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1. Identification

Product identifier used on the label

Ultracur3D® RG 3280

Recommended use of the chemical and restriction on use

Recommended use*: Stereolithography; Monomer in ultraviolet ink jet application; In an enclosed system

Unsuitable for use: Any other use is not compliant.

Details of the supplier of the safety data sheet

Company:

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, additives

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

Eye Dam./Irrit. 1 Serious eye damage/eye irritation

STOT RE 2 (oral) Specific target organ toxicity — repeated

^{*} 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.

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exposure

Aquatic Acute 3 Hazardous to the aquatic environment - acute Aquatic Chronic 3 Hazardous to the aquatic environment - chronic

Label elements

Pictogram:



Signal Word: Danger

Hazard Statement:

H318 Causes serious eye damage.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H373 May cause damage to organs through prolonged or repeated oral

exposure.

H402 Harmful to aquatic life.

H412 Harmful to aquatic life with long lasting effects.

Precautionary Statements (Prevention):

P280 Wear protective gloves and eye protection or face protection.

P260 Do not breathe dust/gas/mist/vapours. P273 Avoid release to the environment.

P272 Contaminated work clothing should not be allowed out of the workplace.

P264 Wash contaminated body parts thoroughly after handling.

Precautionary Statements (Response):

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove

contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER or physician.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P362 + P364 Take off contaminated clothing and wash it before reuse.

Precautionary Statements (Disposal):

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

Hazards not otherwise classified

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

3. Composition / Information on Ingredients

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

Silicon dioxide

CAS Number: 7631-86-9

Content (W/W): >= 50.0 - < 75.0%

Synonym: Silicon dioxide

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2-Propen-1-one, 1-(4-morpholinyl)-

CAS Number: 5117-12-4

Content (W/W): >= 10.0 - < 15.0%Synonym: No data available.

Proprietary acrylate

CAS Number: Trade Secret Content (W/W): >= 7.0 - < 15.0% Synonym: No data available.

Acrylate ester

CAS Number: Trade Secret Content (W/W): >= 7.0 - < 15.0% Synonym: No data available.

Acrylate ester

CAS Number: Trade Secret Content (W/W): >= 3.0 - < 5.0% Synonym: No data available.

Phosphine oxide

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

4. First-Aid Measures

Description of first aid measures

General advice:

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.

If on skin:

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

If in eyes:

Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing. Immediate medical attention required.

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.

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Information on: Silicon dioxide

Symptoms: Overexposure may cause:, rhinitis, irritation of the mucous membranes, irritates the eyes

and respiratory tract, nausea, headache, vomiting, dizziness, diarrhea, abdominal cramps

Information on: Proprietary acrylate

Symptoms: Overexposure may cause:, corneal injury, skin corrosion, severe pain, coughing, respiratory disorders, dyspnea, nausea, headache, vomiting, dizziness, diarrhea, abdominal cramps

Information on: Phosphine oxide

Symptoms: Overexposure may cause:, allergic contact dermatitis, nausea, headache, vomiting,

dizziness, diarrhea, abdominal cramps

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 self-contained breathing apparatus and chemical-protective clothing.

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

Do not breathe vapour/spray. Ensure adequate ventilation. Avoid contact with the skin, eyes and clothing. Use personal protective clothing.

Environmental precautions

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

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Methods and material for containment and cleaning up

For large amounts: Dike spillage. Pump off product.

For residues: Pick up with inert absorbent material (e.g. sand, earth etc.).

Dispose of absorbed material in accordance with regulations.

7. Handling and Storage

Precautions for safe handling

Avoid aerosol formation. Do not inhale vapours / aerosols. Avoid contact with the skin, eyes and clothing. Wear suitable protective clothing and gloves. Provide good ventilation of working area (local exhaust ventilation if necessary).

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

Segregate from foods and animal feeds.

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.

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

Components with occupational exposure limits

Silicon dioxide	ACGIH, US:	TWA value 10 mg/m3 Inhalable particles;
	ACGIH, US:	TWA value 3 mg/m3 Respirable particles;
	OSHA Z3:	TWA value 15 mg/m3 Total dust;
	OSHA Z3:	TWA value 5 mg/m3 Respirable fraction;
	OSHA Z3:	TWA value 50 millions of particles per cubic foot
		of air Total dust ;
	OSHA Z3:	TWA value 15 millions of particles per cubic foot
		of air Respirable fraction;
	OSHA Z3:	TWA value 0.8 mg/m3; The exposure limit is
		calculated from the equation, 80mg/m3)/(%SiO2),
		using a value of 100% SiO2. Lower percentages
		of SiO2 will yield higher exposure limits.
	OSHA Z3:	TWA value 20 millions of particles per cubic foot
		of air:

Advice on system design:

Ensure adequate ventilation.

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Personal protective equipment

Respiratory protection:

Persons likely to be exposed via inhalation, where engineering control and administrative control measures are inadequate, use a NIOSH certified (or equivalent) respirator with a minimum APF of 50

Observe OSHA regulations for respirator use (29 CFR 1910.134).

Hand protection:

Wear chemically impervious protective gloves., Polyethylene-Laminate (PE laminate) - ca. 0.1 mm coating thickness, chloroprene rubber (Neoprene), nitrile rubber (NBR) - 0.4 mm coating thickness, Manufacturer's directions for use should be observed because of great diversity of types.

Eye protection:

Tightly fitting safety goggles (chemical goggles).

Body protection:

Impermeable protective clothing

General safety and hygiene measures:

Store work clothing separately. Hands and/or face should be washed before breaks and at the end of the shift. When using, do not eat, drink or smoke.

9. Physical and Chemical Properties

Form: liquid Odour: acrylic-like

Odour threshold: Not determined due to potential health hazard by inhalation.

Colour: whitish, cloudy

pH value: 6 - 8

(20 °C)

neutral

Freezing point: not determined Boiling point: > 100 °C Flash point: > 100 °C

Flammability: not highly flammable (derived from flash - and boiling point)

Lower explosion limit: not determined Upper explosion limit: not determined Autoignition: not determined Vapour pressure: not determined Density: 1.645 g/cm3

(20 °C)

Vapour density: not determined

Partitioning coefficient n- not applicable for mixtures

octanol/water (log Pow):

Self-ignition not self-igniting

temperature:

Thermal decomposition: > 200 °C
Viscosity, dynamic: not determined
Viscosity, kinematic: not determined
Solubility in water: sparingly soluble

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Solubility (qualitative): soluble

solvent(s): organic solvents,

Evaporation rate: not determined

10. Stability and Reactivity

Reactivity

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

Corrosion to metals:

Corrosive effects to metal are not anticipated.

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

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

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:

> 200 °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: Of low toxicity after single ingestion. Virtually nontoxic by inhalation. Virtually nontoxic after a single skin contact.

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

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Information on: Acrylate ester

Assessment of acute toxicity:Of low toxicity after single ingestion. Virtually nontoxic after a single skin contact.

Information on: Proprietary acrylate

Assessment of acute toxicity:Of low toxicity after single ingestion. Virtually nontoxic after a single skin contact. Inhalation-risk test (IRT): No mortality within 7 hours as shown in animal studies. The inhalation of a highly saturated vapor-air mixture represents no acute hazard. The product has not been fully tested. The statements have been derived in parts from products of a similar structure or composition.

Information on: 2-Propen-1-one, 1-(4-morpholinyl)-

Assessment of acute toxicity:Of moderate toxicity after single ingestion. Of low toxicity after short-term skin contact.

<u>Oral</u>

Type of value: ATE Value: 4,530 mg/kg

Inhalation

Type of value: ATE Value: > 20 mg/l Determined for vapor

Type of value: ATE Value: > 5 mg/l Determined for mist

Dermal

Type of value: ATE Value: > 5,000 mg/kg

Assessment other acute effects

Assessment of STOT single:

The available information is not sufficient for the evaluation of specific target organ toxicity.

Irritation / corrosion

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

Information on: Acrylate ester

Assessment of irritating effects: Skin contact causes irritation. Eye contact causes irritation. EU-classification

Information on: Proprietary acrylate

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

Causes temporary irritation of the respiratory tract. Eye contact causes irritation. Skin contact causes irritation.

Information on: 2-Propen-1-one, 1-(4-morpholinyl)-

Assessment of irritating effects: May cause severe damage to the eyes. EU-classification Not irritating to the skin.

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Information on: Acrylate ester

Assessment of irritating effects: Not irritating to the skin. May cause severe damage to the eyes.

Skin

Information on: Proprietary acrylate

Species: rabbit Result: Irritant.

Method: OECD Guideline 404

Eye

Information on: Proprietary acrylate

Species: rabbit

Result: Risk of serious damage to eyes.

Method: OECD Guideline 405

Sensitization

Assessment of sensitization: Sensitization after skin contact possible.

Information on: Proprietary acrylate

Assessment of sensitization:

The substance may cause sensitization of the respiratory tract. Sensitization after skin contact

possible.

Sensitization after skin contact possible.

Information on: Phosphine oxide Assessment of sensitization: sensitizing effect in animal tests

Information on: 2-Propen-1-one, 1-(4-morpholinyl)-

Assessment of sensitization:

Sensitization after skin contact possible. EU-classification

Information on: Acrylate ester Assessment of sensitization:

Sensitization after skin contact possible.

Information on: Proprietary acrylate
Mouse Local Lymph Node Assay (LLNA)

Species: mouse Result: sensitizing

Method: OECD Guideline 429

Information on: Phosphine oxide Guinea pig maximization test

Species: guinea pig Result: sensitizing

Method: OECD Guideline 406

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Aspiration Hazard

No aspiration hazard expected.

Chronic Toxicity/Effects

Repeated dose toxicity

Assessment of repeated dose toxicity: Repeated exposure may affect certain organs.

Information on: 2-Propen-1-one, 1-(4-morpholinyl)-

Assessment of repeated dose toxicity: Repeated exposure may affect certain organs. EU-

classification

Genetic toxicity

Assessment of mutagenicity: Based on the ingredients, there is no suspicion of a mutagenic effect. The product has not been tested. The statement has been derived from the properties of the individual components.

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 no 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.

Teratogenicity

Assessment of teratogenicity: Based on the ingredients, there is no suspicion of a teratogenic effect. The product has not been tested. The statement has been derived from the properties of the individual components.

Other Information

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

12. Ecological Information

Toxicity

Aquatic toxicity

Assessment of aquatic toxicity:

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Acutely harmful for aquatic organisms.

Aquatic toxicity

Information on: Acrylate ester Assessment of aquatic toxicity:

Acutely toxic for aquatic organisms. Harmful to aquatic organisms based on long-term (chronic) toxicity study data.

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Information on: Proprietary acrylate Assessment of aquatic toxicity:

Acutely toxic for aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

Information on: Acrylate ester Assessment of aquatic toxicity:

Acutely toxic for aquatic organisms. The chronic aquatic risk classification is based on acute aquatic toxicity study data and the environmental fate properties of the product.

Information on: Phosphine oxide Assessment of aquatic toxicity:

There is a high probability that the product is not acutely harmful to aquatic organisms. No toxic effects occur within the range of solubility. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

Toxicity to fish

Information on: Proprietary acrylate

LC50 (96 h) 2.2 - 4.6 mg/l, Leuciscus idus (DIN 38412 Part 15, static)

The product has low solubility in the test medium. An aqueous solution prepared with solubilizers has been tested.

Information on: Phosphine oxide

LC50 (96 h) > 90 µg/l, Brachydanio rerio (OECD 203; ISO 7346; 84/449/EEC, C.1, semistatic)

No toxic effects occur within the range of solubility.

Aquatic plants

Information on: Proprietary acrylate

EC10 (72 h) 2.2 mg/l (growth rate), Desmodesmus subspicatus (DIN 38412 Part 9, static) EC50 (72 h) 16.7 mg/l (growth rate), Scenedesmus subspicatus (DIN 38412 Part 9, static)

Information on: Phosphine oxide

EC50 (72 h) >= 260 μg/L (growth rate), Desmodesmus subspicatus (OECD Guideline 201, static)

No toxic effects occur within the range of solubility.

No observed effect concentration (72 h) >= 260 µg/L (growth rate), Desmodesmus subspicatus (OECD Guideline 201, static)

No toxic effects occur within the range of solubility.

Chronic toxicity to fish

Information on: Phosphine oxide Study scientifically not justified.

Persistence and degradability

Assessment biodegradation and elimination (H2O)

Product is not expected to be readily biodegradable.

Bioaccumulative potential

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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:

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

Not classified as a dangerous good under transport regulations

Air transport

Not classified as a dangerous good under transport regulations

15. Regulatory Information

Federal Regulations

Registration status:

Chemical TSCA, US released; restriction on use / listed

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TSCA §5. Based on EPA's assessment that includes analogue data, a substance in this product has the potential to cause:

Carcinogenicity;

Genetic toxicity;

Specific target organ toxicity.

Hazard(s) not classifiable under GHS criteria.

This product contains a substance (CASRN 5117-12-4) which may cause internal organ and reproductive effects.

When using this product, use skin protection.

TSCA § 5(a) final Significant New Use Restriction (SNUR)

40 CFR 721.5185

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

State regulations

State RTKCAS NumberChemical namePA7631-86-9Silicon dioxide

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

WARNING: This product can expose you to chemicals including 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: 3 Fire: 1 Reactivity: 1 Special:

16. Other Information

SDS Prepared by:

BASF NA Product Regulations SDS Prepared on: 2022/09/27

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.

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