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

1.1. Product identifier

Trade name/designation:

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Article No.:

48000 /48001

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

3D printing resin for additive manufacturing of drill-guides. Only to be used in the 3 D printer and by trained personnel

1.3. Details of the supplier of the safety data sheet

Supplier (manufacturer/importer/only representative/downstream user/distributor):

dentona AG

Feldbachacker 16 44149 Dortmund

Germany

Telephone: 0231-5556-0
Telefax: 0231-5556-30
E-mail: info@dentona.de
Website: www.dentona.com

1.4. Emergency telephone number

No data available

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Hazard classes and hazard categories	Hazard statements	Classification procedure
Hazardous to the aquatic environment (Aquatic Chronic 4)	H413: May cause long lasting harmful effects to aquatic life.	Calculation method.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

According to EC directives or the corresponding national regulations the product does not have to be labelled.

Hazard statements	for environmental hazards
H413	May cause long lasting harmful effects to aquatic life.

Supplemental hazard information: none

Special rules for supplemental label elements for certain mixtures:

49,5 % percent of the mixture consists of ingredient(s) of unknown acute toxicity (oral).

49,5 % percent of the mixture consists of ingredient(s) of unknown acute toxicity (dermal).

100,0 % percent of the mixture consists of ingredient(s) of unknown acute toxicity (inhalative).

98,8 % percent of the mixture consists of components of unknown hazards to the aquatic environment.

2.3. Other hazards

No data available

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SECTION 3: Composition/information on ingredients

* 3.2. Mixtures

Hazardous ingredients / Hazardous impurities / Stabilisers:

Product identifiers	Substance name Classification according to Regulation (EC) No 1272/2008 [CLP]	Concentration
CAS No.: 41637-38-1	Bisphenol A (EO)30 Dimethacrylate Aquatic Chronic 4 (H413)	29 - < 50 weight-%
CAS No.: 75980-60-8 EC No.: 278-355-8 Index No.: 015-203-00-X REACH No.: 01-2119972295-29-XXXX	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide Candidate List of Substances of Very High Concern for Authorisation! Repr. 2 (H361f) Warning	0 - ≤ 1.2 weight-%
CAS No.: 2440-22-4 EC No.: 219-470-5 REACH No.: 01-2119583811-34-0001	2-(2H-benzotriazol-2-yl)-p-cresol Aquatic Chronic 1 (H410), Skin Sens. 1B (H317) Warning	0 - ≤ 0.02 weight-%

Full text of H- and EUH-phrases: see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information:

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Remove victim out of the danger area. Remove contaminated, saturated clothing. If unconscious but breathing normally, place in recovery position and seek medical advice. Do not leave affected person unattended.

Following inhalation:

Provide fresh air.

Following ingestion:

Rinse mouth. Let 1 glass of water be drunken in little sips (dilution effect). Get medical advice/attention if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

No data available

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water spray jet alcohol resistant foam Extinguishing powder Carbon dioxide (CO2)

5.2. Special hazards arising from the substance or mixture

Combustible

Hazardous combustion products:

In case of fire: Gases/vapours, toxic

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.

5.4. Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Personal precautions:

Remove persons to safety.

Protective equipment:

Wear protective gloves/protective clothing/eye protection/face protection.

6.1.2. For emergency responders

Personal protection equipment:

Personal protection equipment: see section 8

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

For containment:

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

6.4. Reference to other sections

Safe handling: see section 7 Personal protection equipment: see section 8 Disposal: see section 13

6.5. Additional information

Use appropriate container to avoid environmental contamination.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Protective measures

Advices on safe handling:

Wear personal protection equipment (refer to section 8).

Fire prevent measures:

Take precautionary measures against static discharge. Keep away from sources of ignition - No smoking.

Advices on general occupational hygiene

When using do not eat, drink, smoke, sniff. Avoid contact with skin, eyes and clothes.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions:

Keep container tightly closed in a cool, well-ventilated place.

Storage class (TRGS 510, Germany): 10 – Combustible liquids that cannot be assigned to any of the above storage classes

7.3. Specific end use(s)

No data available

SECTION 8: Exposure controls/personal protection

st \mid 8.1. Control parameters

No data available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

No data available

8.2.2. Personal protection equipment

Eye/face protection:

Eye glasses with side protection EN 166

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Skin protection:

Tested protective gloves must be worn EN ISO 374 Suitable material: Breakthrough time: min In the case of wanting to use the gloves again, clean them before taking off and air them well. Breakthrough times and swelling properties of the material must be taken into consideration.

Respiratory protection:

Filtering device with filter or ventilator filtering device of type: A A

8.2.3. Environmental exposure controls

No data available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state: Liquid Colour: clear

Odour: ester

Safety relevant basis data

Parameter	Value	at °C	1 Method
			② Remark
рН	6 - 8	25 °C	
Melting point	No data available		
Freezing point	No data available		
Initial boiling point and boiling range	No data available		
Flash point	> 250 °C		
Evaporation rate	No data available		
Auto-ignition temperature	No data available		
Upper/lower flammability or explosive limits	No data available		
Vapour pressure	No data available		
Vapour density	No data available		
Density	No data available		
Bulk density	not applicable		
Water solubility	No data available		
Dynamic viscosity	No data available		
Kinematic viscosity	No data available		

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

Combustible

10.2. Chemical stability

No data available

10.3. Possibility of hazardous reactions

No data available

10.4. Conditions to avoid

No data available

10.5. Incompatible materials

No data available

10.6. Hazardous decomposition products

Gases/vapours, toxic

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SECTION 11: Toxicological information

* 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Bisphenol A (EO)30 Dimethacrylate CAS No.: 41637-38-1

LD₅₀ oral: >2,000 mg/kg (Rat)

LD₅₀ dermal: >2,000 mg/kg (Rat)

diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide CAS No.: 75980-60-8 EC No.: 278-355-8

LD₅₀ oral: >5,000 mg/kg (Ratte) **LD₅₀ dermal:** >2,000 mg/kg (Ratte)

LC₅₀ Acute inhalation toxicity (dust/mist): >2,000 mg/L (Rat)

2-(2H-benzotriazol-2-yl)-p-cresol CAS No.: 2440-22-4 EC No.: 219-470-5

LD₅₀ oral: >10,000 mg/kg (Ratte) OECD-Richtlinie 423

LC₅₀ Acute inhalation toxicity (dust/mist): >0.59 mg/L 4 h (Ratte) OECD-Richtlinie 403

Acute oral toxicity:

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

Acute dermal toxicity:

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

Acute inhalation toxicity:

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

Skin corrosion/irritation:

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

Serious eye damage/irritation:

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

Respiratory or skin sensitisation:

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

Germ cell mutagenicity:

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

Carcinogenicity:

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

Reproductive toxicity:

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

STOT-single exposure:

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

STOT-repeated exposure:

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

Aspiration hazard:

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

Additional information:

No data available

11.2. Information on other hazards

No data available

SECTION 12: Ecological information

* 12.1. Toxicity

diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	CAS No.:	75980-60-8	EC No.:	278-355-8
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LC₅₀: =6.53 mg/L 2 d (fish, Oryzias latipes)

EC₅₀: >2.01 mg/L 3 d (Algae/water plant, Pseudokirchneriella subcapitata, Oryzias latipes (Mikroorganismen))

EC₅₀: >1,000 mg/L (Activated sludge)

EC₅₀: =3.53 mg/L 2 d (Algae/water plant, Daphnia magna)

LC₅₀: 10 mg/L 4 d (fish, Danio rerio)

LC₅₀: 6.53 mg/L 2 d (Oryzias latipes)

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2-(2H-benzotriazol-2-yl)-p-cresol CAS No.: 2440-22-4 EC No.: 219-470-5
LC ₅₀ : >0.17 mg/L 4 d (fish, Oncorhynchus mykiss (Belebtschlamm)) OECD 203, semistatisch
LC ₅₀ : >0.17 mg/L 4 d (fish, Oncorhynchus mykiss Activated sludge) OECD 203 semistatic
EC ₅₀ : >1,000 mg/L 1 d (Daphnia magna) OECD 202, Teil 1, statisch
EC ₅₀ : >0.0822 mg/L 3 d (Algae/water plant, Pseudokirchneriella subcapitata) OECD 201
EC ₅₀ : >1,000 mg/L 1 d (Daphnia magna) OECD 202 Teil 1, statisch
NOEC: 0.013 mg/L 21 d (Algae/water plant, Daphnia magna) OECD 21, semistatisch
NOEC: >1,000 mg/L 56 d (Algae/water plant) OECD 216, ntürlicher Boden

Aquatic toxicity:

May cause long lasting harmful effects to aquatic life.

NOEC: >1,000 mg/L 28 d (Algae/water plant, Alge) OECD 208

12.2. Persistence and degradability

No data available

12.3. Bioaccumulative potential

No data available

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

Bisphenol A (EO)30 Dimethacrylate CA	AS No.: 41637-38-1	
Results of PBT and vPvB assessment: —		
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide CAS No.: 75980-60-8 EC No.: 278-355-8		
Results of PBT and vPvB assessment: —		
2-(2H-benzotriazol-2-yl)-p-cresol CAS No.: 2440-22-4 EC No.: 219-470-5		
Results of PBT and vPvB assessment: —		

12.6. Endocrine disrupting properties

No data available

12.7. Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment options

Appropriate disposal / Product:

Consult the appropriate local waste disposal expert about waste disposal.

SECTION 14: Transport information

Land transport (ADR/RID)	Inland waterway craft (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)			
14.1. UN number or	14.1. UN number or ID number					
No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.			
14.2. UN proper shipping name						
No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.			
14.3. Transport hazard class(es)						
not relevant	not relevant	not relevant	not relevant			
14.4. Packing group						
not relevant	not relevant	not relevant	not relevant			
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Land transport (ADR/RID)	Inland waterway craft (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)	
14.5. Environmental hazards				
not relevant	not relevant	not relevant	not relevant	
14.6. Special precautions for user				
not relevant	not relevant	not relevant	not relevant	

14.7. Maritime transport in bulk according to IMO instruments

No data available

SECTION 15: Regulatory information

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

15.1.1. EU legislation

No data available

15.1.2. National regulations

[DE] National regulations

Water hazard class

WGK:

1 - slightly hazardous to water

15.2. Chemical Safety Assessment

Chemical safety assessments for substances in this mixture have not been carried out

SECTION 16: Other information

16.1. Indication of changes

3.2.	Mixtures
8.1.	Control parameters
11.1.	Information on hazard classes as defined in Regulation (EC) No 1272/2008
12.1.	Toxicity
12.5.	Results of PBT and vPvB assessment
16.1.	Indication of changes
16.5.	List of relevant hazard statements and/or precautionary statements from sections 2 to 15

16.2. Abbreviations and acronyms				
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland			
	Waterways			
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road			

CAS Chemical Abstracts Service CLP Classification, Labelling and Packaging

German Institute for Standardization / German Industrial Standard DIN

DNEL derived no-effect level Effective Concentration 50% EC_{50}

European Standard

International Civil Aviation Organization **ICAO IMDG** International Maritime Dangerous Goods International Maritime Organization IMO ISO International Standards Organisation Lethal (fatal) Concentration 50% LC₅₀

Lethal (fatal) Dose 50% LD_{50}

NFPA National Fire Protection Association persistent and bioaccumulative and toxic PBT

Predicted No Effect Concentration **PNEC**

REACH Registration, Evaluation and Authorization of Chemicals RID Dangerous goods regulations for transport by rail

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TRGS Technische Regeln für Gefahrstoffe

UN United Nations

16.3. Key literature references and sources for data

No data available

16.4. Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

Hazard classes and hazard categories	Hazard statements	Classification procedure
Hazardous to the aquatic environment (Aquatic Chronic 4)	H413: May cause long lasting harmful effects to aquatic life.	Calculation method.

* 16.5. List of relevant hazard statements and/or precautionary statements from sections 2 to 15

Hazard statements	
H317	May cause an allergic skin reaction.
H361f	Suspected of damaging fertility.
H410	Very toxic to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.

16.6. Training advice

No data available

16.7. Additional information

No data available

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^{*} Data changed compared with the previous version.