

## 1. Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

CEKA BOND

#### Contains:

Hydroxypropyl methacrylate  
2,2'-Ethylenedioxydiethyl dimethacrylate  
Methacryloxyethyl succinate  
Cumene hydroperoxide  
Acetic acid, 2-Phenylhydrazide  
2-Hydroxyethyl methacrylate

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

Intended use: Anaerobic adhesive

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

ALPHADENT NV, Mannebeekstraat 33, 8790 Waregem, Belgium, T +32 (0)56 629 531

### 1.4 Emergency telephone number

Belgian Poison Control Centre (24 hours) **070 245 245** or call a poison control centre in your area

## 2. Hazards identification

### 2.1 Classification of the substance or mixture

#### Classification (CLP):

Serious eye irritation H319 Causes serious eye irritation.	Category 2
Skin sensitizer H317 May cause an allergic skin reaction.	Category 1
Specific target organ toxicity – single exposure H335 May cause respiratory irritation. Target organ: respiratory tract irritation	Category 3
Chronic hazards to the aquatic environment H412 Harmful to aquatic life with long lasting effects	Category 3

### 2.2 Label elements

#### Label elements (CLP):

#### Hazard pictogram:



#### Signal word:

Warning

#### Hazard statement:

H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.  
H412 Harmful to aquatic life with long lasting effects.

**Precautionary statement:** \*\*\*For consumer use only: P101 If medical advice is needed, have product container or label at hand. P102 Keep out of reach of children.  
P501 Dispose of waste and residues in accordance with local authority requirements.\*\*\*

**Precautionary statement:** P261 Avoid breathing vapours.  
**Prevention** P280 Wear protective gloves.  
P273 Avoid release to the environment.

**Precautionary statement:** P333+P313 If skin irritation or rash occurs: Get medical advice/attention.  
**Response** P337+P313 If eye irritation persists: Get medical advice/attention.

### 2.3 Other hazards

Non corrosive to eyes according to test method OECD 438 or based on analogy to similar products tested. Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

## 3. Composition/information on ingredients

### 3.1 Mixtures

#### General chemical description:

Anaerobic adhesive

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

Hazardous components CAS No	EC number REACH Reg. No	Content	Classification
Hydroxypropyl methacrylate 27813-02-1	248-666-3 01-2119490226-37	25-50%	Skin Sens. 1; H317 Eye Irrit. 2; H 319
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	203-652-6 01-2119969287-21	5- <10%	Skin Sens. 1B; H317
Methacryloxyethyl succinate 20882-04-6	244-096-4 01-2120137902-58	1- <3%	Skin Sens. 1; Dermal; H317 Eye Dam. 1; H318
Cumene hydroperoxide 80-15-09	201-254-7	1- <2.5%	Acute Tox. 4; Dermal; H312 STOT RE 2; H373 Acute Tox. 4; Oral; H302 Org. Perox. E; H242 Acute Tox. 3; Inhalation; H331 Skin Corr. 1B; H314 Aquatic Chronic 2; H411
Methacrylic acid 79-41-4	201-204-4 01-2119463884-26	0.1- <1%	Acute Tox. 4; Oral; H302 Acute Tox. 3; Dermal; H311 Acute Tox. 4; Inhalation; H332 Skin Corr. 1A; H314
Acetic acid, 2-Phenylhydrazide 114-83-0	204-055-3	0.1- <1%	Acute Tox. 3; Oral; H301 Skin Irrit. 2; Dermal; H315 Skin Sens. 1; H317 Eye Irrit. 2; H319 STOT SE 3; Inhalation; H335 Carc. 2; H351
2-Hydroxyethyl methacrylate 868-77-9	212-782-2 01-2119490169-29	0.1- <1%	Skin Irrit. 2; H315 Skin Sens. 1; H317 Eye Irrit. 2; H319

1,4-Naphthalenedione 130-15-4	204-977-6	0.01- <0.1%	Acute Tox. 3; Oral; H301 Skin Irrit. 2; Dermal; H315 Skin Sens. 1; Dermal; H317 Eye Irrit. 2; H319 Acute Tox. 1; Inhalation; H330 STOT SE 3; Inhalation; H335 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M factor (Acute Aquatic Toxicity): 10 M factor (Chronic Aquatic Toxicity): 10
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**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.**

#### 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

EYES: irritation, conjunctivitis

RESPIRATORY: irritation, coughing, shortness of breath, chest tightness

SKIN: rash, urticaria

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

See section: Description of first aid measures.

#### 5. Firefighting measures

##### 5.1 Extinguishing media

###### Suitable extinguishing media:

Carbon dioxide, foam, powder

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

None known

## 5.2 Special hazards arising from the substance or mixture

In the event of a fire, carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>) and nitrogen oxide (NO<sub>x</sub>) 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.

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## 6. Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Avoid skin and eye contact.

### 6.2 Environmental precautions

Do not let product enter drains.

### 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.

### 6.4 Reference to other sections

See advice in section 8.

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## 7. Handling and storage

### 7.1 Precautions for safe handling

Use only in well-ventilated areas.

Avoid skin and eye contact.

Prolonged or repeated skin contact should be avoided.

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

Refer to Technical Data Sheet.

### 7.3 Specific end use(s)

Anaerobic adhesive

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## 8. Exposure controls/personal protection

### 8.1 Control parameters

### Occupational exposure limits

Valid for Great Britain

Ingredient [Regulated substance]	ppm	mg/m <sup>3</sup>	Value type	Short-term exposure limit category / Remarks	Regulatory list
Methacrylic acid 79-41-4 [METHACRYLIC ACID]	40	143	Short Term Exposure Limit (STEL)		EH 40/WEL
Methacrylic acid 79-41-4 [METHACRYLIC ACID]	20	72	Time Weighted Average (TWA)		EH 40/WEL

### Occupational exposure limits

Valid for Ireland

Ingredient [Regulated substance]	ppm	mg/m <sup>3</sup>	Value type	Short-term exposure limit category / Remarks	Regulatory list
Methacrylic acid 79-41-4 [METHACRYLIC ACID]	20	70	Time Weighted Average (TWA)		IR_OEL
Methacrylic acid 79-41-4 [METHACRYLIC ACID]	40	140	Short Term Exposure Limit (STEL)		IR_OEL

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

Name on list	Environmental compartment	Exposure period	Value			Remarks
			mg/l	ppm	mg/kg	
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	Aqua (freshwater)		0.904			
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	Aqua (marine water)		0.904			
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	Sewage treatment plant (STP)		10			
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	Aqua (intermittent releases)		0.972			
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	Sediment (freshwater)				6.28	
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	Sediment (marine water)				6.28	
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	Soil				0.727	
2,2'-Ethylendioxydiethyl dimethacrylate 109-16-0	Aqua (freshwater)		0,164			
2,2'-Ethylendioxydiethyl dimethacrylate 109-16-0	Aqua (marine water)		0,0164			
2,2'-Ethylendioxydiethyl dimethacrylate 109-16-0	Sewage treatment plant (STP)		10			

2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	Aqua (intermittent releases)		0,164			
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	Sediment (freshwater)				1.85	
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	Sediment (marine water)				0.185	
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	Soil				0.274	
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	Air					
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	Predator					
.alpha.-.alpha.-Dimethylbenzyl hydroperoxide 80-15-9	Aqua (freshwater)		0.0031			
.alpha.-.alpha.-Dimethylbenzyl hydroperoxide 80-15-9	Aqua (marine water)		0.00031			
.alpha.-.alpha.-Dimethylbenzyl hydroperoxide 80-15-9	Aqua (intermittent releases)		0.031			
.alpha.-.alpha.-Dimethylbenzyl hydroperoxide 80-15-9	Sewage treatment plant (STP)		0.35			
.alpha.-.alpha.-Dimethylbenzyl hydroperoxide 80-15-9	Sediment (freshwater)				0.023	
.alpha.-.alpha.-Dimethylbenzyl hydroperoxide 80-15-9	Sediment (marine water)				0.0023	
.alpha.-.alpha.-Dimethylbenzyl hydroperoxide 80-15-9	Soil				0.0029	
Methacrylic acid 79-41-0	Aqua (freshwater)		0.82			
Methacrylic acid 79-41-0	Aqua (marine water)		0.82			
Methacrylic acid 79-41-0	Sewage treatment plant (STP)		10			
Methacrylic acid 79-41-0	Aqua (intermittent releases)		0.82			
Methacrylic acid 79-41-0	Soil				1.2	
2-hydroxyethyl methacrylate 868-77-9	Aqua (freshwater)		0.482			
2-hydroxyethyl methacrylate 868-77-9	Aqua (marine water)		0.482			
2-hydroxyethyl methacrylate 868-77-9	Sewage treatment plant (STP)		10			
2-hydroxyethyl methacrylate 868-77-9	Aqua (intermittent releases)		1			
2-hydroxyethyl methacrylate 868-77-9	Sediment (freshwater)				3.79	
2-hydroxyethyl methacrylate 868-77-9	Sediment (marine water)				3.79	
2-hydroxyethyl methacrylate 868-77-9	Soil				0.476	
2-hydroxyethyl methacrylate 868-77-9	Predator					

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

Name on list	Application area	Route of exposure	Health effect	Exposure time	Value	Remarks
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	Workers	Dermal	Long-term exposure – systemic effects		4.2 mg/kg bw/day	
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	Workers	Inhalation	Long-term exposure – systemic effects		14.7 mg/m <sup>3</sup>	
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	General population	Dermal	Long-term exposure – systemic effects		2.5 mg/kg bw/day	
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	General population	Inhalation	Long-term exposure – systemic effects		8.8 mg/m <sup>3</sup>	
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	General population	Oral	Long-term exposure – systemic effects		2.5 mg/kg bw/day	
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	Workers	Inhalation	Long-term exposure – systemic effects		48.5 mg/m <sup>3</sup>	
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	Workers	Dermal	Long-term exposure – systemic effects		13.9 mg/kg bw/day	
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	General population	Inhalation	Long-term exposure – systemic effects		14.5 mg/m <sup>3</sup>	
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	General population	Dermal	Long-term exposure – systemic effects		8.33 mg/kg bw/day	
2,2'-Ethylenedioxydiethyl Dimethacrylate 109-16-0	General population	Oral	Long-term exposure – systemic effects		8.33 mg/kg bw/day	
.alpha.-.alpha.-Dimethylbenzyl hydroperoxide 80-15-9	Workers	Inhalation	Long-term exposure – systemic effects		6 mg/m <sup>3</sup>	
Methacrylic acid 79-41-0	Workers	Inhalation	Long-term exposure – systemic effects		88 mg/m <sup>3</sup>	
Methacrylic acid 79-41-0	Workers	Inhalation	Long-term exposure – systemic effects		29.6 mg/m <sup>3</sup>	
Methacrylic acid 79-41-0	Workers	Dermal	Long-term exposure – systemic effects		4.25 mg/kg 1 g/day	
Methacrylic acid 79-41-0	General population	Inhalation	Long-term exposure – systemic effects		6.55 mg/m <sup>3</sup>	
Methacrylic acid 79-41-0	General population	Inhalation	Long-term exposure – systemic effects		6.3 mg/m <sup>3</sup>	
Methacrylic acid 79-41-0	General population	Dermal	Long-term exposure – systemic effects		2.55 mg/kg 1 g/day	
2-hydroxyethyl methacrylate 868-77-9	Workers	Dermal	Long-term exposure – systemic effects		1.3 mg/kg 1 g/day	
2-hydroxyethyl methacrylate 868-77-9	Workers	Inhalation	Long-term exposure – systemic effects		4.9 mg/m <sup>3</sup>	
2-hydroxyethyl methacrylate 868-77-9	General population	Dermal	Long-term exposure – systemic effects		0.83 mg/kg 1 g/day	
2-hydroxyethyl methacrylate 868-77-9	General population	Inhalation	Long-term exposure – systemic effects		2.9 mg/m <sup>3</sup>	
2-hydroxyethyl methacrylate 868-77-9	General population	Oral	Long-term exposure – systemic effects		0.83 mg/kg 1 g/day	

**Biological exposure indices:**

None

**8.2 Exposure controls**

**Engineering controls:**

Ensure good ventilation/extraction.

**Respiratory protection:**

Ensure adequate ventilation.

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

Filter type: A (EN 14387)

**Hand protection:**

Chemical-resistant protective gloves (EN 374).

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

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

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

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

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

**Eye protection:**

Safety glasses with sideshields or chemical safety goggles must be worn if there is a risk of splashing. Protective eye equipment should conform to EN 166.

**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.

## 9. Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Appearance	liquid green
Odour	mild
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	> 149 °C (> 300.2 °F)
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 (20 °C)	0.3000000 mbar



Relative vapour density	no data available / not applicable
Density	1.1 g/cm <sup>3</sup>
Bulk density	no data available / not applicable
Solubility	no data available / not applicable
Solubility qualitative (Solvent: water)	partially soluble
Solubility qualitative (Solvent: acetone)	miscible
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
Oxidizing properties	no data available / not applicable

## 9.2 Other information

No data available / Not applicable

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## 10. Stability and reactivity

### 10.1 Reactivity

Reacts with strong oxidants.

### 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 used according to specifications.

### 10.5 Incompatible materials

See section reactivity.

### 10.6 Hazardous decomposition products

Carbon oxides

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## 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 1 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 respiratory irritation.

**Oral toxicity:**

May cause irritation to the digestive tract.

**Skin irritation:**

Prolonged or repeated skin contact may cause skin irritation.

**Eye irritation:**

Causes serious eye irritation.

Non corrosive to eyes according to test method OECD 438 or based on analogy with similar products tested.

**Sensitizing:**

May cause an allergic skin reaction.

**Acute oral toxicity:**

Hazardous components CAS No	Value type	Value	Route of application	Exposure time	Species	Method
Hydroxypropyl methacrylate 27813-02-1	LD50	> 2,000 mg/kg	Oral		Rat	OECD Guideline 401 (Acute Oral Toxicity)
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	LD50	10,837 mg/kg	Oral		Rat	Not specified
Methacryloyloxyethyl succinate 20882-04-6	LD50	> 2,000 mg/kg	Oral		Rat	OECD Guideline 423 (Acute Oral Toxicity)
Cumene hydroperoxide 80-15-9	LD50	550 mg/kg	Oral		Rat	Not specified
Methacrylic acid 79-41-4	LD50	1,320 mg/kg	Oral		Rat	OECD Guideline 401 (Acute Oral Toxicity)
2-hydroxyethyl methacrylate 868-77-9	LD50	> 5,000 mg/kg	Oral		Rat	Not specified
1,4-Naphthalenedione 130-15-4	LD50	190 mg/kg	Oral		Rat	Not specified

**Acute inhalative toxicity:**

Hazardous components CAS No	Value type	Value	Route of application	Exposure time	Species	Method
Methacrylic acid 79-41-4	LC50	> 3.6 mg/l	Aerosol	4 h	Rat	OECD Guideline 403 (Acute Inhalation Toxicity)

**Acute dermal toxicity:**

Hazardous components CAS No	Value type	Value	Route of application	Exposure time	Species	Method
Hydroxypropyl methacrylate 27813-02-1	LD50	> 5,000 mg/kg	Dermal		Rabbit	Not specified
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	LD50	> 2,000 mg/kg	Dermal		Mouse	Not specified
Cumene hydroperoxide 80-15-9	LD50	1,200-1,520 mg/kg	Dermal			Not specified
Methacrylic acid 79-41-4	Acute toxicity estimate (ATE)	500 mg/kg	Dermal			Expert judgement

Methacrylid acid 79-41-4	LD50	500-1,000 mg/kg			Rabbit	Dermal toxicity screening
2-Hydroxyethyl methacrylate 868-77-9	LD50	> 3,000 mg/kg	Dermal		Rabbit	Not specified

### Skin corrosion/irritation:

Hazardous components CAS No	Result	Exposure time	Species	Method
Hydroxypropyl methacrylate 27813-02-1	Not irritating	24 h	Rabbit	Draize test
2,2'-Ethylendioxydiethyl dimethacrylate 109-16-0	Not irritating	24 h	Rabbit	Draize test
Methacryloyloxyethyl succinate 20882-04-6	Not irritating	0.25 h	Human, EPISKIN™ Reconstituted Human Epidermis model	OECD 439 (In Vitro Skin Irritation: Reconstructed Human Epidermis (RHE) Test Method)
Methacryloyloxyethyl succinate 20882-04-6	Not classified	4 h	Human, EPISKIN™ Reconstituted Human Epidermis model	OECD 431 (In Vitro Skin Corrosion: Reconstructed Human Epidermis (RHE) Test Method)
Cumene hydroperoxide 80-15-9	Corrosive		Rabbit	Draize test
Methacrylic acid 79-41-4	Category 1A (corrosive)	4 h	Rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

### Serious eye damage/irritation

Hazardous components CAS No	Result	Exposure time	Species	Method
2,2'-Ethylendioxydiethyl dimethacrylate 109-16-0	Not irritating	24 h	Rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Methacryloyloxyethyl succinate 20882-04-6	Category I	10 min	Bovine, cornea, in vitro test	OECD Guideline 437 (BCOP)
Methacrylic acid 79-41-4	Category I		Rabbit	Draize test
2-Hydroxyethyl methacrylate 868-77-9	Irritating		Rabbit	Draize test

### Respiratory or skin sensitization:

Hazardous components CAS No	Result	Test type	Species	Method
2,2'-Ethylendioxydiethyl dimethacrylate 109-16-0	Sensitizing	Mouse local lymphnode assay (LLNA)	Mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
Methacrylic acid 79-41-4	Not sensitizing	Buehler test	Guinea pig	OECD Guideline 406 (Skin Sensitisation)

### Germ cell mutagenicity:

Hazardous components CAS No	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
Hydroxypropyl methacrylate 27813-02-1	Negative	Bacterial reverse mutation assay (e.g Ames test)	With and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
	Negative	Mammalian cell gene mutation assay	With and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)

Hydroxypropyl methacrylate 27813-02-1	Negative	Oral: gavage		Rat	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
2,2'-Ethyleneedioxydiethyl dimethacrylate 109-16-0	Negative	Mammalian cell gene mutation assay	With and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
	Negative	Bacterial reverse mutation assay (e.g Ames test)	With and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
	Negative	In vitro mammalian cell micronucleus test	With and without		OECD Guideline 487 (In vitro Mammalian Cell Micronucleus Test)
Methacryloyloxyethyl succinate 20882-04-6	Negative	Bacterial reverse mutation assay (e.g Ames test)	With and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Cumene hydroperoxide 80-15-9	Positive	Bacterial reverse mutation assay (e.g. Ames test)	Without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Cumene hydroperoxide 80-15-9	Negative	Dermal		Mouse	Not specified
Methacrylic acid 79-41-4	Negative	Bacterial reverse mutation assay (e.g Ames test)	With and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Methacrylic acid 79-41-4	Negative	Inhalation		Mouse	OECD Guideline 478 (Genetic Toxicology: Rodent Dominant Lethal Test)
2-Hydroxyethyl methacrylate 868-77-9	Negative	Bacterial reverse mutation assay (e.g. Ames test)	With and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
	Positive	In vitro test mammalian chromosome aberration test	With and without		OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
	Negative	Mammalian cell gene mutation assay	With and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
	Negative	Bacterial reverse mutation assay (e.g Ames test)	With and without		OECD Guideline 472 (Genetic Toxicology: Escherichia coli, Reverse Mutation Assay)
2-Hydroxyethyl methacrylate 868-77-9	Negative	Oral: gavage		Rat	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)

### Carcinogenicity:

Hazardous components CAS No	Result	Species	Sex	Exposure time / Frequency of treatment	Route of application	Method
Hydroxypropyl methacrylate 27813-02-1		Rat	Male	2 years (102 weeks) 6 h/day, 5 d/week	Inhalation	OECD Guideline 451 (Carcinogenicity Studies)
2-Hydroxyethyl methacrylate 868-77-9		Rat	Female	102 weeks 6 h/day, 5 d/week	Inhalation	OECD Guideline 451 (Carcinogenicity Studies)

### Reproductive toxicity:

Hazardous components CAS No	Result / Classification	Route of application	Exposure time	Species	Method
Hydroxypropyl methacrylate 27813-02-1	NOAEL P = 400 mg/kg	Two-generation study oral: gavage	Until one day before sacrifice	Rat	OECD Guideline 416 (Two-Generation Reproduction Toxicity Study)
2,2'-ethyleendioxy- diethyldimethacrylaat 109-16-0	NOAEL P = 1.000 mg/kg NOAEL F1 = 1.000 mg/kg	Oral: gavage		Rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)

2-hydroxyethyl-methacrylaat 868-77-9	NOAEL P = >= 1.000 mg/kg NOAEL F1 = >= 1.000 mg/kg	Screening oral: gavage		Rat	OECD Combined Repeated Dose and Reproductive / Developmental Toxicity Screening Test (Precursor Protocol of GL 422)
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### Repeated dose toxicity:

Hazardous components CAS No	Result	Route of application	Exposure time / Frequency of treatment	Species	Method
Hydroxypropyl methacrylate 27813-02-1	NOAEL = 300 mg/kg	Oral: gavage		Rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
2,2'-ethyleendioxy-diethyldimethacrylaat 109-16-0	NOAEL= 1.000 mg/kg	Oral: gavage	Daily	Rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
Cumene hydroperoxide 80-15-9		Inhalation: aerosol	6 h/day 5 d/week	Rat	Not specified
2-hydroxyethyl-methacrylaat 868-77-9	NOAEL= 100 mg/kg	Oral: gavage	Once daily	Rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)

## 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 1 to Regulation (EC) No 1272/2008. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

### 12.1 Toxicity

#### Ecotoxicity:

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

Harmful to aquatic life with long lasting effects.

Hazardous components CAS No	Value type	Value	Acute toxicity study	Exposure time	Species	Method
Hydroxypropyl methacrylate 27813-02-1	LC50	493 mg/l	Fish	48 h	Leuciscus idus melanotus	DIN 38412-15
Hydroxypropyl methacrylate 27813-02-1	EC50	> 143 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Hydroxypropyl methacrylate 27813-02-1	EC50	> 97.2 mg/l	Algae	72 h	Pseudokirchnerella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Hydroxypropyl methacrylate 27813-02-1	NOEC	> 97.2 mg/l	Daphnia	72 h	Pseudokirchnerella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Hydroxypropyl methacrylate 27813-02-1	EC10	> 1,140 mg/l	Bacteria	16 h		
Hydroxypropyl methacrylate 27813-02-1	NOEC	> 45.2 mg/l	Chronic Daphnia	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)

2,2'-Ethylendioxydiethyl dimethacrylate 109-16-0	LC50	16.4 mg/l	Fish	96 h	Danio rerio	OECD Guideline 203 (Fish, Acute Toxicity Test)
2,2'-Ethylendioxydiethyl dimethacrylate 109-16-0	EC50	> 100 mg/l	Algae	72 h	Pseudokirchnerella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
2,2'-Ethylendioxydiethyl dimethacrylate 109-16-0	NOEC	18.6 mg/l	Algae	72 h	Pseudokirchnerella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
2,2'-Ethylendioxydiethyl dimethacrylate 109-16-0	NOEC	32 mg/l	Chronic Daphnia	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
Methacryloyloxyethyl succinate 20882-04-6	EC50	> 515.4 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Methacryloyloxyethyl succinate 20882-04-6	EC50	> 312 mg/l	Algae	72 h	Pseudokirchnerella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Methacryloxyethyl succinaat 20882-04-6	NOEC	21.1 mg/l	Algae	72 h	Pseudokirchnerella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Cumene hydroperoxide 80-15-9	LC50	3.9 mg/l	Fish	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
Cumene hydroperoxide 80-15-9	EC50	18 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Cumene hydroperoxide 80-15-9	ErC50	3.1 mg/l	Algae	72 h	Pseudokirchnerella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Cumene hydroperoxide 80-15-9	EC10	70 mg/l	Bacteria	30 min		
Methacrylic acid 79-41-4	LC50	85 mg/l	Fish	96 h	Salmo gairdneri (new name: Oncorhynchus mykiss)	EPA OTS 797.1400 (Fish Acute Toxicity Test)
Methacrylic acid 79-41-4	EC50	> 130 mg/l	Daphnia	48 h	Daphnia magna	EPA OTS 797.1300 (Aquatic Invertebrate Acute Toxicity Test, Freshwater Daphnids)
Methacrylic acid 79-41-4	EC50	45 mg/l	Algae	72 h	Selenastrum capricornutum (new name: Pseudo-kirchnerella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Methacrylic acid 79-41-4	NOEC	8.2 mg/l	Algae	72 h	Selenastrum capricornutum (new name: Pseudo-kirchnerella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Methacrylic acid 79-41-4	EC10	100 mg/l	Bacteria	17 h		
2-Hydroxyethyl methacrylate 868-77-9	LC50	227 mg/l	Fish	96 h	Pinephales promelas	OECD Guideline 203 (Fish, Acute Toxicity Test)
2-Hydroxyethyl methacrylate 868-77-9	EC50	380 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
2-Hydroxyethyl methacrylate 868-77-9	EC50	345 mg/l	Algae	72 h	Selenastrum capricornutum (new name: Pseudo-kirchnerella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
2-Hydroxyethyl methacrylate 868-77-9	NOEC	160 mg/l	Algae	72 h	Selenastrum capricornutum (new name: Pseudo-kirchnerella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
2-Hydroxyethyl methacrylate 868-77-9	EC0	> 3,000 mg/l	Bacteria	16 h		
2-Hydroxyethyl methacrylate 868-77-9	NOEC	24.1 mg/l	Chronic Daphnia	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)

1,4-Naphthalenedione 130-15-4	EC50	0.011 mg/l	Algae	72 h	Dunaliella bioculata	OECD Guideline 201 (Alga, Growth Inhibition Test)
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## 12.2 Persistence and degradability

### Persistence and degradability:

The product is not biodegradable.

Hazardous components CAS No	Result	Route of application	Degradability	Method
Hydroxypropyl methacrylate 27813-02-1	Readily biodegradable	Aerobic	94,2 %	OECD Guideline 301 E (Ready Biodegradability: Modified OECD Screening Test)
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	Readily biodegradable		85 %	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)
Methacryloyloxyethyl succinate 20882-04-6	Readily biodegradable, but failing 10-day window	Aerobic	80 %	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
Cumene hydroperoxide 80-15-9		No data	0 %	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)
Methacrylic acid 79-41-4	Inherently biodegradable	Aerobic	100 %	OECD Guideline 302 B (Inherent biodegradability: Zahn-Wellens/EMPA Test)
Methacrylic acid 79-41-4	Readily biodegradable	Aerobic	86 %	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
2-Hydroxyethyl methacrylate 868-77-9	Readily biodegradable	Aerobic	92-100 %	OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I))
1,4-Naphthalenedione 130-15-4		No data	0-60 %	OECD 301 A-F

## 12.3 Bioaccumulative potential / 12.4 Mobility in soil

### Mobility:

Cured adhesives are immobile.

### Bioaccumulative potential:

No data available for the product.

Hazardous components CAS No	LogPow	Bioconcentration factor (BCF)	Exposure time	Species	Temperature	Method
Hydroxypropyl methacrylate 27813-02-1	0.97				20 °C	Not specified
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	1.88					Not specified
Methacryloyloxyethyl succinate 20882-04-6	0.783				23 °C	EU Method A.8 (Partition Coefficient)
Cumene hydroperoxide 80-15-9		9.1		Calculation		OECD Guideline 305 (Bioconcentration : Flow- through Fish Test)
Cumene hydroperoxide 80-15-9	2.16					
Methacrylic acid 79-41-4	0.93				22 °C	OECD Guideline 107 (Partition Coefficient (n-octanol/water), Shake Flask Method)
Acetic acid, 2- Phenylhydrazide 114-83-0	0.74					Not specified
2-Hydroxyethyl methacrylate 868-77-9	0.42				25 °C	OECD Guideline 107 (Partition Coefficient (n- octanol/water), Shake Flask Method)

1,4-Naphthalenedione 130-15-4	1.71				Not specified
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## 12.5 Results of PBT and vPvB assessment

Hazardous components CAS No	PBT/vPvB
Hydroxypropyl methacrylate 27813-02-1	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
2,2'-Ethylenedioxydiethyl dimethacrylate 109-16-0	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Cumene hydroperoxide 80-15-9	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Methacrylic acid 79-41-4	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
2-Hydroxyethyl methacrylate 868-77-9	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

## 12.6 Other adverse effects

No data available

## 13. Disposal considerations

### 13.1 Waste treatment methods

Product disposal:

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 authorized legal land fill site or incinerated.

Disposal must be made according to official regulations.

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.

## 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

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### **15. Regulatory information**

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

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

#### **15.2 Chemical safety assessment**

A chemical safety assessment has not been carried out.

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### **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.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.
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.

#### **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.

**Label elements (DPD):**

Xi – Irritant



**Risk phrases:**

R36/37 Irritating to eyes and respiratory system.

R43 May cause sensitization by skin contact.

**Safety phrases:**

S23 Do not breathe vapour.

S24 Avoid contact with skin.

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S37 Wear suitable gloves.

**Additional labelling:**

For consumer use only: S2 Keep out of the reach of children.

S46 If swallowed, seek medical advice immediately and show this container or label.

**Contains:**

Hydroxypropyl methacrylate

2,2'-Ethylenedioxydiethyl dimethacrylate

Methacryloyloxyethyl succinate