Safety Data Sheet
Ultracur3D® EL 60

1. Identification

Product identifier used on the label

Ultracur3D® EL 60

Recommended use of the chemical and restriction on use
Recommended use*: resin; Printing inks; Chemical
Unsuitable for use: Uses other than recommended

* The “Recommended use” identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Details of the supplier of the safety data sheet

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

Contact address:
BASF CORPORATION
100 Park Avenue
Florham Park, NJ 07932
USA
Telephone: +1 973 245-6000

Emergency telephone number

24 Hour Emergency Response Information
CHEMTREC: 1-800-424-9300
BASF HOTLINE: 1-800-832-HELP (4357)

Other means of identification
Chemical family: Blend based on: acrylic resin

2. Hazards Identification

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Classification of the product

Skin Corr./Irrit.	2	Skin corrosion/irritation
Skin Sens.	1	Skin sensitization
Repr.	1B (fertility)	Reproductive toxicity
Repr.	1B (unborn child)	Reproductive toxicity
Aquatic Acute	2	Hazardous to the aquatic environment - acute
Aquatic Chronic	2	Hazardous to the aquatic environment - chronic

Label elements

Pictogram:

Signal Word:
Danger

Hazard Statement:

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
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.
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.
P264	Wash contaminated body parts thoroughly after handling.

Precautionary Statements (Response):

P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P333 + P313	If skin irritation or rash occurs: Get medical attention.
P308 + P313	IF exposed or concerned: Get medical attention.
P332 + P313	If skin irritation occurs: Get medical attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P391	Collect spillage.

Precautionary Statements (Storage):

P405	Store locked up.

Precautionary Statements (Disposal):

P501	Dispose of contents/container in accordance with local regulations.

Hazards not otherwise classified

No applicable information available.

3. Composition / Information on Ingredients

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Phenyl acrylate
CAS Number: Trade Secret
Content (W/W): >= 20.0 - < 25.0%
Synonym: No data available.

2-phenoxyethyl acrylate
CAS Number: 48145-04-6
Content (W/W): >= 7.0 - < 15.0%
Synonym: 2-Propenoic acid 2-phenoxyethyl ester

Acrylate derivative
CAS Number: Trade Secret
Content (W/W): >= 0.3 - < 1.0%
Synonym: No data available.

diphenyl(2,4,6,-trimethylbenzoyl)phosphine oxide
CAS Number: 75980-60-8
Content (W/W): >= 0.3 - < 1.0%
Synonym: Diphenyl(2,4,6-trimethylbenzoyl)phosphineoxide

4. First-Aid Measures

Description of first aid measures

General advice:
Immediately remove contaminated clothing.

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

If on skin:
Wash affected areas thoroughly with soap and water. Seek medical attention.

If in eyes:
Wash affected eyes for at least 15 minutes under running water with eyelids held open. Seek medical attention.

If swallowed:
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.

Information on: Acrylate derivative
Symptoms: Overexposure may cause:, Eye irritation, skin irritation, erythema, nausea, headache, vomiting, dizziness, diarrhea, abdominal cramps
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Indication of any immediate medical attention and special treatment needed

Note to physician
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

Hazards during fire-fighting:
harmful vapours, carbon oxides, nitrogen oxides
Evolution of fumes/fog. The substances/groups of substances mentioned can be released in case of fire.

Advice for fire-fighters

Protective equipment for fire-fighting:
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.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Use personal protective clothing. Keep people away and stay on the upwind side.

Environmental precautions

Do not discharge into drains/surface waters/groundwater.

Methods and material for containment and cleaning up

Spills should be contained, solidified, and placed in suitable containers for disposal.

7. Handling and Storage

Precautions for safe handling

Keep away from sources of ignition - No smoking.

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.

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.

8. Exposure Controls/Personal Protection

No occupational exposure limits known.

Advice on system design:
Provide local exhaust ventilation to control vapours/mists.

Personal protective equipment

Respiratory protection:
Respiratory protection may not be required under normal operating conditions if adequate ventilation is provided. Wear respiratory protection if ventilation is inadequate.

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:
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

Form:	liquid
Odour:	acrylic-like
Odour threshold:	not determined
Colour:	slightly yellow clear
pH value:	7
Melting temperature:	No data available.

Boiling point:	> 100 °C
Sublimation point:	No applicable information available.
Flash point:	> 100 °C
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.
Autoignition:	not determined
Vapour pressure:	not determined
Density:	1.0 g/cm3 (20 °C)
Relative density:	approx. 1.0 (20 °C)
Vapour density:	not determined
Partitioning coefficient n-octanol/water (log Pow):	not applicable for mixtures
Self-ignition temperature:	not self-igniting
Thermal decomposition:	137 °C, 178 kJ/kg
Viscosity, dynamic:	4,300 mPa.s (25 °C) 810 mPa.s (50 °C)
Viscosity, kinematic:	No applicable information available.
Solubility in water:	sparingly soluble
Solubility (quantitative):	No applicable information available.
Solubility (qualitative):	soluble solvent(s): organic solvents,
Molar mass:	No applicable information available.
Evaporation rate:	not determined, Value can be approximated from Henry's Law Constant or vapor pressure.
Other Information:	If necessary, information on other physical and chemical parameters is indicated in this section.

10. Stability and Reactivity

Reactivity
No applicable information available.

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

Oxidizing properties:
not fire-propagating

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

Possibility of hazardous reactions
The product is stabilized against spontaneous polymerization prior to despatch.
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.

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

Incompatible materials
free radical initiators

Hazardous decomposition products

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

Thermal decomposition:
137 °C

11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/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.

Oral
No applicable information available.

Inhalation
No applicable information available.

Dermal
No applicable information available.

Assessment other acute effects
Based on available data, the classification criteria are not met.

Irritation / corrosion
Assessment of irritating effects: Skin contact causes irritation.

Information on: Phenyl acrylate
Assessment of irritating effects: Not irritating to the eyes. Causes skin irritation.

Information on: Acrylate derivative
Assessment of irritating effects: Eye contact causes irritation. Skin contact causes irritation.

Sensitization
Assessment of sensitization: Sensitization after skin contact possible.

Information on: Phenyl 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: Acrylate derivative
Assessment of sensitization:
Caused skin sensitization in animal studies.

Aspiration Hazard
No aspiration hazard expected.

Chronic Toxicity/Effects

Repeated dose toxicity
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.

Genetic toxicity
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: May impair fertility. 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.

Teratogenicity
Assessment of teratogenicity: May cause harm to the unborn child. The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: 2-phenoxyethyl acrylate
Assessment of teratogenicity: 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.

Other Information
The product has not been tested. The statement has been derived from the properties of the individual components.

12. Ecological Information

Toxicity

Aquatic 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.

Toxicity to fish

Information on: Phenyl acrylate
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
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
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: Acrylate derivative
LC50 (96 h) 0.87 mg/l, Brachydanio rerio (OECD 203; ISO 7346; 92/69/EEC, C.1, semistatic)

Aquatic invertebrates

Information on: Phenyl acrylate
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
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
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: Acrylate derivative
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.

Aquatic plants

Information on: Phenyl acrylate
EC50 (72 h) 34 mg/l (growth rate), Desmodesmus 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), Desmodesmus 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)

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

Information on: 2-phenoxyethyl acrylate
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
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: Acrylate derivative
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)

Chronic toxicity to fish

Information on: Phenyl acrylate
Study not necessary due to exposure considerations.

Information on: 2-phenoxyethyl acrylate
No data available.

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

Information on: Acrylate derivative
No data available.

Chronic toxicity to aquatic invertebrates

Information on: Phenyl acrylate
Study not necessary due to exposure considerations.

Information on: 2-phenoxyethyl acrylate
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
No data available regarding toxicity to daphnids.

Information on: Acrylate derivative
No data available.

Microorganisms/Effect on activated sludge

Toxicity to microorganisms

Information on: Phenyl acrylate
OECD Guideline 209 aerobic
activated sludge, domestic/EC50: > 1,000 mg/l

Information on: 2-phenoxyethyl acrylate
OECD Guideline 209 aerobic
activated sludge, domestic, non-adapted/EC50 (3 h): 177 mg/l

Information on: diphenyl(2,4,6,-trimethylbenzoyl)phosphine oxide
OECD Guideline 209 aerobic
activated sludge, domestic/EC20 (3 h): > 1,000 mg/l
Limit concentration test only (LIMIT test). The details of the toxic effect relate to the nominal concentration.

Information on: Acrylate derivative
DIN EN ISO 8192 aquatic
activated sludge, domestic/EC20 (30 min): 625 mg/l
Nominal concentration.

Bioaccumulative potential

Assessment bioaccumulation potential
The product has not been tested.

Mobility in soil

Assessment transport between environmental compartments
No data available.

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

Container disposal:
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.

14. Transport Information

Land transport
USDOT

Not classified as a dangerous good under transport regulations

Sea transport
IMDG

Hazard class: 9

Packing group:	III
ID number:	UN 3082
Hazard label:	9, EHSM
Marine pollutant:	YES
Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains (5-ETHYL-1,3-DIOXAN-5-YL)METHYL ACRYLATE, TRIMETHYLOLPROPANE TRIACRYLATE)

Air transport
IATA/ICAO

Hazard class:	9
Packing group:	III
ID number:	UN 3082
Hazard label:	9, EHSM
Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains (5-ETHYL-1,3-DIOXAN-5-YL)METHYL ACRYLATE, TRIMETHYLOLPROPANE TRIACRYLATE)

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

Federal Regulations

Registration status:
Chemical TSCA, US released / listed

EPCRA 311/312 (Hazard categories): Refer to SDS section 2 for GHS hazard classes applicable for this product.

State regulations

State RTK	CAS Number	Chemical name
PA	48145-04-6	2-phenoxyethyl acrylate

Safe Drinking Water & Toxic Enforcement Act, CA Prop. 65:

WARNING: This product can expose you to chemicals including TRIMETHYLOLPROPANE TRIACRYLATE, which is known to the State of California to cause cancer, and TOLUENE, which is known to the state of California to cause birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.

NFPA Hazard codes:
Health: 2 Fire: 1 Reactivity: 1 Special:

HMIS III rating
Health: 2¤ Flammability: 1 Physical hazard: 1

16. Other Information

SDS Prepared by:
BASF 3D Printing NA Product Regulations
SDS Prepared on: 2022/03/22

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

Ultracur3D® EL 60 Any other intended applications should be discussed with the manufacturer.

END OF DATA SHEET