

# Safety data sheet

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Date / Revised: 07.02.2022

Version: 4.0

Date previous version: 08.12.2021

Previous version: 3.0

Date / First version: 30.07.2019

Product: **Ultracur3D EL 60**

(ID no. 963821/SDS\_GEN\_EU/EN)

Date of print 07.03.2022

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

### 1.1. Product identifier

## Ultracur3D EL 60

### 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 3D Printing Solutions GmbH  
Speyerer Str. 4  
69115 Heidelberg, Germany

Telephone: +49 6221 67417 900

E-mail address: sales@basf-3dps.com

### 1.4. Emergency telephone number

International emergency number:

Telephone: +49 180 2273-112

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## 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.

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

Skin Corr./Irrit. 2	H315 Causes skin irritation.
Skin Sens. 1A	H317 May cause an allergic skin reaction.
Repr. 2	H361d Suspected of damaging the unborn child.
Aquatic Chronic 2	H411 Toxic to aquatic life with long lasting effects.

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:  
Warning

Hazard Statement:

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H361d	Suspected of damaging the unborn child.
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.

Precautionary Statements (Response):

P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
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Precautionary Statements (Storage):

P405	Store locked up.
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Precautionary Statements (Disposal):

P501	Dispose of contents and container to hazardous or special waste collection point.
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Labeling of special preparations (GHS):

The following percentage of the mixture consists of component(s) with unknown hazards regarding the acute toxicity: 1 %, Inhalation - vapour

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The following percentage of the mixture consists of component(s) with unknown hazards regarding the acute toxicity: 1 %, Inhalation - mist

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

Hazard determining component(s) for labelling: 2-Phenoxyethyl acrylate, diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide, (5-Ethyl-1,3-dioxan-5-yl)methyl acrylate, 2,2-bis(acryloyloxymethyl)butyl acrylate

### 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.

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## 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

5-Ethyl-1,3-dioxane-5-methanol

Content (W/W):  $\geq 0\%$  -  $< 3\%$

CAS Number: 5187-23-5

EC-Number: 225-967-8

Eye Dam./Irrit. 2

H319

2,2-bis(acryloyloxymethyl)butyl acrylate

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Content (W/W): $\geq 0.3\%$ - $< 3\%$	Skin Corr./Irrit. 2
CAS Number: 15625-89-5	Eye Dam./Irrit. 2
EC-Number: 239-701-3	Skin Sens. 1
REACH registration number: 01-2119489896-11	Aquatic Acute 1
INDEX-Number: 607-111-00-9	Aquatic Chronic 1
	M-factor acute: 1
	H319, H315, H317, H400, H410

**2-Phenoxyethyl acrylate**

Content (W/W): $\geq 7\%$ - $< 15\%$	Skin Sens. 1A
CAS Number: 48145-04-6	Repr. 2 (unborn child)
EC-Number: 256-360-6	Aquatic Chronic 2
REACH registration number: 01-2119980532-35	H317, H361d, H411

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

Content (W/W): $\geq 1\%$ - $< 3\%$	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

**(5-Ethyl-1,3-dioxan-5-yl)methyl acrylate**

Content (W/W): $\geq 20\%$ - $< 25\%$	Skin Corr./Irrit. 2
CAS Number: 66492-51-1	Skin Sens. 1B
EC-Number: 266-380-7	Aquatic Chronic 2
REACH registration number: 01-2119976303-36	H315, H317, H411

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.

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## SECTION 4: First-Aid Measures

**4.1. Description of first aid measures**

Immediately remove contaminated clothing.

If inhaled:

If difficulties occur after vapour/aerosol has been inhaled, remove to fresh air and seek medical attention.

On skin contact:

Wash thoroughly with soap and water

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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.

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## **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**

Endangering substances: harmful vapours, carbon oxides, nitrogen oxides

Advice: 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:

If exposed to fire, keep containers cool by spraying with water. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

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## **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.

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### **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.

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## **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: Containers should be stored tightly sealed in a dry place. Keep container dry because product takes up the humidity of air. Protect against heat. Protect from the effects of light. The stabilizer is only effective in the presence of oxygen. Ensure adequate inhibitor and dissolved oxygen level.

Storage stability:

Storage temperature: -15 - 40 °C

Protect from temperatures below: 0 °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.

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## **SECTION 8: Exposure Controls/Personal Protection**

### **8.1. Control parameters**

### **8.2. Exposure controls**

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### 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:

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.

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## **SECTION 9: Physical and Chemical Properties**

### **9.1. Information on basic physical and chemical properties**

Form:	liquid
Colour:	slightly yellow clear
Odour:	acrylic-like
Odour threshold:	
	not determined
pH value:	7
Melting temperature:	
	No data available.
Boiling point:	> 100 °C
Flash point:	> 100 °C

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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:	1.0 g/cm <sup>3</sup> (20 °C)
Relative density:	approx. 1.0 (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:	137 °C, 178 kJ/kg,
Viscosity, dynamic:	4,300 mPa.s (25 °C) 810 mPa.s (50 °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.

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## SECTION 10: Stability and Reactivity

### 10.1. Reactivity



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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.

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## **SECTION 11: Toxicological Information**

### **11.1. Information on toxicological effects**

#### Acute toxicity

Assessment of acute toxicity:

Virtually nontoxic after a single skin contact. Virtually nontoxic by inhalation. Virtually nontoxic after a single ingestion. The product has not been tested. The statement has been derived from the properties of the individual components.

The following percentage of the mixture consists of components(s) with unknown hazards regarding the acute toxicity: 1 %, Inhalation - vapour

The following percentage of the mixture consists of components(s) with unknown hazards regarding the acute toxicity: 1 %, Inhalation - mist

#### Irritation

Assessment of irritating effects:

Skin contact causes irritation.

*Information on: (5-Ethyl-1,3-dioxan-5-yl)methyl acrylate*

*Assessment of irritating effects:*

*Not irritating to the eyes. Causes skin irritation.*

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*Information on: 2,2-bis(acryloyloxymethyl)butyl acrylate*

*Assessment of irritating effects:*

*Eye contact causes irritation. Skin contact causes irritation.*

*Information on: 5-Ethyl-1,3-dioxane-5-methanol*

*Assessment of irritating effects:*

*Eye contact causes irritation. Not irritating to the skin.*

*Information on: (5-Ethyl-1,3-dioxan-5-yl)methyl acrylate*

*Experimental/calculated data:*

*Skin corrosion/irritation*

*rabbit: Irritant. (OECD Guideline 404)*

*Information on: 2,2-bis(acryloyloxymethyl)butyl acrylate*

*Experimental/calculated data:*

*Skin corrosion/irritation*

*rabbit: Irritant. (Draize test)*

*Information on: 2,2-bis(acryloyloxymethyl)butyl acrylate*

*Experimental/calculated data:*

*Serious eye damage/irritation*

*rabbit: Irritant. (Draize test)*

*Information on: 5-Ethyl-1,3-dioxane-5-methanol*

*Experimental/calculated data:*

*Serious eye damage/irritation*

*rabbit: Irritant. (OECD Guideline 405)*

#### Respiratory/Skin sensitization

Assessment of sensitization:

Sensitization after skin contact possible.

*Information on: (5-Ethyl-1,3-dioxan-5-yl)methyl acrylate*

*Assessment of sensitization:*

*Caused skin sensitization in animal studies.*

*Information on: 2-Phenoxyethyl acrylate*

*Assessment of sensitization:*

*Caused skin sensitization in animal studies.*

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

*Assessment of sensitization:*

*Caused skin sensitization in animal studies.*

*Information on: 2,2-bis(acryloyloxymethyl)butyl acrylate*

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*Assessment of sensitization:*

*Caused skin sensitization in animal studies.*  
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*Information on: (5-Ethyl-1,3-dioxan-5-yl)methyl acrylate*

*Experimental/calculated data:*

*Mouse Local Lymph Node Assay (LLNA) mouse: skin sensitizing (OECD Guideline 429)*

*Information on: 2-Phenoxyethyl acrylate*

*Experimental/calculated data:*

*Guinea pig maximization test guinea pig: skin sensitizing (OECD Guideline 406)*

*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: 2,2-bis(acryloyloxymethyl)butyl acrylate*

*Experimental/calculated data:*

*Guinea pig maximization test guinea pig: skin sensitizing (similar to OECD guideline 406)*  
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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 the ingredients, there is a suspicion of a toxic effect on reproduction. The product has not been tested. The statement has been derived from the properties of the individual components.

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

*Assessment of reproduction toxicity:*

*The results of animal studies suggest a fertility impairing effect.*  
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Developmental toxicity

Assessment of teratogenicity:

Indications of possible developmental toxicity/teratogenicity were seen in animal studies.

*Information on: 2-Phenoxyethyl acrylate*

*Assessment of teratogenicity:*

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*Possible risk of harm to the unborn child.*

*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)

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

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

Assessment of repeated dose toxicity:

The information available on the product provides no indication of toxicity on target organs after repeated exposure. The product has not been tested. The statement has been derived from the properties of the individual components.

#### 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.

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## **SECTION 12: Ecological Information**

### **12.1. Toxicity**

Assessment of aquatic toxicity:

Acutely toxic for aquatic organisms. May cause long-term adverse effects in the aquatic environment. The product has not been tested. The statement has been derived from the properties of the individual components.

*Information on: (5-Ethyl-1,3-dioxan-5-yl)methyl acrylate*

*Toxicity to fish:*

*LC50 (96 h) 4 mg/l, Oncorhynchus mykiss (OECD Guideline 203, semistatic)*

*The details of the toxic effect relate to the nominal concentration.*

*LC50 (96 h) 4.04 mg/l, Fish (calculated)*

*LC50 (96 h) 3.909 mg/l, Fish (calculated)*

*Information on: 2-Phenoxyethyl acrylate*

*Toxicity to fish:*

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LC50 (96 h) approx. 10 mg/l, *Leuciscus idus* (DIN 38412 Part 15, static)  
The details of the toxic effect relate to the nominal concentration.

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: 2,2-bis(acryloyloxymethyl)butyl acrylate

Toxicity to fish:

LC50 (96 h) 0.87 mg/l, *Brachydanio rerio* (OECD 203; ISO 7346; 92/69/EEC, C.1, semistatic)

Information on: (5-Ethyl-1,3-dioxan-5-yl)methyl acrylate

Aquatic invertebrates:

EC50 (48 h) 20 mg/l, *Daphnia magna* (OECD Guideline 202, part 1, static)

The details of the toxic effect relate to the nominal concentration.

EC50 (48 h) 7.07 mg/l, *daphnia* (calculated)

EC50 (48 h) 11.6 mg/l, *daphnia* (calculated)

Information on: 2-Phenoxyethyl acrylate

Aquatic invertebrates:

EC50 (48 h) 1.2 mg/l, *Daphnia magna* (Directive 79/831/EEC, static)

The details of the toxic effect relate to the nominal concentration.

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: 2,2-bis(acryloyloxymethyl)butyl acrylate

Aquatic invertebrates:

EC50 (48 h) 19.9 mg/l, *Daphnia magna* (Directive 79/831/EEC, static)

The details of the toxic effect relate to the nominal concentration.

Information on: (5-Ethyl-1,3-dioxan-5-yl)methyl acrylate

Aquatic plants:

EC50 (72 h) 34 mg/l (growth rate), *Desmodemus subspicatus* (OECD Guideline 201, static)

The details of the toxic effect relate to the nominal concentration.

No observed effect concentration (72 h) 9 mg/l (growth rate), *Desmodemus subspicatus* (OECD Guideline 201, static)

The details of the toxic effect relate to the nominal concentration.

EC50 (96 h) 2.028 mg/l, algae (calculated)

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*EC50 (96 h) 14 mg/l, algae (calculated)*

*Information on: 2-Phenoxyethyl acrylate*

*Aquatic plants:*

*EC50 (72 h) 4.4 mg/l (growth rate), Scenedesmus subspicatus (DIN 38412 Part 9, static)*

*The details of the toxic effect relate to the nominal concentration.*

*EC10 (72 h) 0.71 mg/l (growth rate), Scenedesmus subspicatus (DIN 38412 Part 9, static)*

*The details of the toxic effect relate to the nominal concentration.*

*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: 2,2-bis(acryloyloxymethyl)butyl acrylate*

*Aquatic plants:*

*EC10 (72 h) 1.9 mg/l (growth rate), Desmodesmus subspicatus (Guideline 92/69/EEC, C.3, static)*

*EC50 (72 h) 18.8 mg/l (growth rate), Desmodesmus subspicatus (Guideline 92/69/EEC, C.3, static)*

*Information on: (5-Ethyl-1,3-dioxan-5-yl)methyl acrylate*

*Microorganisms/Effect on activated sludge:*

*EC50 > 1,000 mg/l, (OECD Guideline 209, aerobic)*

*Information on: 2-Phenoxyethyl acrylate*

*Microorganisms/Effect on activated sludge:*

*EC50 (3 h) 177 mg/l, activated sludge, domestic, non-adapted (OECD Guideline 209, aerobic)*

*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: 2,2-bis(acryloyloxymethyl)butyl acrylate*

*Microorganisms/Effect on activated sludge:*

*EC20 (30 min) 625 mg/l, activated sludge, domestic (DIN EN ISO 8192, aquatic)*

*Nominal concentration.*

*Information on: (5-Ethyl-1,3-dioxan-5-yl)methyl acrylate*

*Chronic toxicity to fish:*

*Study not necessary due to exposure considerations.*

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*Information on: 2-Phenoxyethyl acrylate*

*Chronic toxicity to fish:*

No data available.

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

*Chronic toxicity to fish:*

No data available regarding toxicity to fish.

*Information on: 2,2-bis(acryloyloxymethyl)butyl acrylate*

*Chronic toxicity to fish:*

No data available.

-----  
*Information on: (5-Ethyl-1,3-dioxan-5-yl)methyl acrylate*

*Chronic toxicity to aquatic invertebrates:*

Study not necessary due to exposure considerations.

*Information on: 2-Phenoxyethyl acrylate*

*Chronic toxicity to aquatic invertebrates:*

*EC10 (21 d) approx. 0.1 mg/l, Daphnia magna (OECD Guideline 211)*

*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*

*Chronic toxicity to aquatic invertebrates:*

No data available regarding toxicity to daphnids.

*Information on: 2,2-bis(acryloyloxymethyl)butyl acrylate*

*Chronic toxicity to aquatic invertebrates:*

No data available.

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Assessment of terrestrial toxicity:

No data available concerning terrestrial toxicity.

## **12.2. Persistence and degradability**

Assessment biodegradation and elimination (H<sub>2</sub>O):

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: (5-Ethyl-1,3-dioxan-5-yl)methyl acrylate*

*Assessment biodegradation and elimination (H<sub>2</sub>O):*

*Not readily biodegradable (by OECD criteria).*

*Information on: 2-Phenoxyethyl acrylate*

*Assessment biodegradation and elimination (H<sub>2</sub>O):*

*Inherently biodegradable. Easily eliminated from water.*

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

*Information on: 2,2-bis(acryloyloxymethyl)butyl acrylate*  
*Assessment biodegradation and elimination (H2O):*  
*Readily biodegradable (according to OECD criteria).*

*Information on: 5-Ethyl-1,3-dioxane-5-methanol*  
*Assessment biodegradation and elimination (H2O):*  
*Readily biodegradable (according to OECD criteria).*

*Information on: (5-Ethyl-1,3-dioxan-5-yl)methyl acrylate*  
*Elimination information:*  
*28 % DOC reduction (28 d) (OECD 301B; ISO 9439; 92/69/EEC, C.4-C) (aerobic, activated sludge, domestic, non-adapted)*

*(calculated) Not readily biodegradable (by OECD criteria).*

*Information on: 2-Phenoxyethyl acrylate*  
*Elimination information:*  
*22.3 % BOD of the ThOD (28 d) (OECD 301D; EEC 92/69, C.4-E) (aerobic, domestic sewage, non-adapted)*

*> 95 % DOC reduction (28 d) (OECD Guideline 302 B) (aerobic, activated sludge, industrial)*

*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: 2,2-bis(acryloyloxymethyl)butyl acrylate*  
*Elimination information:*  
*82 - 90 % CO2 formation relative to the theoretical value (28 d) (OECD 301B; ISO 9439; 92/69/EEC, C.4-C) (aerobic, activated sludge, domestic, non-adapted)*

*Information on: 5-Ethyl-1,3-dioxane-5-methanol*

### **12.3. Bioaccumulative potential**

Assessment bioaccumulation potential:  
 The product has not been tested.

*Information on: 2-Phenoxyethyl acrylate*  
*Assessment bioaccumulation potential:*



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*Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.*

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

*Assessment bioaccumulation potential:*

*Does not significantly accumulate in organisms.*

*Information on: 2,2-bis(acryloyloxymethyl)butyl acrylate*

*Assessment bioaccumulation potential:*

*Significant accumulation in organisms is not to be expected.*

*Information on: (5-Ethyl-1,3-dioxan-5-yl)methyl acrylate*

*Bioaccumulation potential:*

*Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.*

*Information on: 2-Phenoxyethyl acrylate*

*Bioaccumulation potential:*

*No data available.*

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

*Bioaccumulation potential:*

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

*Information on: 2,2-bis(acryloyloxymethyl)butyl acrylate*

*Bioaccumulation potential:*

*Bioconcentration factor (BCF): 21, Fish (calculated)*

*No significant accumulation in organisms is expected as a result of the distribution coefficient of n-octanol/water (log Pow).*

#### **12.4. Mobility in soil**

Assessment transport between environmental compartments:

Volatility: No data available.

*Information on: (5-Ethyl-1,3-dioxan-5-yl)methyl 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 not expected.*

*Information on: 2-Phenoxyethyl 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 not expected.*

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*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: 2,2-bis(acryloyloxymethyl)butyl acrylate*

*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 not expected.*

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## **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.

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## **SECTION 13: Disposal Considerations**

### **13.1. Waste treatment methods**

Dispose of in accordance with national, state and local regulations.  
Contact specialized companies about recycling.

Contaminated packaging:

Dispose of in accordance with national, state and local regulations.

Contaminated packaging should be emptied as far as possible and disposed of in the same manner as the substance/product.

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## **SECTION 14: Transport Information**

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### Land transport

#### ADR

UN number or ID number: UN3082  
UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains (5-ETHYL-1,3-DIOXAN-5-YL)METHYL ACRYLATE, TRIMETHYLOLPROPANE TRIACRYLATE)  
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 (5-ETHYL-1,3-DIOXAN-5-YL)METHYL ACRYLATE, TRIMETHYLOLPROPANE TRIACRYLATE)  
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 (5-ETHYL-1,3-DIOXAN-5-YL)METHYL ACRYLATE, TRIMETHYLOLPROPANE TRIACRYLATE)  
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

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UN number or ID number:	UN 3082
UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains (5-ETHYL-1,3-DIOXAN-5-YL)METHYL ACRYLATE, TRIMETHYLOLPROPANE TRIACRYLATE)
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 (5-ETHYL-1,3-DIOXAN-5-YL)METHYL ACRYLATE, TRIMETHYLOLPROPANE TRIACRYLATE)
Transport hazard class(es):	9, EHSM
Packing group:	III
Environmental hazards:	yes
Special precautions for user:	None known

#### **14.1. UN number or ID number**

See corresponding entries for "UN number or ID 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**

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See corresponding entries for "Special precautions for user" for the respective regulations in the tables above.

#### **14.7. 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)

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## **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, 75

Directive 2012/18/EU - Control of Major Accident Hazards involving dangerous substances (EU):  
List entry in regulation: E2

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.

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## **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
Skin Sens.	Skin sensitization
Repr.	Reproductive toxicity
Aquatic Chronic	Hazardous to the aquatic environment - chronic

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Eye Dam./Irrit.	Serious eye damage/eye irritation
Aquatic Acute	Hazardous to the aquatic environment - acute
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H361d	Suspected of damaging the unborn child.
H411	Toxic to aquatic life with long lasting effects.
H319	Causes serious eye irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.

#### 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.

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