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Safety data sheet

BASF Safety data sheet according to Regulation (EC) No. 1907/2006 as amended from time to time.
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Date previous version: 19.11.2019 Previous version: 4.0
Product: **Ultracur3D® FL 300**

(ID no. 11125609/SDS_GEN_EU/EN)
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Ultracur3D® FL 300

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

Recommended use: resin, Printing inks, Chemical

1.3. Details of the supplier of the safety data sheet

Company:
BASF SE
67056 Ludwigshafen
GERMANY

Telephone: +49 621 60-0
E-mail address: global.info@basf.com

1.4. Emergency telephone number

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

SECTION 2: Hazards Identification

2.1. Classification of the substance or mixture

For the classification of the mixture the following methods have been applied: extrapolation on the concentration levels of the hazardous substances, on basis of test results and after evaluation of experts. The methodologies used are mentioned at the respective test results.

According to Regulation (EC) No 1272/2008 [CLP]

Skin Corr./Irrit. 2	H315 Causes skin irritation.
Acute Tox. 4 (oral)	H302 Harmful if swallowed.
Eye Dam./Irrit. 1	H318 Causes serious eye damage.
Skin Sens. 1B	H317 May cause an allergic skin reaction.
Aquatic Chronic 2	H411 Toxic to aquatic life with long lasting effects.
STOT SE 3	H335 May cause respiratory irritation.

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

2.2. Label elements

Globally Harmonized System, EU (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.
H411	Toxic to aquatic life with long lasting effects.

Precautionary Statements (Prevention):

P280	Wear protective gloves and eye protection or face protection.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.

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.

Precautionary Statements (Storage):

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

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: 59 %, Inhalation - vapour
The following percentage of the mixture consists of components(s) with unknown hazards regarding the acute toxicity: 59 %, Inhalation - mist

According to Regulation (EC) No 1272/2008 [CLP]

Hazard determining component(s) for labelling: Isodecyl acrylate, diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide, Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate, 2-Oxazolidinone, 3-ethenyl-5-methyl-

2.3. Other hazards

According to Regulation (EC) No 1272/2008 [CLP]

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.

SECTION 3: Composition/Information on Ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Chemical nature

Blend based on: acrylic resin

Hazardous ingredients (GHS)
according to Regulation (EC) No. 1272/2008

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

Content (W/W): >= 1 % - < 3 %	Skin Sens. 1B
CAS Number: 75980-60-8	Repr. 2 (fertility)
EC-Number: 278-355-8	Repr. 2 (unborn child)
	Aquatic Chronic 2
	H317, H361fd, H411

Isodecyl acrylate

Content (W/W): >= 15 % - < 20 %	Skin Corr./Irrit. 2
CAS Number: 1330-61-6	Eye Dam./Irrit. 2
EC-Number: 215-542-5	Skin Sens. 1B
REACH registration number: 01-2119964031-47	STOT SE 3 (irr. to respiratory syst.) Aquatic Chronic 2
INDEX-Number: 607-133-00-9	H319, H315, H317, H335, 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 %	Skin Corr./Irrit. 2
CAS Number: 5888-33-5	Eye Dam./Irrit. 2
EC-Number: 227-561-6	Skin Sens. 1
INDEX-Number: 607-133-00-9	STOT SE 3 (irr. to respiratory syst.) Aquatic Acute 1 Aquatic Chronic 2 M-factor acute: 1 M-factor chronic: 1 H319, H315, H317, H335, H411, H400 Differing classification according to current knowledge and the criteria given in Annex I of Regulation (EC) No. 1272/2008 Skin Sens. 1 STOT SE 3 (irr. to respiratory syst.) Aquatic Acute 1 Aquatic Chronic 1 Skin Corr./Irrit. 2 Eye Dam./Irrit. 2 Specific concentration limit: STOT SE 3, irr. to respiratory syst.: >= 10 %

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

Content (W/W): >= 25 % - < 50 %	Acute Tox. 4 (oral)
CAS Number: 3395-98-0	Skin Corr./Irrit. 2
REACH registration number: 01-2120734125-63	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, including the hazard classes and the hazard statements, the full text is listed in section 16.

SECTION 4: First-Aid Measures

4.1. Description of first aid measures

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.

4.2. 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

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

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

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing media

Suitable extinguishing media:
water spray, dry powder, foam

Unsuitable extinguishing media for safety reasons:
water jet

5.2. 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.

5.3. 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.

SECTION 6: Accidental Release Measures

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective clothing. Breathing protection required.

6.2. Environmental precautions

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

6.3. 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.

6.4. Reference to other sections

Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

SECTION 7: Handling and Storage

7.1. 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.

7.2. Conditions for safe storage, including any incompatibilities

The product in undamaged packing need not be stored separately.

Suitable materials for containers: High density polyethylene (HDPE), Aluminium
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.

7.3. 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.

SECTION 8: Exposure Controls/Personal Protection

8.1. Control parameters

8.2. 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 374)
Suitable materials for short-term contact (recommended: At least protective index 2, corresponding > 30 minutes of permeation time according to EN 374)
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:
Safety glasses with side-shields (frame goggles) (e.g. EN 166)

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.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Form:	liquid
Colour:	colourless clear
Odour:	acrylic-like

Odour threshold:
not determined
pH value: 7
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: 1.02 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: 171.1 °C, 154.61 J/g,
Viscosity, dynamic: 880 mPa.s
(30 °C)
Explosion hazard: not explosive
Fire promoting properties: not fire-propagating

9.2. 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.

SECTION 10: Stability and Reactivity

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

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

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

10.3. 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.

10.4. Conditions to avoid
See SDS section 7 - Handling and storage.

10.5. Incompatible materials

Substances to avoid:
free radical initiators

10.6. Hazardous decomposition products

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

SECTION 11: Toxicological Information

11.1. Information on toxicological effects

Acute toxicity

Assessment of acute toxicity:
Of moderate toxicity after single ingestion.

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)

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: 59 %, Inhalation - vapour

The following percentage of the mixture consists of components(s) with unknown hazards regarding the acute toxicity: 59 %, Inhalation - mist

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: 1,2-Cyclohexanedicarboxylic acid, diisononyl ester
Assessment of irritating effects:
May cause slight irritation to the skin. Not irritating to the eyes.

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

Information on: 1,2-Cyclohexanedicarboxylic acid, diisononyl ester
Experimental/calculated data:
Skin corrosion/irritation rabbit: Slightly irritating. (OECD Guideline 404)

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: 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)

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: 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)

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

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

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 applicable information available.

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.

SECTION 12: Ecological Information

12.1. Toxicity

Assessment of aquatic toxicity:
Toxic to aquatic life with long lasting effects.
The product has not been tested. The statement has been derived from the properties of the individual components.

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.

Assessment of terrestrial toxicity:
No data available concerning terrestrial toxicity.

12.2. Persistence and degradability

Assessment biodegradation and elimination (H2O):
Moderately/partially eliminated from water.
The product has not been tested. The statement has been derived from the properties of the individual components.

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

Information on: 1,2-Cyclohexanedicarboxylic acid, diisononyl ester
Assessment biodegradation and elimination (H2O):
Not readily biodegradable (by OECD criteria). Biodegradable.

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: Isodecyl acrylate
Assessment biodegradation and elimination (H2O):
Readily biodegradable (according to 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: 2-Oxazolidinone, 3-ethenyl-5-methyl-
Assessment biodegradation and elimination (H2O):
Not readily biodegradable (by 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: 1,2-Cyclohexanedicarboxylic acid, diisononyl ester
Elimination information:

90 - 100 % CO2 formation relative to the theoretical value (60 d) (OECD 301B; ISO 9439; 92/69/EEC, C.4-C) (aerobic, activated sludge, domestic, non-adapted)

70 - 80 % CO2 formation relative to the theoretical value (28 d) (OECD 301B; ISO 9439; 92/69/EEC, C.4-C) (aerobic, activated sludge, domestic, adapted)

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: 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: 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: 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)

12.3. Bioaccumulative potential

Assessment bioaccumulation potential:
The product has not been tested.

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: 1,2-Cyclohexanedicarboxylic acid, diisononyl ester
Assessment bioaccumulation potential:
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: Isodecyl acrylate
Assessment bioaccumulation potential:
Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is possible.

Information on: diphenyl(2,4,6- trimethylbenzoyl)phosphine oxide
Assessment bioaccumulation potential:
Does not significantly accumulate in organisms.

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

Information on: 1,2-Cyclohexanedicarboxylic acid, diisononyl ester
Bioaccumulation potential:

Bioconcentration factor (BCF): 189 (30 d), Brachydanio rerio (OECD Guideline 305 E)

Information on: Isodecyl acrylate

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

Bioconcentration factor (BCF): 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 (BCF): 23 - 55 (56 d), Cyprinus carpio (measured)

Information on: diphenyl(2,4,6- trimethylbenzoyl)phosphine oxide
Bioaccumulation potential:

Bioconcentration factor (BCF): 23 - 55 (56 d), Cyprinus carpio (measured)

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

12.4. 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: 1,2-Cyclohexanedicarboxylic acid, diisononyl ester
Assessment transport between environmental compartments:
Volatility: The substance will slowly evaporate into the atmosphere from the water surface.
Adsorption in soil: Adsorption to solid soil phase is 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: 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: 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: 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.

12.5. 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.

12.6. Other adverse effects

The product does not contain substances that are listed in Annex I of Regulation (EC) 2037/2000 on substances that deplete the ozone layer.

12.7. 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.

SECTION 13: Disposal Considerations

13.1. 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.

SECTION 14: Transport Information

Land transport

ADR

UN number	UN3082
UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

	N.O.S. (contains ISOBORNYL ACRYLATE)
Transport hazard class(es):	9, EHSM
Packing group:	III
Environmental hazards:	yes
Special precautions for user:	None known

RID

UN number	UN3082
UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains ISOBORNYL 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	UN3082
UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains ISOBORNYL 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:	UN 3082
UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains ISOBORNYL 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:	UN 3082
UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains ISOBORNYL ACRYLATE)
Transport hazard class(es):	9, EHSM
Packing group:	III
Environmental hazards:	yes
Special precautions for user:	None known

14.1. UN number
See corresponding entries for “UN number” for the respective regulations in the tables above.

14.2. UN proper shipping name
See corresponding entries for “UN proper shipping name” for the respective regulations in the tables above.

14.3. Transport hazard class(es)
See corresponding entries for “Transport hazard class(es)” for the respective regulations in the tables above.

14.4. Packing group
See corresponding entries for “Packing group” for the respective regulations in the tables above.

14.5. Environmental hazards
See corresponding entries for “Environmental hazards” for the respective regulations in the tables above.

14.6. Special precautions for user
See corresponding entries for “Special precautions for user” for the respective regulations in the tables above.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Regulation:	Not evaluated
Shipment approved:	Not evaluated
Pollution name:	Not evaluated
Pollution category:	Not evaluated
Ship Type:	Not evaluated

SECTION 15: Regulatory Information

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

Prohibitions, Restrictions and Authorizations

Annex XVII of Regulation (EC) No 1907/2006: Number on List: 3

Directive 2012/18/EU - Control of Major Accident Hazards involving dangerous substances (EU): List entry in regulation: E1

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

15.2. Chemical Safety Assessment

Advice on product handling can be found in sections 7 and 8 of this safety data sheet.

SECTION 16: Other Information

Any other intended applications should be discussed with the manufacturer.

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

Skin Corr./Irrit.	Skin corrosion/irritation
Acute Tox.	Acute toxicity
Eye Dam./Irrit.	Serious eye damage/eye irritation
Skin Sens.	Skin sensitization
Aquatic Chronic	Hazardous to the aquatic environment - chronic
STOT SE	Specific target organ toxicity — single exposure
Repr.	Reproductive toxicity
Aquatic Acute	Hazardous to the aquatic environment - acute
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.
H411	Toxic to aquatic life with long lasting effects.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
H319	Causes serious eye irritation.
H400	Very toxic to aquatic life.

Abbreviations
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road. ADN = The European Agreement concerning the International Carriage of Dangerous Goods by Inland waterways. ATE = Acute Toxicity Estimates. CAO = Cargo Aircraft Only. CAS = Chemical Abstract Service. CLP = Classification, Labelling and Packaging of substances and mixtures. DIN = German

national organization for standardization. DNEL = Derived No Effect Level. EC50 = Effective concentration median for 50% of the population. EC = European Community. EN = European Standards. IARC = International Agency for Research on Cancer. IATA = International Air Transport Association. IBC-Code = Intermediate Bulk Container code. IMDG = International Maritime Dangerous Goods Code. ISO = International Organization for Standardization. STEL = Short-Term Exposure Limit. LC50 = Lethal concentration median for 50% of the population. LD50 = Lethal dose median for 50% of the population. TLV = Threshold Limit Value. MARPOL = The International Convention for the Prevention of Pollution from Ships. NEN = Dutch Norm. NOEC = No Observed Effect Concentration. OEL = Occupational Exposure Limit. OECD = Organization for Economic Cooperation and Development. PBT = Persistent, Bioaccumulative and Toxic. PNEC = Predicted No Effect Level. PPM = Parts per million. RID = The European Agreement concerning the International Carriage of Dangerous Goods by Rail. TWA = Time Weight Average. UN-number = UN number at transport. vPvB = very Persistent and very Bioaccumulative.

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.