

Trade name: FotoDent guide

Substance number: 9370

Version: 2 / GB

Date revised: 20.02.2024

Replaces Version: 1 / GB

Print date: 20.02.2024

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

Department Research & Development: Fax: +49 2303 8807-562

by / telephone

E-mail address of

sicherheitsdatenblatt@dreve.com

person responsible

for this SDS

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



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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; Hydroxypropyl methacrylate; 7,7,9(7,9,9)-trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahehexadecane-1,16-diylbismethacrylate

2.3. Other hazards

No special hazards have to be mentioned.

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. The product contains substances meeting the PBT criteria. See SECTION 3 in this safety data sheet. The product contains substances meeting the vPvB criteria. See SECTION 3 in this safety data sheet.

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 \geq 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-diazahehexadecane-1,16-diylbismethacrylate

CAS No. 72869-86-4
 EINECS no. 276-957-5
 Registration no. 01-2120751202-68
 Concentration \geq 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 \geq 1 < 6,3 %



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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

| | |
|--|-------------|
| EINECS no. | 933-881-3 |
| 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 |

Supplemental information

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

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 |

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 |

Further ingredients**Bumetrizole**

| | |
|------------------|------------------|
| CAS No. | 3896-11-5 |
| EINECS no. | 223-445-4 |
| Registration no. | 01-2119971796-18 |
| Concentration | < 1 % |
| Advice: [1], [2] | |

Supplemental information

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

Note

[1] PBT substance
[2] vPvB substance

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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.



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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



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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/m ³ |

| | | |
|----------------------|--------------------------------|---------|
| 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/m ³ |

| | | |
|----------------------|--------------------------------|-------|
| 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/m ³ |

| | | |
|---------------|--------------------------------|--|
| Type of value | Derived No Effect Level (DNEL) | |
|---------------|--------------------------------|--|



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| | | |
|----------------------|------------------|-------|
| 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/m ³ |

| | | |
|----------------------|--------------------------------|---------|
| 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/m ³ |

| | | |
|----------------------|--------------------------------|---------|
| 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/m ³ |

| | | |
|-------------------|--------------------------------|---------|
| 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) | |
|---------------|--------------------------------|--|



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| | | |
|-------------------|----------|-------|
| 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/m ³ |

| | | |
|-------------------|--------------------------------|-------|
| 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/m ³ |

| | | |
|----------------------|--------------------------------|-------|
| 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/m ³ |

| | | |
|----------------------|--------------------------------|-------|
| 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 |



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| | | |
|---------------|---------------------|-------|
| 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 |
| Type of value | PNEC | |
| Type | Water (intermittent release) | |
| Concentration | 1 | mg/l |

Hydroxypropyl methacrylate

| | | |
|---------------------|----------------------------|-------|
| Reference substance | Hydroxypropyl methacrylate | |
| Type of value | PNEC | |
| Type | Freshwater | |
| Concentration | 0,904 | mg/l |
| Type of value | Hydroxypropyl methacrylate | |
| Type | PNEC | |
| Concentration | Freshwater sediment | |
| | 6,28 | mg/kg |



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| | | |
|---------------|------------------------------|-------|
| Type of value | Hydroxypropyl methacrylate | |
| Type | PNEC | |
| Concentration | Soil | |
| | 0,727 | mg/kg |
| Type of value | Hydroxypropyl methacrylate | |
| Type | PNEC | |
| Concentration | Sewage treatment plant (STP) | |
| | 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



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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 | | |
| evaluation | not determined | |
| Upper and lower explosive limits | | |
| Remarks | not determined | |
| Flash point | | |
| Value | 100 | °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 | | |



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Remarks not determined

Density and/or relative densityValue 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)**



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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 |
| Remarks | Test conducted with a similar formulation. | |

2-hydroxyethyl methacrylate

| | | |
|---------|--------|-------|
| Species | rat | |
| LD50 | > 5564 | mg/kg |

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 | |

Acrylic Resin

| | | |
|------|--------|-------|
| LD50 | > 2000 | mg/kg |
|------|--------|-------|

Aliphatic urethane methacrylate

| | | |
|---------|--------|-------|
| Species | rat | |
| LD50 | > 2000 | mg/kg |

Bumetrizole

| | | |
|---------|--------|-------|
| 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 | |
| Remarks | Test conducted with a similar formulation. | |

2-hydroxyethyl methacrylate

| | | |
|---------|--|-------|
| Species | hamster | |
| 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 | |

Acrylic Resin

| | | |
|------|--------|-------|
| LD50 | > 2000 | mg/kg |
|------|--------|-------|



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Aliphatic urethane methacrylate

| | | | |
|---------|--------|------|-------|
| Species | rabbit | | |
| LD50 | > | 2000 | mg/kg |

Bumetrizole

| | | | |
|---------|----------|------|-------|
| Species | rat | | |
| LD50 | > | 2000 | mg/kg |
| Method | OECD 402 | | |

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 |

Hydroxypropyl 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. |
|---------|---|

Hydroxypropyl methacrylate



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| | |
|------------|--|
| 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-dioxo-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

| | |
|---------|---|
| Remarks | 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

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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 (<i>Cyprinus carpio</i>) | | |
| LC50 | 1,4 | | mg/l |
| Duration of exposure | 96 | h | |
| Method | OECD 203 | | |

Bisphenol A, ethoxylated, dimethacrylate

| | | | |
|---------|--|--|------|
| Species | rainbow trout (<i>Oncorhynchus mykiss</i>) | | |
| LL50 | > 100 | | mg/l |
| Method | OECD 203 | | |
| 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 | | |

Hydroxypropyl methacrylate

| | | | |
|----------------------|---------------------------------------|---|------|
| Species | golden orfe (<i>Leuciscus idus</i>) | | |
| 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-dioxo-5,12-diazahexadecane-1,16-diylbismethacrylate

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

Bumetrizole

| | | | |
|----------------------|---|---|------|
| Species | zebra fish (<i>Brachydanio rerio</i>) | | |
| LC50 | > 100 | | 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 | | |
| EL50 | > 100 | | mg/l |
| Duration of exposure | 48 | h | |
| Method | OECD 202 | | |

2-hydroxyethyl methacrylate

| | | | |
|---------|---------------|--|--|
| Species | Daphnia magna | | |
|---------|---------------|--|--|



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| | | | |
|----------------------|----------|---|------|
| 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 | |
| Method | OECD 202 | | |

Hydroxypropyl 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-dioxo-5,12-diazahehexadecane-1,16-diylbismethacrylate

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

Bumetizole

| | | | |
|----------------------|---------------|---|------|
| Species | Daphnia magna | | |
| EC50 | >= 100 | | mg/l |
| Duration of exposure | 48 | h | |
| Method | OECD 202 | | |

Bumetizole

| | | | |
|----------------------|---------------|---|------|
| Species | Daphnia magna | | |
| NOEC | >= 10 | | mg/l |
| Duration of exposure | 21 | d | |
| Method | OECD 211 | | |

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 | | |
| EL50 | > 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 | | |

Hydroxypropyl methacrylate

| | | | |
|----------------------|---------------------------------|---|------|
| Species | Pseudokirchneriella subcapitata | | |
| EC50 | > 97,2 | | mg/l |
| Duration of exposure | 72 | h | |



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Method OECD 201
7,7,9(7,9,9)-trimethyl-4,13-dioxo-3,14-dioxo-5,12-diazahexadecane-1,16-diylbismethacrylate

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

Bumetizole

Species Scenedesmus subspicatus
 EC50 > 100 mg/l
 Duration of exposure 72 h

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-dioxo-5,12-diazahexadecane-1,16-diylbismethacrylate

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

Bumetizole

Species activated sludge
 EC50 > 100 mg/l
 Duration of exposure 3 h
 Method OECD 209

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 biodegradable (according to OECD criteria)

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-dioxo-5,12-diazahexadecane-1,16-diylbismethacrylate

Value 22 %



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| | | | | |
|-----------------------------|------------------------|---|--|--|
| Duration of test evaluation | 28 | d | | |
| | not readily degradable | | | |

Bumetrizole

| | | | | |
|-----------------------------|----------------------|----|----|---|
| Value | 10 | to | 20 | % |
| Duration of test evaluation | 28 | d | | |
| | sparingly degradable | | | |

Ready degradability (Components)**Hydroxypropyl 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 | | |

Hydroxypropyl methacrylate

| | | | |
|-------------|------|----|--|
| log Pow | 0,97 | | |
| Temperature | 20 | °C | |

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

| | | | |
|-------------|------|----|--|
| log Pow | 3,39 | | |
| Temperature | 20 | °C | |

Bumetrizole

| | | | |
|-------------|---|-----|----|
| log Pow | > | 6,5 | |
| Temperature | | 23 | °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



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The product contains PBT-substances.
The product contains vPvB-substances.

Results of PBT and vPvB assessment (Ingredients)

Bumetrizole

The Substance meets PBT-criteria

Bumetrizole

The substance meets vPvB-criteria.

12.6 Endocrine disrupting properties

Endocrine disrupting properties with respect to the environment

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 | | - | - |



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SECTION 15: Regulatory information

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

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 |
| 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. |
| H361f | Suspected of damaging fertility. |
| H411 | Toxic to aquatic life with long lasting effects. |
| H412 | Harmful to aquatic life with long lasting effects. |
| H413 | May cause long lasting harmful effects to aquatic life. |

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 |
| 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.