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

1.1. Product identifier

FotoDent guide

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

Use of the substance/preparation

Material on methacrylate resin basis for DLP systems with 385nm resp. 405nm LED for manufacturing of dental surgical drill guides for tooth-supported and/or teethridge-supported and surgical invasive application

1.3. Details of the supplier of the safety data sheet

Address/Manufacturer

Dreve Dentamid GmbH
Max-Planck-Straße 31
59423 Unna

Telephone no.	+49 2303 8807-0
Fax no.	+49 2303 8807-29
Information provided by / telephone	Department Research & Development: Fax: +49 2303 8807-562
E-mail address of person responsible for this SDS	sicherheitsdatenblatt@dreve.com

1.4. Emergency telephone number

Henkel Fire Department / 24h-Emergency-Contact-No.: +49 211 797-3350

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (Regulation (EC) No. 1272/2008)

Classification (Regulation (EC) No. 1272/2008)

Eye Irrit. 2	H319
Skin Sens. 1	H317
Aquatic Chronic 3	H412

The product is classified and labelled in accordance with Regulation (EC) No 1272/2008
For explanation of abbreviations see section 16.

2.2. Label elements

Labelling according to regulation (EC) No 1272/2008

Hazard pictograms

Signal word

Warning

Hazard statements

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

Precautionary statements

P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264.1	Wash hands thoroughly after handling.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P501.1	Dispose of contents/container to industrial incineration plant.

Hazardous component(s) to be indicated on label (Regulation (EC) No. 1272/2008)

contains 2-hydroxyethyl methacrylate; Hydroxylpropyl methacrylate; 7,7,9(7,9,9)-trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahexadecane-1,16-diylbismethacrylate

2.3. Other hazards

No special hazards have to be mentioned.
The product contains no PBT substances. The product contains no vPvB substances. This product does not contain a substance that has endocrine disrupting properties with respect to human. The product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous ingredients

Bisphenol A, ethoxylated, dimethacrylate

CAS No.	41637-38-1				
EINECS no.	609-946-4				
Registration no.	01-2119980659-17				
Concentration	>=	50			%
Classification (Regulation (EC) No. 1272/2008)					
	Aquatic Chronic 4	H413			

7,7,9(7,9,9)-trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahexadecane-1,16-diylbismethacrylate

CAS No.	72869-86-4				
EINECS no.	276-957-5				
Registration no.	01-2120751202-68				
Concentration	>=	2,5	<	10	%
Classification (Regulation (EC) No. 1272/2008)					
	Skin Sens. 1B	H317			
	Aquatic Chronic 2	H411			

2-hydroxyethyl methacrylate

CAS No.	868-77-9				
EINECS no.	212-782-2				
Registration no.	01-2119490169-29				
Concentration	>=	1	<	6,3	%
Classification (Regulation (EC) No. 1272/2008)					
	Skin Irrit. 2	H315			
	Eye Irrit. 2	H319			

Skin Sens. 1 H317

Additional remarks:
CLP Regulation (EC) No 1272/2008, Annex VI, Note D

Aliphatic urethane methacrylate
Concentration >= 1 < 10 %
Classification (Regulation (EC) No. 1272/2008)
Eye Irrit. 2 H319

Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide
CAS No. 75980-60-8
EINECS no. 278-355-8
Registration no. 01-2119972295-29
Concentration >= 1 < 3 %
Classification (Regulation (EC) No. 1272/2008)
Repr. 2 H361f

Hydroxylpropyl methacrylate
CAS No. 27813-02-1
EINECS no. 248-666-3
Registration no. 01-2119490226-37
Concentration >= 1 < 10 %
Classification (Regulation (EC) No. 1272/2008)
Eye Irrit. 2 H319
Skin Sens. 1 H317

ATE oral 2.000 mg/kg

Acrylic Resin
Concentration >= 1 < 3,6 %
Classification (Regulation (EC) No. 1272/2008)
Skin Irrit. 2 H315
Eye Irrit. 2 H319

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Remove contaminated clothing immediately and dispose of safely. Adhere to personal protective measures when giving first aid

After inhalation

Ensure supply of fresh air. Remove affected person from danger area. Seek medical advice immediately.

After skin contact

Wash off immediately with soap and water. Seek medical advice immediately.

After eye contact

Separate eyelids, wash the eyes thoroughly with water (15 min.). Take medical treatment.

After ingestion

Call in a physician immediately and show him the Safety Data Sheet. Rinse mouth thoroughly with water. Let plenty of water be drunk in small gulps. Do not induce vomiting.

Adhere to personal protective measures when giving first aid

First aider: Pay attention to self-protection!

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

Until now no symptoms known so far.

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

Hints for the physician / hazards

In the case of swallowing with subsequent vomiting, aspiration of the lungs can occur which can lead to chemical pneumonia or asphyxiation.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Recommended: alcohol resistant foam, CO2, powders, water spray/mist, Extinguishing measures to suit surroundings

Non suitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

In case of combustion evolution of dangerous gases possible.

5.3. Advice for firefighters

Special protective equipment for fire-fighting

Do not inhale explosion and/or combustion gases. In case of combustion use a suitable breathing apparatus. Wear full protective suit.

Other information

Collect contaminated fire-fighting water separately, must not be discharged into the drains. Fire residues and contaminated fire-fighting water must be disposed of in accordance with the local regulations. Observe manufacturer's / distributor`s instructions.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Keep away sources of ignition. Ensure adequate ventilation. Use breathing apparatus if exposed to vapours/dust/aerosol. Avoid contact with skin, eyes and clothing. Use personal protective clothing. Refer to protective measures listed in Sections 7 and 8.

6.2. Environmental precautions

Prevent spread over a wide area (e.g. by containment or oil barriers). Do not discharge into the drains/surface waters/groundwater. Do not discharge into the subsoil/soil. Retain and dispose of contaminated wash water. In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

6.3. Methods and material for containment and cleaning up

Pick up rest with suitable absorbent materials. Do not pick up with the help of saw-dust or other combustible substances. Clean contaminated floors and objects thoroughly, observing environmental regulations. Containers in which spilt substance has been collected must be adequately labelled. Dispose of as prescribed.

6.4. Reference to other sections

Refer to protective measures listed in Sections 7 and 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Provide good ventilation of working area (local exhaust ventilation if necessary). Avoid formation of aerosols. Avoid impact, friction and electro-static loading; risk of ignition!. Keep container tightly closed.

Advice on protection against fire and explosion

Keep away from sources of heat and ignition. No smoking. Take action to prevent static discharges. Avoid impact and friction. Use only explosion-proof equipment. Keep away from combustible material. Wear shoes with conductive soles.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep in original packaging, tightly closed. Storage rooms must be properly ventilated. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Hints on storage assembly

Do not store together with foodstuffs. Do not store with strong oxidizing agents.

Further information on storage conditions

Keep under lock and key or accessible only to specialists or people who are authorized. Keep container tightly closed and in a well-ventilated place. Keep in a cool place

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Other information

Contains no substances with occupational exposure limit values.

Derived No/Minimal Effect Levels (DNEL/DMEL)

Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	0,233	mg/kg/d

Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	0,145	mg/m³

Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	0,0833	mg/kg/d

Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	oral	
Mode of action	Systemic effects	
Concentration	0,0833	mg/kg/d

Bisphenol A, ethoxylated, dimethacrylate

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	3,52	mg/m³

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	2	mg/kg

Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	0,87	mg/m³

Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	1	mg/kg

Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	oral	
Mode of action	Systemic effects	
Concentration	0,5	mg/kg

2-hydroxyethyl methacrylate

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	4,9	mg/m³

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	dermal	

Mode of action	Systemic effects	
Concentration	1,39	mg/kg/d
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	1,45	mg/m³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	0,83	mg/kg/d

Hydroxylpropyl methacrylate

Reference substance	Hydroxylpropyl methacrylate	
Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Route of exposure	inhalative	
Concentration	14,7	mg/m³
	Hydroxylpropyl methacrylate	
Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Route of exposure	dermal	
Concentration	4,2	mg/kg/d
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Route of exposure	dermal	
Concentration	2,5	mg/kg
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Route of exposure	inhalative	
Concentration	8,8	mg/m³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Route of exposure	oral	
Concentration	2,5	mg/kg

7,7,9(7,9,9)-trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahexadecane-1,16-diylbismethacrylate

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	3,3	mg/m³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	

Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	1,3	mg/kg
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	0,6	mg/m³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	oral	
Mode of action	Systemic effects	
Concentration	0,3	mg/kg
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	0,7	mg/kg

Predicted No Effect Concentration (PNEC)

Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide

Type of value	PNEC	
Type	Saltwater	
Concentration	0,00014	mg/l
Type of value	PNEC	
Type	Freshwater sediment	
Concentration	0,115	mg/kg
Type of value	PNEC	
Type	Marine sediment	
Concentration	0,0115	mg/kg
Type of value	PNEC	
Type	Soil	
Concentration	0,0222	mg/kg

2-hydroxyethyl methacrylate

Type of value	PNEC	
Type	Freshwater	
Concentration	0,482	mg/l
Type of value	PNEC	
Type	Soil	
Concentration	0,476	mg/kg
Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	10	mg/l

Type of value	PNEC	
Type	Freshwater sediment	
Concentration	3,79	mg/kg
Type of value	PNEC	
Type	Saltwater	
Concentration	0,482	mg/l
Type of value	PNEC	
Type	Marine sediment	
Concentration	3,79	mg/kg
Type of value	PNEC	
Type	Man via the environment	
Concentration	0,83	mg/kg/d

Hydroxylpropyl methacrylate

Reference substance	Hydroxylpropyl methacrylate	
Type of value	PNEC	
Type	Freshwater	
Concentration	0,904	mg/l
	Hydroxylpropyl methacrylate	
Type of value	PNEC	
Type	Freshwater sediment	
Concentration	6,28	mg/kg
	Hydroxylpropyl methacrylate	
Type of value	PNEC	
Type	Soil	
Concentration	0,727	mg/kg
	Hydroxylpropyl methacrylate	
Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	10	mg/l
Type of value	PNEC	
Type	Marine	
Concentration	0,904	mg/l
Type of value	PNEC	
Type	Marine sediment	
Concentration	6,28	mg/kg

7,7,9(7,9,9)-trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahexadecane-1,16-diylbismethacrylate

Type of value	PNEC	
Type	Freshwater	
Concentration	0,01	mg/l
Type of value	PNEC	
Type	Freshwater sediment	
Concentration	4,56	mg/kg
Type of value	PNEC	
Type	Saltwater	

Concentration	0,001	mg/l
Type of value	PNEC	
Type	Marine sediment	
Concentration	0,46	mg/kg
Type of value	PNEC	
Type	Soil	
Concentration	0,91	mg/kg
Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	3,61	mg/l
Type of value	PNEC	
Type	Water (intermittent release)	
Concentration	0,1	mg/l

8.2. Exposure controls

General protective and hygiene measures

Do not smoke during work time. Hold emergency shower available. Hold eye wash fountain available. Do not inhale gases/vapours/aerosols. Avoid contact with skin and eyes. Take off immediately all contaminated clothing. Do not eat or drink during work time. Storage of foodstuffs in work rooms is forbidden. Wash hands before breaks and after work. Clean skin thoroughly after work; apply skin cream.

Respiratory protection

Do not inhale vapours; Use suitable respiratory protective device in case of insufficient ventilation

Hand protection

There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals.
The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed.
Gloves should be replaced regularly and if there is any sign of damage to the glove material.
Hand protection must comply with EN 374.

Appropriate Material	nitrile

Eye protection

Safety glasses

Body protection

Clothing as usual in the chemical industry.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	liquid
Colour	Various, depending on coloration
Odour	characteristic
Melting point	
Remarks	not determined
Freezing point	
Remarks	not determined

Boiling point or initial boiling point and boiling range

Value	>	100	°C

Flammability

not determined

Upper and lower explosive limits

Remarks not determined

Flash point

Value	91	°C
Method	closed cup	

Ignition temperature

Remarks not determined

Decomposition temperature

Remarks not determined

pH value

Remarks not determined

Viscosity

Remarks not determined

Solubility(ies)

Remarks not determined

Partition coefficient n-octanol/water (log value)

Remarks not determined

Vapour pressure

Remarks not determined

Density and/or relative density

Value	1,1		g/cm³
Temperature	20	°C	

Relative vapour density

Remarks not determined

9.2. Other information

Odour threshold

Remarks not determined

Evaporation rate (ether = 1) :

Remarks not determined

Solubility in water

Remarks virtually insoluble

Explosive properties

evaluation not determined

Oxidising properties

Remarks not determined

Other information

None known

SECTION 10: Stability and reactivity

10.1. Reactivity
No hazardous reactions when stored and handled according to prescribed instructions.

10.2. Chemical stability
No hazardous reactions known.

10.3. Possibility of hazardous reactions
No hazardous reactions known.

10.4. Conditions to avoid
Protect from heat and direct sunlight

10.5. Incompatible materials
None known

10.6. Hazardous decomposition products
Irritant gases/vapours

SECTION 11: Toxicological information

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

Acute oral toxicity

ATE	>	10.000	mg/kg
Method	calculated value (Regulation (EC) No. 1272/2008)		

Acute oral toxicity (Components)

Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide

Species	rat		
LD50	>	5000	mg/kg
Method	OECD 401		

Bisphenol A, ethoxylated, dimethacrylate

Species	rat		
LD50	>	2000	mg/kg

2-hydroxyethyl methacrylate

Species	rat		
LD50	>	5564	mg/kg

Hydroxylpropyl methacrylate

Species	rat		
LD50	>=	2000	mg/kg
Method	OECD 401		

7,7,9(7,9,9)-trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahexadecane-1,16-diylbismethacrylate

Species	rat		
LD50	>	5000	mg/kg
Method	OECD 401		

Acrylic Resin

LD50	>	2000	mg/kg

Aliphatic urethane methacrylate

Species	rat		
LD50	>	2000	mg/kg

Acute dermal toxicity

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

Acute dermal toxicity (Components)

Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide

Species	rat		
LD50	>	2000	mg/kg
Method	OECD 402		

Bisphenol A, ethoxylated, dimethacrylate

Species	rat		
LD50	>	2000	mg/kg
Method	OECD 402		

2-hydroxyethyl methacrylate

Species	rabbit		
LD50		5000	mg/kg
Remarks	Test conducted with a similar formulation.		

Hydroxylpropyl methacrylate

Species	rabbit		
LD50	>	5000	mg/kg

7,7,9(7,9,9)-trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahexadecane-1,16-diylbismethacrylate

Species	rat		
LD50	>	2000	mg/kg
Method	OECD 402		

Acrylic Resin

LD50	>	2000	mg/kg

Aliphatic urethane methacrylate

Species	rabbit		
LD50	>	2000	mg/kg

Acute inhalational toxicity

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

Acute inhalative toxicity (Components)

Acrylic Resin

LC50	>	5		mg/l
Duration of exposure		4	h	
Administration/Form	Dust/Mist			

Aliphatic urethane methacrylate

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

Skin corrosion/irritation

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

Skin corrosion/irritation (Components)

Acrylic Resin

evaluation irritant

Aliphatic urethane methacrylate

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

Serious eye damage/irritation

evaluation irritant

Remarks The classification criteria are met.

Serious eye damage/irritation (Components)

2-hydroxyethyl methacrylate

Species rabbit

evaluation slightly irritant

Hydroxylpropyl methacrylate

Species rabbit

evaluation slightly irritant

Acrylic Resin

evaluation	irritant

Aliphatic urethane methacrylate

Species	rabbit
evaluation	irritant

Sensitization

evaluation	May cause sensitization by skin contact.
Remarks	The classification criteria are met.

Sensitization (Components)

Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide

Route of exposure	dermal
Species	mouse
evaluation	May cause sensitization by skin contact.

2-hydroxyethyl methacrylate

Remarks	Possible sensitization potential with human beings.

Hydroxylpropyl methacrylate

Species	mouse
evaluation	non-sensitizing
Method	OECD 429
Remarks	May cause sensitization by skin contact.

7,7,9(7,9,9)-trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahexadecane-1,16-diylbismethacrylate

Route of exposure	dermal
Species	mouse
evaluation	sensitizing

Aliphatic urethane methacrylate

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

Subacute, subchronic, chronic toxicity

Remarks	not determined

Mutagenicity

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

Mutagenicity (Components)

Aliphatic urethane methacrylate

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

Reproductive toxicity

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

Reproduction toxicity (Components)

Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide

evaluation	Suspected of damaging fertility.

Aliphatic urethane methacrylate

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

Carcinogenicity

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

Carcinogenicity (Components)

Aliphatic urethane methacrylate

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

Specific Target Organ Toxicity (STOT)

Single exposure

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

Repeated exposure

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

Specific Target Organ Toxicity (STOT) (Components)

Aliphatic urethane methacrylate

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

Aspiration hazard

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

11.2 Information on other hazards

Endocrine disrupting properties with respect to humans

The product does not contain a substance that has endocrine disrupting properties with respect to humans.

Experience in practice

Inhalation may lead to irritation of the respiratory tract.

Other information

No toxicological data are available.

SECTION 12: Ecological information

12.1. Toxicity

General information

not determined

Fish toxicity (Components)

Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide

Species	carp (Cyprinus carpio)		
LC50	1,4		mg/l
Duration of exposure	96	h	
Method	OECD 203		

Bisphenol A, ethoxylated, dimethacrylate

Species	rainbow trout (Oncorhynchus mykiss)		
LC50	> 100		mg/l
Remarks	Test conducted with a similar formulation.		

2-hydroxyethyl methacrylate

Species	Oryzias latipes		
LC50	> 100		mg/l
Duration of exposure	96	h	
Method	OECD 203		

Hydroxylpropyl methacrylate

Species	golden orfe (Leuciscus idus)		
LC50	493		mg/l
Duration of exposure	48	h	
Method	DIN 38412 / Part 15		

7,7,9(7,9,9)-trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahexadecane-1,16-diylbismethacrylate

Species	zebra fish (Brachydanio rerio)		
LC50	10,1		mg/l
Duration of exposure	96	h	
Method	OECD 203		

Daphnia toxicity (Components)

Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide

Species	Daphnia magna		
EC50	3,53		mg/l
Duration of exposure	48	h	
Method	OECD 202		

Bisphenol A, ethoxylated, dimethacrylate

Species	Daphnia magna		
EC50	> 100		mg/l
Duration of exposure	48	h	
Remarks	Test conducted with a similar formulation.		

2-hydroxyethyl methacrylate

Species	Daphnia magna		
EC50	380		mg/l
Duration of exposure	48	h	
Method	OECD 202		

2-hydroxyethyl methacrylate

Species	Daphnia magna		
NOEC	24,1		mg/l
Duration of exposure	21	d	
Method	OECD 211		

Hydroxylpropyl methacrylate

Species	Daphnia magna		
EC50	> 143		mg/l
Duration of exposure	48	h	
Method	OECD 202		

Hydroxylpropyl methacrylate

Species	Daphnia magna		
NOEC	45,2		mg/l
Duration of exposure	21	d	
Method	OECD 211		

7,7,9(7,9,9)-trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahexadecane-1,16-diylbismethacrylate

Species	Daphnia magna		
EC50	1,2		mg/l
Duration of exposure	48	h	
Method	OECD 202		

Algae toxicity (Components)

Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide

Species	Pseudokirchneriella subcapitata		
EC50	> 2,01		mg/l
Duration of exposure	72	h	
Method	OECD 201		

Bisphenol A, ethoxylated, dimethacrylate

Species	Pseudokirchneriella subcapitata		
EC50	> 100		mg/l
Duration of exposure	72	h	
Method	OECD 201		
Remarks	Test conducted with a similar formulation.		

2-hydroxyethyl methacrylate

Species	Pseudokirchneriella subcapitata		
EC50	345		mg/l
Duration of exposure	72	h	
Method	OECD 201		

Hydroxylpropyl methacrylate

Species	Pseudokirchneriella subcapitata				
EC50	>	97,2			mg/l
Duration of exposure		72	h		
Method	OECD 201				

7,7,9(7,9,9)-trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahexadecane-1,16-diylbismethacrylate

Species	Scenedesmus subspicatus				
EC50	>	0,68			mg/l
Duration of exposure		72	h		
Method	OECD 201				

Bacteria toxicity (Components)

Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide

Species	activated sludge				
EC50	>	1000			mg/l
Duration of exposure		3	h		
Method	OECD 209				

Bisphenol A, ethoxylated, dimethacrylate

Species	activated sludge				
NOEC		14,3			mg/l
Duration of exposure		28	d		
Remarks	Test conducted with a similar formulation.				

2-hydroxyethyl methacrylate

Species	Pseudomonas fluorescens				
EC0	>	3000			mg/l
Duration of exposure		16	h		

7,7,9(7,9,9)-trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahexadecane-1,16-diylbismethacrylate

Species	activated sludge				
NOEC	>=	36,1			mg/l
Duration of exposure		14	d		

12.2. Persistence and degradability

General information

not determined

Biodegradability (Components)

Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide

Value	<	0	to	10	%
Duration of test		28	d		
evaluation	not readily degradable				

Bisphenol A, ethoxylated, dimethacrylate

Value		24			%
Duration of test		28	d		
evaluation	readily degradable				
Remarks	Test conducted with a similar formulation.				

2-hydroxyethyl methacrylate

Value		92	to	100	%
Duration of test		14	d		
evaluation	Readily biodegradable (according to OECD criteria)				

7,7,9(7,9,9)-trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahexadecane-1,16-diylbismethacrylate

Value		22			%
Duration of test		28	d		
evaluation	not readily degradable				

Ready degradability (Components)

Hydroxylpropyl methacrylate

Value	81		%
Duration of test	28	Days	

12.3. Bioaccumulative potential

General information

not determined

Partition coefficient n-octanol/water (log value)

Remarks	not determined

Octanol/water partition coefficient (log Pow) (Components)

Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide

log Pow	3,1	
Temperature	23	°C

Bisphenol A, ethoxylated, dimethacrylate

log Pow	4,39	

2-hydroxyethyl methacrylate

log Pow	0,42	
Temperature	25	°C
Method	OECD 107	

Hydroxylpropyl methacrylate

log Pow	0,97	
Temperature	20	°C

7,7,9(7,9,9)-trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahexadecane-1,16-diylbismethacrylate

log Pow	3,39	
Temperature	20	°C

Bioconcentration factor (BCF) (Components)

Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide

BCF		47	to	55
Concentration	0,1	mg/l		
Duration of exposure	8	Weeks		
Medium	Freshwater			
Species	carp (Cyprinus carpio)			

12.4. Mobility in soil

General information

not determined

12.5. Results of PBT and vPvB assessment

General information

not determined

Results of PBT and vPvB assessment

The product contains no PBT substances
The product contains no vPvB substances.

12.6 Endocrine disrupting properties

Endocrine disrupting properties with respect to the envrionment

The product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms.

12.7. Other adverse effects

General information

not determined

General information / ecology

Do not allow to enter soil, waterways or waste water canal. Avoid release into the atmosphere.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations for the product

Must not be disposed together with household garbage.
Dispose of waste according to applicable legislation.

Disposal recommendations for packaging

Packaging that cannot be cleaned should be disposed off as product waste.

SECTION 14: Transport information

	Land transport ADR/RID	Marine transport IMDG/GGVSee	Air transport ICAO/IATA
14.1. UN number	The product does not constitute a hazardous substance in land transport.	The product does not constitute a hazardous substance in sea transport.	The product does not constitute a hazardous substance in air transport.
14.2. UN proper shipping name	-	-	-
14.3. Transport hazard class(es)		-	-
Label			
14.4. Packing group		-	-
14.5. Environmental hazards	-	no	-

SECTION 15: Regulatory information

15.2. Chemical safety assessment

For this preparation a chemical safety assessment has not been carried out.

SECTION 16: Other information

Hazard statements listed in Chapter 3

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H361f	Suspected of damaging fertility.

H411	Toxic to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.

CLP categories listed in Chapter 3

Aquatic Chronic 2	Hazardous to the aquatic environment, chronic, Category 2
Aquatic Chronic 4	Hazardous to the aquatic environment, chronic, Category 4
Eye Irrit. 2	Eye irritation, Category 2
Repr. 2	Reproductive toxicity, Category 2
Skin Irrit. 2	Skin irritation, Category 2
Skin Sens. 1	Skin sensitization, Category 1
Skin Sens. 1B	Skin sensitization, Category 1B

Supplemental information

Relevant changes compared with the previous version of the safety data sheet are marked with: ***
This information is based on our present state of knowledge. However, it should not constitute a guarantee for any specific product properties and shall not establish a legally valid relationship.