437 (BCOP)
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)

**Respiratory or skin sensitization:**

Hazardous components CAS-No.	Result	Test type	Species	Method
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)
Dicyclopentylidimethylene diacrylate 42594-17-2	sensitising	Freund's complete adjuvant 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)
Isobornyl methacrylate 7534-94-3	not sensitising	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)
Hydroquinone 123-31-9	sensitising	Guinea pig maximisation test	guinea pig	not specified

**Germ cell mutagenicity:**

Hazardous components CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
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)
Epoxy resin (number average molecular weight ≤ 700) 25068-38-6	negative	oral: gavage		mouse	not specified
Dicyclopentylidimethylene diacrylate 42594-17-2	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
2,3-Epoxypropyl methacrylate 106-91-2	positive	oral: gavage		mouse	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
Isobornyl methacrylate 7534-94-3	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
	negative		with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
	negative	in vitro mammalian chromosome aberration test	with and without		OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
Bisphenol A Diglycidyl Ether 1675-54-3	negative	oral: gavage		hamster, Chinese	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
Hydroquinone 123-31-9	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		EU Method B.13/14 (Mutagenicity)

**Carcinogenicity:**

Hazardous components CAS-No.	Result	Species	Sex	Exposure timeFrequency of treatment	Route of application	Method
Epoxy resin (number average molecular weight ≤ 700) 25068-38-6	not carcinogenic	mouse	male	2 y daily	dermal	OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)
Epoxy resin (number average molecular weight ≤ 700) 25068-38-6	not carcinogenic	rat	male/female	2 y daily	oral: gavage	OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)
2,3-Epoxypropyl methacrylate 106-91-2	carcinogenic	rat	male/female	103 weeks 5d per w	oral: gavage	not specified

**Reproductive toxicity:**

Hazardous substances CAS-No.	Result / Classification	Species	Exposure time	Species	Method
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	238 d	rat	OECD Guideline 416 (Two- Generation Reproduction Toxicity Study)
2,3-Epoxypropyl methacrylate 106-91-2	NOAEL P = 30 mg/kg NOAEL F1 = 100 mg/kg	two- generation study oral: gavage		rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
Isobornyl methacrylate 7534-94-3	NOAEL P = 25 mg/kg NOAEL F1 = 500 mg/kg	oral: gavage		rat	OECD Guideline 421 (Reproduction / Developmental Toxicity Screening Test)

**Repeated dose toxicity**

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Method
Epoxy resin (number average molecular weight ≤ 700) 25068-38-6	NOAEL=50 mg/kg	oral: gavage	14 wdaily	rat	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
Dicyclopentylidimethylene diacrylate 42594-17-2	NOAEL=1.000 mg/kg	oral: gavage		rat	OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)
Hydroquinone 123-31-9	NOAEL=≥ 250 mg/kg	oral: gavage	14 days5 days/week. 12 doses	rat	OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)
Hydroquinone 123-31-9	LOAEL=≤ 500 mg/kg	oral: gavage	14 days5 days/week. 12 doses	rat	OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)

**SECTION 12: Ecological information****General ecological 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.

If used properly the product does not enter the drains.

In the cured state contribution of this product to Environmental Hazards is insignificant in comparison to articles in which it is used.

**12.1. Toxicity****Ecotoxicity:**

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

Toxic to aquatic life with long lasting effects.

Hazardous components CAS-No.	Value type	Value	Acute Toxicity Study	Exposure time	Species	Method
Epoxy resin (number average molecular weight $\leq 700$ ) 25068-38-6	LC50	1,75 mg/l	Fish	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
Epoxy resin (number average molecular weight $\leq 700$ ) 25068-38-6	EC50	9,4 mg/l	Algae	72 h	Scenedesmus capricornutum	OECD Guideline 201 (Alga, Growth Inhibition Test)
	NOEC	2,4 mg/l	Algae	72 h	Scenedesmus capricornutum	OECD Guideline 201 (Alga, Growth Inhibition Test)
Epoxy resin (number average molecular weight $\leq 700$ ) 25068-38-6	NOEC	0,3 mg/l	chronic Daphnia	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
Bisphenol-F epichlorhydrin resin; MW<700 9003-36-5	EC50	1,6 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Bisphenol-F epichlorhydrin resin; MW<700 9003-36-5	EC50	1,8 mg/l	Algae	72 h		OECD Guideline 201 (Alga, Growth Inhibition Test)
Bisphenol-F epichlorhydrin resin; MW<700 9003-36-5	NOEC	0,3 mg/l	chronic Daphnia	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
Dicyclopentylidimethylene diacrylate 42594-17-2	EC50	2,36 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Dicyclopentylidimethylene diacrylate 42594-17-2	EC50	1,6 mg/l	Algae	72 h	Pseudokirchnerella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
	EC10	0,64 mg/l	Algae	72 h	Pseudokirchnerella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Epoxy Acrylate Oligomer 55818-57-0	EC50	> 100 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Epoxy Acrylate Oligomer 55818-57-0	NOEC	1,2 mg/l	Algae	72 h	Pseudokirchnerella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
	EC50	105 mg/l	Algae	72 h	Pseudokirchnerella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
2,3-Epoxypropyl methacrylate 106-91-2	LC50	2,8 mg/l	Fish	96 h	Oryzias latipes	OECD Guideline 203 (Fish, Acute Toxicity Test)
2,3-Epoxypropyl methacrylate 106-91-2	EC50	24,9 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
2,3-Epoxypropyl methacrylate 106-91-2	NOEC	3,2 mg/l	Algae	72 h	Selenastrum capricornutum (new name: Pseudokirchnerella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
	EC50	14,6 mg/l	Algae	72 h	Selenastrum capricornutum (new name: Pseudokirchnerella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
2,3-Epoxypropyl methacrylate 106-91-2	NOEC	1,02 mg/l	chronic Daphnia	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
Isobornyl methacrylate 7534-94-3	LC50	1,79 mg/l	Fish	96 h	Danio rerio	OECD Guideline 203 (Fish, Acute Toxicity Test)
Isobornyl methacrylate 7534-94-3	EC50	1,1 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Isobornyl methacrylate 7534-94-3	EC50	2,66 mg/l	Algae	96 h	Pseudokirchnerella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
	NOEC	0,254 mg/l	Algae	96 h	Pseudokirchnerella subcapitata	OECD Guideline

Isobornyl methacrylate 7534-94-3	NOEC	0,233 mg/l	chronic Daphnia	21 d	Daphnia magna	201 (Alga, Growth Inhibition Test) OECD 211 (Daphnia magna, Reproduction Test)
tert-Butyl peroxy(2-ethyl)-hexanoate 3006-82-4	LC50	8,66 mg/l	Fish	96 h	Poecilia reticulata	OECD Guideline 203 (Fish, Acute Toxicity Test)
tert-Butyl peroxy(2-ethyl)-hexanoate 3006-82-4	EC50	7,5 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
tert-Butyl peroxy(2-ethyl)-hexanoate 3006-82-4	EC50	0,44 mg/l	Algae	72 h	Pseudokirchnerella subcapitata (reported as Selenastrum capricornutum)	OECD Guideline 201 (Alga, Growth Inhibition Test)
tert-Butyl peroxy(2-ethyl)-hexanoate 3006-82-4	NOEC	0,018 mg/l	Algae	72 h	Pseudokirchnerella subcapitata (reported as Selenastrum capricornutum)	OECD Guideline 201 (Alga, Growth Inhibition Test)
tert-Butyl peroxy(2-ethyl)-hexanoate 3006-82-4	EC 50	64 mg/l	Bacteria	3 h		OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
tert-Butyl peroxy(2-ethyl)-hexanoate 3006-82-4	NOEC	0,45 mg/l	chronic Daphnia	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
Bisphenol A Diglycidyl Ether 1675-54-3	LC50	3,1 mg/l	Fish	96 h	Pimephales promelas	OECD Guideline 203 (Fish, Acute Toxicity Test)
Bisphenol A Diglycidyl Ether 1675-54-3	EC50	1,3 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Bisphenol A Diglycidyl Ether 1675-54-3	EC 50	> 100 mg/l	Bacteria	3 h	activated sludge	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
Bisphenol A Diglycidyl Ether 1675-54-3	NOEC	0,3 mg/l	chronic Daphnia	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
RP Bisphenol F-epichlorohydrin resin, MW<=700 28064-14-4	EC50	3,5 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Hydroquinone 123-31-9	LC50	0,638 mg/l	Fish	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
Hydroquinone 123-31-9	EC50	0,134 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Hydroquinone 123-31-9	EC50	0,335 mg/l	Algae	72 h	Selenastrum capricornutum (new name: Pseudokirchnerella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Hydroquinone 123-31-9	EC 50	0,038 mg/l	Bacteria	30 min		not specified
Hydroquinone 123-31-9	NOEC	0,0057 mg/l	chronic Daphnia	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)

## 12.2. Persistence and degradability

### Persistence and Biodegradability:

The product is not biodegradable.

Hazardous components CAS-No.	Result	Route of application	Degradability	Method
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Epoxy resin (number average molecular weight $\leq$ 700) 25068-38-6		aerobic	5 %	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
Bisphenol-F epichlorhydrin resin; MW<700 9003-36-5		aerobic	5 %	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
Dicyclopentylidimethylene diacrylate 42594-17-2	Not readily biodegradable.	aerobic	28 %	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
Epoxy Acrylate Oligomer 55818-57-0		aerobic	42 %	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
2,3-Epoxypropyl methacrylate 106-91-2	readily biodegradable, but failing 10-day window	aerobic	94 %	OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I))
Isobornyl methacrylate 7534-94-3	readily biodegradable	aerobic	70 %	OECD Guideline 310 (Ready Biodegradability CO <sub>2</sub> in Sealed Vessels (Headspace Test))
tert-Butyl peroxy(2-ethyl)-hexanoate 3006-82-4	Not readily biodegradable.	aerobic	55 %	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
Bisphenol A Diglycidyl Ether 1675-54-3	not inherently biodegradable	not specified	12 %	OECD Guideline 302 B (Inherent biodegradability: Zahn-Wellens/EMPA Test)
RP Bisphenol F-epichlorohydrin resin, MW<=700 28064-14-4		aerobic	10 - 16 %	OECD Guideline 301 B (Ready Biodegradability: CO <sub>2</sub> Evolution Test)
Hydroquinone 123-31-9	readily biodegradable	aerobic	75 - 81 %	EU Method C.4-E (Determination of the "Ready" Biodegradability Closed Bottle Test)

**12.3. Bioaccumulative potential / 12.4. Mobility in soil****Mobility:**

Cured adhesives are immobile.

**Bioaccumulative potential:**

No data available.

Hazardous components CAS-No.	LogPow	Bioconcentration factor (BCF)	Exposure time	Species	Temperature	Method
Dicyclopentylidimethylene diacrylate 42594-17-2	4,6					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)
2,3-Epoxypropyl methacrylate 106-91-2	0,96				25 °C	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
Isobornyl methacrylate 7534-94-3	5,09	37	56 day	Danio rerio	24 °C	OECD Guideline 305 E (Bioaccumulation: Flow-through Fish Test)
Isobornyl methacrylate 7534-94-3						OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)
tert-Butyl peroxy(2-ethyl)-hexanoate 3006-82-4	4,79				25 °C	OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)
Bisphenol A Diglycidyl Ether 1675-54-3	3,84					QSAR (Quantitative Structure Activity Relationship)
Hydroquinone 123-31-9	0,59					EU Method A.8 (Partition Coefficient)

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

Hazardous components CAS-No.	PBT/vPvB
Epoxy resin (number average molecular weight $\leq 700$ ) 25068-38-6	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Bisphenol-F epichlorohydrin resin; MW<700 9003-36-5	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.
p-tert-Butylphenyl 1-(2,3-epoxy)propyl ether 3101-60-8	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
2,3-Epoxypropyl methacrylate 106-91-2	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Isobornyl methacrylate 7534-94-3	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
RP Bisphenol F-epichlorohydrin resin, MW $\leq 700$ 28064-14-4	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Hydroquinone 123-31-9	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:

Collection and delivery to recycling enterprise or other registered elimination institution.

Dispose of in accordance with local and national regulations.

Disposal of uncleaned packages:

Disposal must be made according to official regulations.

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. (Bisphenol-A Epichlorhydrin resin,Bisphenol-F Epichlorhydrin resin)
RID	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bisphenol-A Epichlorhydrin resin,Bisphenol-F Epichlorhydrin resin)
ADN	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bisphenol-A Epichlorhydrin resin,Bisphenol-F Epichlorhydrin resin)
IMDG	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bisphenol-A Epichlorhydrin resin,Bisphenol-F Epichlorhydrin resin)
IATA	Environmentally hazardous substance, liquid, n.o.s. (Bisphenol-A Epichlorhydrin resin,Bisphenol-F Epichlorhydrin 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	UN 1845, carbon dioxide, solid, as a coolant (does not apply for Germany, Sweden, France, Belgium, UK)
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	Tunnelcode: (E)
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), 197 (IATA), 969 (IMDG) may be applied, which can result in a deviation from the transport classification for packed goods.

**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 product. Classification according to the mixture rules in German VwVwS regulation annex 4 from 27 July 2005.

Storage class according to TRGS 510: 10

## 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.  
H302 Harmful if swallowed.  
H311 Toxic in contact with skin.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H318 Causes serious eye damage.  
H319 Causes serious eye irritation.  
H332 Harmful if inhaled.  
H341 Suspected of causing genetic defects.  
H350 May cause cancer.  
H351 Suspected of causing cancer.  
H360F May damage fertility.  
H370 Causes damage to organs.  
H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.  
H411 Toxic to aquatic life with long lasting effects.  
H412 Harmful to aquatic life with long lasting effects.

### Further information:

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.**