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

1.1. Product identifier

FotoDent model2

This substance/mixture contains components in nanoform

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

Use of the substance/preparation

Light-curing material for the fabrication of dental working models

1.3. Details of the supplier of the safety data sheet

Address/Manufacturer

Dreve Dentamid GmbH
Max-Planck-Straße 31
DE-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
Repr. 1B	H360F
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 ***

Danger

Hazard statements ***

H319	Causes serious eye irritation.
H317	May cause an allergic skin reaction.
H360F	May damage fertility.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements ***

P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
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.
P308+P313	IF exposed or concerned: Get medical advice/ attention.
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; Hydroxypropyl methacrylate; 7,7,9 (7,9,9)-trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahexadecane-1,16-diylbismethacrylate; Propylidynetrimethanol, ethoxylated, esters with acrylic acid; Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide

Supplemental information

Further supplemental information ***

Restricted to professional users

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 ***

2-hydroxyethyl methacrylate

CAS No.	868-77-9				
EINECS no.	212-782-2				
Registration no.	01-2119490169-29				
Concentration	>=	1	<	6,2	%

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

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

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

Hydroxypropyl 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

Acrylic Resin
Concentration >= 1 < 3,7 %
Classification (Regulation (EC) No. 1272/2008)
Skin Irrit. 2 H315
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 < 2,5 %
Classification (Regulation (EC) No. 1272/2008)
Repr. 1B H360Fd.
Skin Sens. 1B H317
Aquatic Chronic 2 H411

Supplemental information
The substance is contained in the Candidate List for inclusion in Annex XIV of Regulation (EC) No. 1907/2006 (REACH).

Propylidynetrimethanol, ethoxylated, esters with acrylic acid
CAS No. 28961-43-5
EINECS no. 500-066-5
Registration no. 01-2119489900-30
Concentration >= 0,1 < 1 %
Classification (Regulation (EC) No. 1272/2008)
Eye Irrit. 2 H319
Skin Sens. 1B H317
Aquatic Chronic 3 H412

Further ingredients

Dichlorodimethylsilane, reaction products with silica
CAS No. 68611-44-9
EINECS no. 271-893-4
Registration no. 01-2119379499-16
Concentration < 1 %
Advice: [7]

Name of set of nanoform	Nanoagglomerate	
Particle size distribution	d50 2,5-50	nm
	Method	Transmission Electron Microscopy (TEM)
Shape and aspect ratio of particles	Spheroidal	

Note

[7] Nanoforms

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

Remove the casualty into fresh air and keep him calm. In the event of symptoms take medical treatment.

After skin contact

After contact with skin, wash immediately with plenty of water and soap. Consult a doctor if skin irritation persists.

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

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

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	0,83	mg/kg/d

Hydroxypropyl methacrylate

Reference substance	Hydroxypropyl methacrylate	
Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Route of exposure	inhalative	
Concentration	14,7	mg/m³

	Hydroxypropyl 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	4,35	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

Propylidynetrimethanol, ethoxylated, esters with acrylic acid

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	37	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	10,5	mg/kg/d

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	0,113	mg/kg
Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	10	mg/l
Type of value	PNEC	
Type	Freshwater sediment	
Concentration	1,98	mg/kg
Type of value	PNEC	
Type	Saltwater	
Concentration	0,048	mg/l
Type of value	PNEC	
Type	Marine sediment	
Concentration	0,198	mg/kg

Hydroxypropyl methacrylate

Reference substance	Hydroxypropyl methacrylate	
Type of value	PNEC	
Type	Freshwater	
Concentration	0,904	mg/l
	Hydroxypropyl methacrylate	
Type of value	PNEC	
Type	Freshwater sediment	
Concentration	4,13	mg/kg
	Hydroxypropyl methacrylate	
Type of value	PNEC	
Type	Soil	
Concentration	0,295	mg/kg
	Hydroxypropyl methacrylate	
Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	10	mg/l
Type of value	PNEC	
Type	Saltwater	
Concentration	0,09	mg/l

Type of value	PNEC	
Type	Marine sediment	
Concentration	0,413	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

Propylidynetrimethanol, ethoxylated, esters with acrylic acid

Type of value	PNEC	
Type	Freshwater	
Concentration	0,002	mg/l
Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	10	mg/l
Type	Freshwater sediment	
Concentration	0,038	mg/kg
Type of value	PNEC	
Type	Marine sediment	
Concentration	0,004	mg/kg
Type of value	PNEC	
Type	Soil	
Concentration	0,006	mg/kg

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	213		°C
Flammability			
evaluation	not determined		
Upper and lower explosive limits			
Remarks	not determined		
Flash point			
Value	>	100	°C
Method	closed cup		
Auto-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

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

Acute oral toxicity (Components)

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

Species	rat		
LD50	>	5000	mg/kg
Method	OECD 401		

2-hydroxyethyl methacrylate

Species	rat		
LD50	>	5000	mg/kg
Method	FDA guideline		

Hydroxypropyl 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		

Propylidynetrimethanol, ethoxylated, esters with acrylic acid

Species	rat		
LD50	>	2000	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		

2-hydroxyethyl methacrylate

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

Hydroxypropyl 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		

Propylidynetrimethanol, ethoxylated, esters with acrylic acid

Species	rabbit		
LD50	>	13200	mg/kg

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		

Skin corrosion/irritation

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

Skin corrosion/irritation (Components)

Acrylic Resin

evaluation: irritant

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

Hydroxypropyl methacrylate

Species: rabbit

evaluation: slightly irritant

Propylidynetrimethanol, ethoxylated, esters with acrylic acid

Species: rabbit

evaluation: irritant

Method: OECD 405

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.

Hydroxypropyl 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

Propylidynetrimethanol, ethoxylated, esters with acrylic acid

Route of exposure	dermal
Species	guinea pig
evaluation	sensitizing
Method	OECD 406

Subacute, subchronic, chronic toxicity

Remarks not determined

Mutagenicity

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

Reproductive toxicity

evaluation May damage fertility.

Remarks The classification criteria are met.

Reproduction toxicity (Components)

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

evaluation Suspected of damaging fertility.

Carcinogenicity

Remarks 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.

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		

2-hydroxyethyl methacrylate

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

Hydroxypropyl methacrylate

LC50	> 100		mg/l
Duration of exposure	96	h	

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		

Propylidynetrimethanol, ethoxylated, esters with acrylic acid

Species	Zebrabaerbling		
LC50	1,95		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		

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		

Hydroxypropyl methacrylate

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

Hydroxypropyl methacrylate

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

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		

Propylidynetrimethanol, ethoxylated, esters with acrylic acid

Species	Daphnia magna		
EC50	70,7		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			

2-hydroxyethyl methacrylate

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

Hydroxypropyl methacrylate

EC50	>	97,2		mg/l
Duration of exposure		72	h	

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			

Propylidynetrimethanol, ethoxylated, esters with acrylic acid

Species	Scenedesmus subspicatus			
EC50		2,2		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			

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	

Propylidynetrimethanol, ethoxylated, esters with acrylic acid

Species	activated sludge			
EC20		292		mg/l
Duration of exposure		3	h	
Method	OECD 209			

Hydroxypropyl methacrylate

NOEC		100		mg/l

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				

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			

Propylidynetrimethanol, ethoxylated, esters with acrylic acid

Value	58	to	61	%
Duration of test	28	d		
evaluation	Readily biodegradable (according to OECD criteria)			

Hydroxypropyl methacrylate

Value	> 80			%
Duration of test	10	d		
evaluation	Readily biodegradable (according to OECD criteria)			
Method	OECD 301 E			

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

2-hydroxyethyl methacrylate

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

Hydroxypropyl 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

Propylidynetrimethanol, ethoxylated, esters with acrylic acid

log Pow	2,89	
Temperature	23	°C
Method	OECD 107	

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 or ID 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		-	-

SECTION 15: Regulatory information

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

Restriction according to annex XVII to regulation (EU) No 1907/2006

The product is subject to restrictions according to Annex XVII Regulation (EU) No. 1907/2006: Entry No. 3

Other information

All components are contained in the TSCA inventory or exempted.

15.2. Chemical safety assessment

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

SECTION 16: Other information

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

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

Eye Irrit. 2	H319	Calculation method
Skin Sens. 1	H317	Calculation method
Repr. 1B	H360F	Calculation method
Aquatic Chronic 3	H412	Calculation method

Hazard statements listed in Chapter 2/3

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H360F	May damage fertility.
H360Fd.	May damage fertility. Suspected of damaging the unborn child.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

CLP categories listed in Chapter 2/3

Aquatic Chronic 2	Hazardous to the aquatic environment, chronic, Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment, chronic, Category 3
Eye Irrit. 2	Eye irritation, Category 2
Repr. 1B	Reproductive toxicity, Category 1B
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.