Safety data sheet

1. Identification

Product identifier

Ultracur3D® DM 2304 Gingiva Mask

Recommended use: 3D Printing

Details of the supplier of the safety data sheet

Company:
BASF 3D Printing Solutions GmbH
Speyerer Str. 4
69115 Heidelberg, Germany

Telephone: +49 6221 67417 900
E-mail address: sales@basf-3dps.com

Emergency telephone number

International emergency number:
Telephone: +49 180 2273-112

2. Hazards Identification

Classification of the substance or mixture

According to UN GHS criteria

Acute Tox. 4 (oral)
Skin Corr./Irrit. 2
Eye Dam./Irrit. 1
Skin Sens. 1
Repr. 1B (fertility)
Repr. 1B (unborn child)
STOT SE 3 (irritating to respiratory system)

Aquatic Acute 2
Aquatic Chronic 2

For the classifications not written out in full in this section the full text can be found in section 16.

Label elements

Globally Harmonized System (GHS)

Pictogram:

Signal Word:
Danger

Hazard Statement:

H318	Causes serious eye damage.
H315	Causes skin irritation.
H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H335	May cause respiratory irritation.
H360	May damage fertility. May damage the unborn child.
H401	Toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

Precautionary Statements (Prevention):

P280	Wear protective gloves, protective clothing and eye protection or face protection.
P261	Avoid breathing mist or vapour or spray.
P273	Avoid release to the environment.
P271	Use only outdoors or in a well-ventilated area.
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P272	Contaminated work clothing should not be allowed out of the workplace.
P270	Do not eat, drink or smoke when using this product.
P264	Wash contaminated body parts thoroughly after handling.

Precautionary Statements (Response):

P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or physician.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P308 + P313	IF exposed or concerned: Get medical attention.
P330	Rinse mouth
P362 + P364	Take off contaminated clothing and wash it before reuse.
P391	Collect spillage.

Precautionary Statements (Storage):

P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.

Precautionary Statements (Disposal):

P501	Dispose of contents and container to hazardous or special waste collection point.

Labeling of special preparations (GHS):

The following percentage of the mixture consists of components(s) with unknown hazards regarding the acute toxicity: 4 %, dermal
The following percentage of the mixture consists of components(s) with unknown hazards regarding the acute toxicity: 4 %, oral
The following percentage of the mixture consists of components(s) with unknown hazards regarding the acute toxicity: 30 %, Inhalation - vapour
The following percentage of the mixture consists of components(s) with unknown hazards regarding the acute toxicity: 30 %, Inhalation - mist

Other hazards

According to UN GHS criteria

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

3. Composition/Information on Ingredients

Substances

Not applicable

Mixtures

Chemical nature

Blend based on: acrylic resin, additives

Hazardous ingredients (GHS)
According to UN GHS criteria

Oxybis(methyl-2,1-ethanediyl) diacrylate

Content (W/W): >= 0,3 % - < 3 %	Acute Tox. 5 (oral)
CAS Number: 57472-68-1	Skin Corr./Irrit. 2
EC-Number: 260-754-3	Eye Dam./Irrit. 1
	Skin Sens. 1
	Aquatic Acute 2
	H318, H315, H303, H317, H401

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

Content (W/W): >= 1 % - < 3 %	Skin Sens. 1B
CAS Number: 75980-60-8	Repr. 1B (fertility)
EC-Number: 278-355-8	Repr. 1B (unborn child)
	Aquatic Acute 2
	Aquatic Chronic 2
	H317, H360, H401, H411

1,2-Cyclohexanedicarboxylic acid, diisononyl ester

Content (W/W): >= 20 % - < 25 %	Skin Corr./Irrit. 3
CAS Number: 166412-78-8	H316
EC-Number: 431-890-2	

Isodecyl acrylate

Content (W/W): >= 15 % - < 20 %	Skin Corr./Irrit. 2
CAS Number: 1330-61-6	Skin Sens. 1B
EC-Number: 215-542-5	STOT SE 3 (irr. to respiratory syst.)
INDEX-Number: 607-133-00-9	Aquatic Acute 2
	Aquatic Chronic 2
	H317, H335, H402, H411
	Specific concentration limit:
	STOT SE 3, irr. to respiratory syst.: >= 10 %

Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate

Content (W/W): >= 5 % - < 10 %	Acute Tox. 5 (oral)
CAS Number: 5888-33-5	Skin Sens. 1
EC-Number: 227-561-6	STOT SE 3 (irr. to respiratory syst.)
INDEX-Number: 607-133-00-9	Aquatic Acute 1
	Aquatic Chronic 1
	M-factor acute: 1
	M-factor chronic: 1
	H303, H317, H335, H400, H410
	Specific concentration limit:
	STOT SE 3, irr. to respiratory syst.: >= 10 %

Polymeric urethane acrylate

Content (W/W): >= 1 % - < 3 %	Skin Corr./Irrit. 2
CAS Number: 52404-33-8	Eye Dam./Irrit. 2A
	H319, H315

2-Oxazolidinone, 3-ethenyl-5-methyl-

Content (W/W): >= 25 % - < 50 %	Acute Tox. 4 (oral)
CAS Number: 3395-98-0	Skin Corr./Irrit. 2
	Eye Dam./Irrit. 1
	STOT SE 3 (irr. to respiratory syst.)
	H318, H315, H302, H335

For the classifications not written out in full in this section the full text can be found in section 16.

4. First-Aid Measures

Description of first aid measures

First aid personnel should pay attention to their own safety. If the patient is likely to become unconscious, place and transport in stable sideways position (recovery position). Immediately remove contaminated clothing.

If inhaled:
Keep patient calm, remove to fresh air, seek medical attention. Immediately administer a corticosteroid from a controlled/metered dose inhaler.

On skin contact:
Immediately wash thoroughly with plenty of water, apply sterile dressings, consult a skin specialist.

On contact with eyes:
Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

On ingestion:
Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms: Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11., (Further) symptoms and / or effects are not known so far

Indication of any immediate medical attention and special treatment needed

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:
water spray, dry powder, foam

Unsuitable extinguishing media for safety reasons:
water jet

Special hazards arising from the substance or mixture

harmful vapours
Evolution of fumes/fog. The substances/groups of substances mentioned can be released in case of fire.

Advice for fire-fighters

Special protective equipment:
Wear a self-contained breathing apparatus.

Further information:

The degree of risk is governed by the burning substance and the fire conditions. Contaminated extinguishing water must be disposed of in accordance with official regulations.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Use personal protective clothing. Breathing protection required.

Environmental precautions

Contain contaminated water/firefighting water. Do not discharge into drains/surface waters/groundwater.

Methods and material for containment and cleaning up

For large amounts: Pump off product.
For residues: Pick up with suitable absorbent material. Dispose of absorbed material in accordance with regulations.

7. Handling and Storage

Precautions for safe handling

No special measures necessary provided product is used correctly.

Protection against fire and explosion:
Heated containers should be cooled to prevent polymerization. Take precautionary measures against static discharges.

Conditions for safe storage, including any incompatibilities

The product in undamaged packing need not be stored separately.
Further information on storage conditions: Protect against heat. Protect from the effects of light. The stabilizer is only effective in the presence of oxygen.

Protect from temperatures below: -15 °C
Changes in the properties of the product may occur if substance/product is stored below indicated temperature for extended periods of time.
Protect from temperatures above: 40 °C
Changes in the properties of the product may occur if substance/product is stored above indicated temperature for extended periods of time.

Specific end use(s)

For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.

8. Exposure Controls/Personal Protection

Control parameters

Components with occupational exposure limits

No substance specific occupational exposure limits known.

Exposure controls

Personal protective equipment

Respiratory protection:
Suitable respiratory protection for higher concentrations or long-term effect: Gas filter for gases/vapours of organic compounds (boiling point >65 °C, e. g. EN 14387 Type A)

Hand protection:
Chemical resistant protective gloves (EN ISO 374-1)
Suitable materials for short-term contact (recommended: At least protective index 2, corresponding > 30 minutes of permeation time according to EN ISO 374-1)
butyl rubber (butyl) - 0.7 mm coating thickness
nitrile rubber (NBR) - 0.4 mm coating thickness
Supplementary note: The specifications are based on tests, literature data and information of glove manufacturers or are derived from similar substances by analogy. Due to many conditions (e.g. temperature) it must be considered, that the practical usage of a chemical-protective glove in practice may be much shorter than the permeation time determined through testing.
Manufacturer's directions for use should be observed because of great diversity of types.

Eye protection:
Tightly fitting safety goggles (cage goggles) (e.g. EN 166) and face shield.

Body protection:
Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

General safety and hygiene measures
Under no circumstances should the product come into contact with the skin of pregnant women or be inhaled by them. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with the skin, eyes and clothing. Avoid inhalation. Wearing of closed work clothing is required additionally to the stated personal protection equipment. Wash contaminated clothing before reuse.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Form:	Liquid with bottom solids
Colour:	pink
Odour:	acrylic-like
Odour threshold:	not determined
pH value:	7 (25 °C)
Melting temperature:	not determined
Boiling point:	> 100 °C
Flash point:	> 100 °C
Evaporation rate:	not determined, Value can be approximated from Henry's Law Constant or vapor pressure.
Flammability:	not highly flammable

Lower explosion limit:	
	For liquids not relevant for classification and labelling.
Upper explosion limit:	
	For liquids not relevant for classification and labelling.
Ignition temperature:	
	not determined
Vapour pressure:	
	not determined
Density:	1,00 g/cm3 (20 °C)
Relative density:	approx. 1,02 (20 °C)
Relative vapour density (air):	
	not determined
Solubility in water:	sparingly soluble
Solubility (qualitative) solvent(s):	organic solvents soluble
Partitioning coefficient n-octanol/water (log Kow):	
	not applicable for mixtures
Self ignition:	not self-igniting
Thermal decomposition:	171 °C, 155 kJ/kg
Viscosity, dynamic:	880 mPa.s (30 °C)
Explosion hazard:	not explosive
Fire promoting properties:	not fire-propagating

Other information

Self heating ability:	not applicable, the product is a liquid
Hygroscopy:	hygroscopic

Other Information:
If necessary, information on other physical and chemical parameters is indicated in this section.

10. Stability and Reactivity

Reactivity
No hazardous reactions if stored and handled as prescribed/indicated.

Corrosion to metals: Corrosive effects to metal are not anticipated.

Chemical stability
The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions
The product can polymerize if the shelf life or storage temperature are greatly exceeded. Heat develops during polymerization. Reacts with peroxides and other radical components.
The product is stabilized against spontaneous polymerization prior to despatch.

Conditions to avoid

Avoid heat. Avoid UV-light and other radiation with high energy. Avoid direct sunlight. Avoid prolonged storage. Avoid inhibitor loss.

Incompatible materials

Substances to avoid:
free radical initiators

Hazardous decomposition products

Hazardous decomposition products:
No hazardous decomposition products if stored and handled as prescribed/indicated.

11. Toxicological Information

Information on toxicological effects

Acute toxicity

Assessment of acute toxicity:
Of moderate toxicity after single ingestion. Virtually nontoxic by inhalation. Virtually nontoxic after a single skin contact.

Experimental/calculated data:
ATE (oral): 1.370 mg/kg

ATE (by inhalation): > 20 mg/l 4 h
Determined for vapor

ATE (by inhalation): > 5 mg/l 4 h
Determined for mist

ATE (dermal): > 5.000 mg/kg

Information on: 2-Oxazolidinone, 3-ethenyl-5-methyl-

Experimental/calculated data:
LD50 rat (oral): >300-<2000 mg/kg bw (OECD Guideline 423)

Information on: Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate

Experimental/calculated data:
LD50 rat (oral): 4.350 mg/kg (Conventional method)

Information on: Oxybis(methyl-2,1-ethanediyl) diacrylate

Experimental/calculated data:
LD50 rat (oral): 3.530 mg/kg (OECD Guideline 401)

The following percentage of the mixture consists of components(s) with unknown hazards regarding the acute toxicity: 4 %

The following percentage of the mixture consists of components(s) with unknown hazards regarding the acute toxicity: 4 %

The following percentage of the mixture consists of components(s) with unknown hazards regarding the acute toxicity: 30 %

The following percentage of the mixture consists of components(s) with unknown hazards regarding the acute toxicity: 30 %

Irritation

Assessment of irritating effects:
Skin contact causes irritation. May cause severe damage to the eyes.

Information on: 2-Oxazolidinone, 3-ethenyl-5-methyl-
Assessment of irritating effects:
May cause severe damage to the eyes. Causes skin irritation.

Information on: Isodecyl acrylate
Assessment of irritating effects:
Skin contact causes irritation. Not irritating to the eyes. The European Union (EU) has classified the substance as "irritating to skin and eyes".

Information on: Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate
Assessment of irritating effects:
Not irritating to eyes and skin.

Information on: Oxybis(methyl-2,1-ethanediyl) diacrylate
Assessment of irritating effects:
Skin contact causes irritation. May cause severe damage to the eyes.

Information on: 2-Oxazolidinone, 3-ethenyl-5-methyl-
Experimental/calculated data:
Skin corrosion/irritation In vitro assay: Irritant. (OECD Guideline 439)

Information on: Isodecyl acrylate
Experimental/calculated data:
Skin corrosion/irritation rabbit: Irritant. (other)

Information on: Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate
Experimental/calculated data:
Skin corrosion/irritation rabbit: non-irritant (other)

Information on: Oxybis(methyl-2,1-ethanediyl) diacrylate
Experimental/calculated data:
Skin corrosion/irritation rabbit: Irritant. (OECD Guideline 404)

Information on: 2-Oxazolidinone, 3-ethenyl-5-methyl-
Experimental/calculated data:
Serious eye damage/irritation In vitro assay: irreversible damage (OECD Guideline 437)

Information on: Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate
Experimental/calculated data:
Serious eye damage/irritation rabbit: non-irritant (other)

Information on: Oxybis(methyl-2,1-ethanediyl) diacrylate
Experimental/calculated data:
Serious eye damage/irritation rabbit: irreversible damage (OECD Guideline 405)

Respiratory/Skin sensitization

Assessment of sensitization:
Sensitization after skin contact possible.

Information on: Isodecyl acrylate
Assessment of sensitization:
Sensitization after skin contact possible.

Information on: Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate
Assessment of sensitization:
Sensitization after skin contact possible.

Information on: Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide
Assessment of sensitization:
Caused skin sensitization in animal studies.

Information on: Oxybis(methyl-2,1-ethanediyl) diacrylate
Assessment of sensitization:
Sensitization after skin contact possible.

Information on: Isodecyl acrylate
Experimental/calculated data:
Mouse Local Lymph Node Assay (LLNA) mouse: skin sensitizing (OECD Guideline 429)

Information on: Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate
Experimental/calculated data:
Mouse Local Lymph Node Assay (LLNA) mouse: skin sensitizing (OECD Guideline 429)

Information on: Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide
Experimental/calculated data:
Mouse Local Lymph Node Assay (LLNA) mouse: skin sensitizing (OECD Guideline 429)

Information on: Oxybis(methyl-2,1-ethanediyl) diacrylate
Experimental/calculated data:
Mouse Local Lymph Node Assay (LLNA) mouse: skin sensitizing (OECD Guideline 429)

Germ cell mutagenicity

Assessment of mutagenicity:
Based on the ingredients, there is no suspicion of a mutagenic effect.

Carcinogenicity

Assessment of carcinogenicity:
The whole of the information assessable provides no indication of a carcinogenic effect.

Reproductive toxicity

Assessment of reproduction toxicity:
Based on available data, the classification criteria are not met. Contains a component that causes reproductive toxicity in test animals.

Information on: Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide
Assessment of reproduction toxicity:
The results of animal studies suggest a fertility impairing effect.

Developmental toxicity

Assessment of teratogenicity:
Based on available data, the classification criteria are not met. Contains a component that causes teratogenicity in test animals.

Information on: Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide
Assessment of teratogenicity:
At high doses there are indications of a developmental effect.

Specific target organ toxicity (single exposure)

Assessment of STOT single:
Causes temporary irritation of the respiratory tract.

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

Assessment of repeated dose toxicity:
No adverse effects were observed after repeated exposure in animal studies.

Aspiration hazard

No aspiration hazard expected.

Other relevant toxicity information

The product has not been tested. The statement has been derived from the properties of the individual components. The product has been assessed on the basis of the components' available data. To some extent data gaps exist for individual components. According to our present knowledge and experience dangers which are not covered by the current labeling are not to be expected.

12. Ecological Information

Toxicity

Assessment of aquatic toxicity:
Acutely toxic for aquatic organisms. Toxic to aquatic organisms based on long-term (chronic) toxicity study data.

Information on: Isodecyl acrylate
Toxicity to fish:

LC50 (96 h) 1,81 mg/l, Oncorhynchus mykiss (OECD Guideline 203, semistatic)
The statement of the toxic effect relates to the analytically determined concentration. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Information on: Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate
Toxicity to fish:
LC50 (96 h) 0,704 mg/l, Brachydanio rerio (OECD Guideline 203, semistatic)

Information on: Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide
Toxicity to fish:
LC50 (48 h) 6,53 mg/l, Oryzias latipes (JIS K 0102-71, semistatic)
The details of the toxic effect relate to the nominal concentration.

Information on: Isodecyl acrylate
Aquatic invertebrates:
EC50 (48 h) 1,3 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)
The statement of the toxic effect relates to the analytically determined concentration. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Information on: Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate
Aquatic invertebrates:
Study scientifically not justified.

Information on: Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide
Aquatic invertebrates:
EC50 (48 h) 3,53 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)
The statement of the toxic effect relates to the analytically determined concentration.

Information on: Isodecyl acrylate
Aquatic plants:
EC50 (72 h) 1,71 mg/l (growth rate), Scenedesmus subspicatus (OECD Guideline 201, static)
The statement of the toxic effect relates to the analytically determined concentration. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Information on: Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate
Aquatic plants:
No observed effect concentration (72 h) 0,405 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201, static)

EC50 (72 h) 1,98 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201, static)

Information on: Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide
Aquatic plants:
EC50 (72 h) > 2,01 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201, static)
The statement of the toxic effect relates to the analytically determined concentration.

EC10 (72 h) 1,56 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201, static)
The statement of the toxic effect relates to the analytically determined concentration.

Information on: Isodecyl acrylate
Microorganisms/Effect on activated sludge:
EC20 (30 min) > 1.000 mg/l, activated sludge, domestic (DIN EN ISO 8192, aquatic)
Nominal concentration.

Information on: Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate
Microorganisms/Effect on activated sludge:
Study scientifically not justified.

Information on: Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide
Microorganisms/Effect on activated sludge:
EC20 (3 h) > 1.000 mg/l, activated sludge, domestic (OECD Guideline 209, aerobic)
Limit concentration test only (LIMIT test). The details of the toxic effect relate to the nominal concentration.

Information on: Isodecyl acrylate
Chronic toxicity to fish:
No data available.

Information on: Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate
Chronic toxicity to fish:
Study scientifically not justified.

Information on: Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide
Chronic toxicity to fish:
No data available regarding toxicity to fish.

Information on: Isodecyl acrylate
Chronic toxicity to aquatic invertebrates:
No data available.

Information on: Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate
Chronic toxicity to aquatic invertebrates:
No observed effect concentration (21 d) 0,092 mg/l, Daphnia magna (OECD Guideline 211, semistatic)

Information on: Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide
Chronic toxicity to aquatic invertebrates:
No data available regarding toxicity to daphnids.

Persistence and degradability

Assessment biodegradation and elimination (H2O):
Product is not expected to be readily biodegradable.

Information on: 2-Oxazolidinone, 3-ethenyl-5-methyl-
Assessment biodegradation and elimination (H2O):
Not readily biodegradable (by OECD criteria).

Information on: Isodecyl acrylate
Assessment biodegradation and elimination (H2O):
Readily biodegradable (according to OECD criteria).

Information on: Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate
Assessment biodegradation and elimination (H2O):
Biodegradable. Not readily biodegradable (by OECD criteria).

Information on: Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide
Assessment biodegradation and elimination (H2O):
Poorly biodegradable. Not readily biodegradable (by OECD criteria).

Information on: Oxybis(methyl-2,1-ethanediyl) diacrylate
Assessment biodegradation and elimination (H2O):
Readily biodegradable (according to OECD criteria).

Information on: 2-Oxazolidinone, 3-ethenyl-5-methyl-
Elimination information:
< 10 % CO2 formation relative to the theoretical value (28 d) (OECD 301B; ISO 9439; 92/69/EEC, C.4-C) (aerobic, activated sludge, domestic)

Information on: Isodecyl acrylate
Elimination information:
82 % (28 d) (OECD 301D; EEC 92/69, C.4-E) (aerobic, activated sludge, domestic) Readily biodegradable (according to OECD criteria).

Information on: Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate
Elimination information:
57 % CO2 formation relative to the theoretical value (28 d) (OECD Guideline 310) (aerobic, activated sludge, non-adapted)

Information on: Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide
Elimination information:
0 - 10 % BOD of the ThOD (28 d) (OECD Guideline 301 F) (aerobic, activated sludge, domestic)

Information on: Oxybis(methyl-2,1-ethanediyl) diacrylate
Elimination information:
90 - 100 % DOC reduction (28 d) (OECD 301 A (new version)) (aerobic, activated sludge, domestic)

Bioaccumulative potential

Information on: 2-Oxazolidinone, 3-ethenyl-5-methyl-
Assessment bioaccumulation potential:
Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.

Information on: Isodecyl acrylate
Assessment bioaccumulation potential:
Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is possible.

Information on: Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate
Assessment bioaccumulation potential:
Does not accumulate in organisms.

Information on: Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide

Assessment bioaccumulation potential:
Does not significantly accumulate in organisms.

Information on: Oxybis(methyl-2,1-ethanediyl) diacrylate
Assessment bioaccumulation potential:
Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.

Information on: 2-Oxazolidinone, 3-ethenyl-5-methyl-
Bioaccumulation potential:
No data available.

Information on: Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate
Bioaccumulation potential:
Bioconcentration factor: 37 (56 h), Brachydanio rerio (OECD-Guideline 305)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Information on: Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide
Bioaccumulation potential:
Bioconcentration factor: 23 - 55 (56 d), Cyprinus carpio (measured)

Mobility in soil

Information on: 2-Oxazolidinone, 3-ethenyl-5-methyl-
Assessment transport between environmental compartments:
Volatility: The substance will not evaporate into the atmosphere from the water surface.
Adsorption in soil: Adsorption to solid soil phase is not expected.

Information on: Isodecyl acrylate
Assessment transport between environmental compartments:
Volatility: The substance will rapidly evaporate into the atmosphere from the water surface.
Adsorption in soil: Adsorption to solid soil phase is expected.

Information on: Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate
Assessment transport between environmental compartments:
Volatility: The substance will not evaporate into the atmosphere from the water surface.
Adsorption in soil: Adsorption to solid soil phase is expected.

Information on: Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide
Assessment transport between environmental compartments:
Volatility: The substance will not evaporate into the atmosphere from the water surface.
Adsorption in soil: Adsorption to solid soil phase is not expected.

Information on: Oxybis(methyl-2,1-ethanediyl) diacrylate
Assessment transport between environmental compartments:
Volatility: The substance will not evaporate into the atmosphere from the water surface.
Adsorption in soil: Adsorption to solid soil phase is not expected.

Results of PBT and vPvB assessment

The product does not contain a substance fulfilling the PBT (persistent/bioaccumulative/toxic) criteria or the vPvB (very persistent/very bioaccumulative) criteria.

Additional information

Add. remarks environm. fate & pathway:
Treatment in biological waste water treatment plants has to be performed according to local and administrative regulations.

Other ecotoxicological advice:
Do not discharge product into the environment without control.

13. Disposal Considerations

Waste treatment methods

Must be disposed of or incinerated in accordance with local regulations.

Contaminated packaging:
Uncontaminated packaging can be re-used.
Packs that cannot be cleaned should be disposed of in the same manner as the contents.

14. Transport Information

Land transport

ADR

UN number or ID number:	UN3082
UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains EXO-1,7,7- TRIMETHYLBICYCLO[2,2,1]HEPT-2-YL ACRYLATE, ISODECYL ACRYLATE)
Transport hazard class(es):	9, EHSM
Packing group:	III
Environmental hazards:	yes
Special precautions for user:	None known

RID

UN number or ID number:	UN3082
UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains EXO-1,7,7- TRIMETHYLBICYCLO[2,2,1]HEPT-2-YL ACRYLATE, ISODECYL ACRYLATE)
Transport hazard class(es):	9, EHSM
Packing group:	III
Environmental hazards:	yes
Special precautions for user:	None known

Inland waterway transport
ADN

UN number or ID number:	UN3082
UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains EXO-1,7,7- TRIMETHYLBICYCLO[2,2,1]HEPT-2-YL ACRYLATE, ISODECYL ACRYLATE)
Transport hazard class(es):	9, EHSM
Packing group:	III
Environmental hazards:	yes
Special precautions for user:	None known

Transport in inland waterway vessel
Not evaluated

Sea transport

IMDG

UN number or ID number:	UN 3082
UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains EXO-1,7,7- TRIMETHYLBICYCLO[2,2,1]HEPT-2-YL ACRYLATE, ISODECYL ACRYLATE)
Transport hazard class(es):	9, EHSM
Packing group:	III
Environmental hazards:	yes Marine pollutant: YES
Special precautions for user:	None known

Air transport

IATA/ICAO

UN number or ID number:	UN 3082
UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains EXO-1,7,7- TRIMETHYLBICYCLO[2,2,1]HEPT-2-YL ACRYLATE, ISODECYL ACRYLATE)
Transport hazard class(es):	9, EHSM
Packing group:	III
Environmental hazards:	yes
Special precautions for user:	None known

Maritime transport in bulk according to IMO instruments

Maritime transport in bulk is not intended.

Further information

Product may be shipped as non-hazardous in suitable packages containing a net quantity of 5 L or less under the provisions of various regulatory agencies: ADR, RID, ADN: Special Provision 375; IMDG: 2.10.2.7; IATA: A197; TDG: Special Provision 99(2); 49CFR: §171.4 (c) (2) and also the Special Provision 375 in Appendix B which is regulated in China "Regulations Concerning Road Transportation of Dangerous Goods Part 3: Index of dangerous goods name and transportation requirements" (JT/T 617.3)

15. Regulatory Information

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

If other regulatory information applies that is not already provided elsewhere in this safety data sheet, then it is described in this subsection.

16. Other Information

Any other intended applications should be discussed with the manufacturer.

Full text of classifications, hazard symbols and hazard statements, if mentioned in section 2 or 3:

Acute Tox.	Acute toxicity
Skin Corr./Irrit.	Skin corrosion/irritation
Eye Dam./Irrit.	Serious eye damage/eye irritation
Skin Sens.	Skin sensitization
Repr.	Reproductive toxicity
STOT SE	Specific target organ toxicity — single exposure
Aquatic Acute	Hazardous to the aquatic environment - acute
Aquatic Chronic	Hazardous to the aquatic environment - chronic
H318	Causes serious eye damage.
H315	Causes skin irritation.
H303	May be harmful if swallowed.
H317	May cause an allergic skin reaction.
H401	Toxic to aquatic life.
H360	May damage fertility. May damage the unborn child.
H411	Toxic to aquatic life with long lasting effects.
H316	Causes mild skin irritation.
H335	May cause respiratory irritation.
H402	Harmful to aquatic life.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H319	Causes serious eye irritation.
H302	Harmful if swallowed.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor a contractually designated use. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.

Vertical lines in the left hand margin indicate an amendment from the previous version.