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

- · 1.1 Product identifier
- · Trade name: SHERAprint-splint taff
- · Article number: SD400350
- · 1.2 Relevant identified uses of the substance or mixture and uses advised against:

No further relevant information available.

- · Application of the substance / the mixture: 3D printed material.
- · 1.3 Details of the supplier of the safety data sheet
- · Manufacturer/Supplier:

Hersteller: DETAX GmbH Carl-Zeiss-Straße 4 D-76275 Ettlingen +49 (0) 7243 510-0 post@detax.com www.detax.com

Lieferant:

SHERA Werkstoff-Technologie GmbH

Espohlstraße 53 D-49448 Lemförde sdb@shera.de + 49 (0) 5443 9933-0

- + +3 (0) 3++0 3300 0
- · Further information obtainable from: Service de sécurité de produit
- · 1.4 Emergency telephone number: +1-800-424-9300 (CHEMTREC worldwide)

### **SECTION 2: Hazards identification**

- · 2.1 Classification of the substance or mixture
- · Classification according to Regulation (EC) No 1272/2008:

Skin Irrit. 2
Eye Irrit. 2
Skin Sens. 1
STOT SE 3
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
H335 May cause respiratory irritation.

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.

- · 2.2 Label elements
- · Labelling according to Regulation (EC) No 1272/2008:

The product is classified and labelled according to the GB CLP regulation.

Hazard pictograms:





GHS07 GHS09

- · Signal word: Warning
- · Hazard-determining components of labelling:

7,7,9(or7,9,9)-trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahexadecane-1,16-diyl bismethacrylate

Dicyclopentanylmethylacrylate

exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-ylmethacrylate

methacrylic acid, monoester with propane-1,2-diol

2-hydroxyethyl methacrylate

ethyl phenyl(2,4,6-trimethylbenzoyl)phosphinate

Hazard statements:

H315 Causes skin irritation.

H319 Causes serious eye irritation.

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H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

H411 Toxic to aquatic life with long lasting effects.

· Precautionary statements:

P261 Avoid breathing dust / fume / gas / mist / vapours / spray.

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

P302+P352 IF ON SKIN: Wash with plenty of water.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

P362+P364 Take off contaminated clothing and wash it before reuse.

P391 Collect spillage.

P501 Dispose of contents / container in accordance with local / regional / national / international

regulations.

- · 2.3 Other hazards
- · Results of PBT and vPvB assessment:
- · **PBT:** Not applicable.
- · **vPvB:** Not applicable.

## **SECTION 3: Composition/information on ingredients**

#### · 3.2 Mixtures

· Description: Acrylic/methacrylate resins with additives.

· Dangerous components:		
CAS: 72869-86-4 EINECS: 276-957-5 Reg.nr.: 01-2120751202-68	7,7,9(or7,9,9)-trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahexadecane-1,16-diyl bismethacrylate Aquatic Chronic 2, H411; Skin Sens. 1B, H317	40-<60%
CAS: 7534-94-3 EINECS: 231-403-1	exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-ylmethacrylate Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335; Aquatic Chronic 3, H412	5-<20%
CAS: 93962-84-6 EC number: 300-723-4 Reg.nr.: 01-2120785023-58	Dicyclopentanylmethylacrylate Aquatic Chronic 2, H411; Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1B, H317; STOT SE 3, H335	5-<20%
CAS: 27813-02-1 EINECS: 248-666-3 Index number: 607-125-00-5 Reg.nr.: 01-2119490226-37	methacrylic acid, monoester with propane-1,2-diol Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317	5-<20%
CAS: 868-77-9 EINECS: 212-782-2 Index number: 607-124-00-X Reg.nr.: 01-2119490169-29	2-hydroxyethyl methacrylate Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317	0.1-<5%
CAS: 84434-11-7 EINECS: 282-810-6 Reg.nr.: 01-2119987994-10	ethyl phenyl(2,4,6-trimethylbenzoyl)phosphinate Aquatic Chronic 2, H411; Skin Sens. 1B, H317	0.1-<5%

· Additional information: For the wording of the listed hazard phrases refer to section 16.

## **SECTION 4: First aid measures**

#### · 4.1 Description of first aid measures

- · After inhalation: Supply fresh air and to be sure call for a doctor.
- · After skin contact:

Remove dirty clothing and wash before using again.

Seek medical treatment.

Immediately wash with water and soap and rinse thoroughly.

· After eye contact:

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

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· After swallowing:

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; call for medical help immediately.

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

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

No further relevant information available.

### **SECTION 5: Firefighting measures**

- · 5.1 Extinguishing media
- · Suitable extinguishing agents: Use fire extinguishing methods suitable to surrounding conditions.
- 5.2 Special hazards arising from the substance or mixture No further relevant information available.
- · 5.3 Advice for firefighters
- · Protective equipment:

Wear fully protective suit.

Wear self-contained respiratory protective device.

#### **SECTION 6: Accidental release measures**

· 6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.

Wear protective clothing.

Do not breathe vapour or spray.

· 6.2 Environmental precautions

Suppress gases / fumes / haze with water spray.

Do not allow to enter sewers / surface or ground water.

· 6.3 Methods and material for containment and cleaning up

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Ensure adequate ventilation.

6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

### **SECTION 7: Handling and storage**

#### · 7.1 Precautions for safe handling

Devices with local extraction are to be used for open handling.

Do not breathe vapours.

Take off immediately all contaminated clothing.

Avoid contact with skin, eye and clothing.

Wash hands before breaks and at the end of work.

Prevent formation of aerosols.

- · Information about fire and explosion protection: No special measures required.
- · 7.2 Conditions for safe storage, including any incompatibilities
- · Storage
- $\cdot$  Requirements to be met by storerooms and receptacles:

Keep container tightly closed.

Store in a well-ventilated place.

· Information about storage in one common storage facility:

Store away from oxidising agents.

Do not store together with alkalis (caustic solutions).

Do not store together with acids.

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· Further information about storage conditions:

Do not store in a protective gas environment, as oxygen (in the air) is required for stabilisation.

Store only in the original container.

Store in a well-ventilated place.

Protect from exposure to the light.

Keep container tightly sealed.

Storage class:

TRGS 510: LGK 12

No information available.

· 7.3 Specific end use(s)

Light-curing material for generative production of dental molds.

For use by trained personnel.

### **SECTION 8: Exposure controls/personal protection**

- · 8.1 Control parameters
- Ingredients with limit values that require monitoring at the workplace:

#### 868-77-9 2-hydroxyethyl methacrylate

MAK (Germany) cf. Section IIb

- · Additional information: The lists valid during the making were used as basis.
- · 8.2 Exposure controls
- · Appropriate engineering controls No further data; see section 7.
- · Individual protection measures, such as personal protective equipment
- · General protective and hygienic measures:

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

· Respiratory protection:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

· Hand protection



Protective gloves

The glove material has to be impermeable and resistant to the product. Due to missing tests no recommendation to the glove material can be given for the product. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

· Material of gloves:

Butyl rubber, BR

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove material:

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye/face protection



Tightly sealed goggles

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· Body protection: Protective work clothing.

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## **SECTION 9: Physical and chemical properties**

· 9.1 Information on basic physical and chemical properties

· General Information

Physical state
Colour:
Odour:
Melting point/freezing point:
Fluid
Orange
Ester-like
Undetermined.

Boiling point or initial boiling point and boiling

range Undetermined.
• Flammability Not applicable.

· Lower and upper explosion limit

Lower: Not determined.
 Upper: Not determined.
 Flash point: >100 °C (DIN 51755)
 Decomposition temperature: Not determined.
 pH Not applicable.

Mixture is non-soluble (in water).

· Viscosity:

Kinematic viscosity Dynamic: Not determined. Not determined.

Solubility

• water: Not miscible or difficult to mix.

· Partition coefficient n-octanol/water (log value)

72869-86-4 | 7,7,9(or7,9,9)-trimethyl-4,13-dioxo-3,14-dioxa- | 3,39 Log Pow

5,12-diazahexadecane-1,16-diyl

bismethacrylate

27813-02-1 methacrylic acid, monoester with propane-1,2- 0,97 Log Pow

diol

Vapour pressure at 20 °C: <1 hPa

Density and/or relative density

Density at 20 °C:
 Relative density
 Vapour density
 1.09 g/cm³ (DIN 51757)
 Not determined.
 Not determined.

· 9.2 Other information

· Appearance:

· Form: Fluid

· Important information on protection of health and

environment, and on safety.

· **Ignition temperature:** Product is not selfigniting.

• Explosive properties: Product does not present an explosion hazard.

Solvent content:

· VOC (EC): 0.00 %

· Change in condition:

· Evaporation rate Not determined.

Information with regard to physical hazard classes

Explosives
Flammable gases
Aerosols
Oxidising gases
Gases under pressure
Void.
Void.

• Flammable liquids Void.

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		(Contd. of page 5)
· Flammable solids	Void.	
· Self-reactive substances and mixtures	Void.	
· Pyrophoric liquids	Void.	
· Pyrophoric solids	Void.	
· Self-heating substances and mixtures	Void.	
· Substances and mixtures, which emit flamma	able	
gases in contact with water	Void.	
· Oxidising liquids	Void.	
Oxidising solids	Void.	
· Organic peroxides	Void.	
· Corrosive to metals	Void.	
Desensitised explosives	Void.	

## **SECTION 10: Stability and reactivity**

- · 10.1 Reactivity No decomposition if used according to specifications.
- 10.2 Chemical stability No decomposition if used according to specifications.
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- 10.3 Possibility of hazardous reactions Reacts with acids, alkalis and oxidising agents.
- 10.4 Conditions to avoid

The product cures when exposed to visible and UV light. It must therefore be stored in closed containers, in complete darkness and at 15°C - 28°C.

- 10.5 Incompatible materials No further relevant information available.
- 10.6 Hazardous decomposition products No dangerous decomposition products known.

### **SECTION 11: Toxicological information**

- · 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008
- · Acute toxicity:

No data available.

· LD/LC5	0 valu	es relevant for classification:
72869-8		7,9(or7,9,9)-trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahexadecane-1,16-diyl smethacrylate
Oral	LD50	>5,000 mg/kg (Rat) (OECD 401)
Dermal	LD50	>2,000 mg/kg (Rat) (OECD 402)
7534-94	-3 exo	-1,7,7-trimethylbicyclo[2.2.1]hept-2-ylmethacrylate
Oral	LD50	>2,000 mg/kg (Rat)
Dermal	LD50	>3,000 mg/kg (Rabbit)
93962-8	4-6 Di	cyclopentanylmethylacrylate
Oral	LD50	2,000 mg/kg (Rat) (OECD 423)
27813-0	2-1 m	ethacrylic acid, monoester with propane-1,2-diol
Oral	LD50	>2,000 mg/kg (Rat)
Dermal	LD50	>5,000 mg/kg (Rabbit)
868-77-	9 2-hy	droxyethyl methacrylate
Oral	LD50	5,564 mg/kg (Rat)
Dermal	LD50	>5,000 mg/kg (Rabbit)
84434-1	1-7 et	hyl phenyl(2,4,6-trimethylbenzoyl)phosphinate
Oral	LD50	>5,000 mg/kg (Rat) (OECD 401)
Dermal	LD50	>2,000 mg/kg (Rat)

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- · Skin corrosion/irritation Causes skin irritation.
- · Serious eye damage/irritation Causes serious eye irritation.
- · Respiratory or skin sensitisation May cause an allergic skin reaction.
- · STOT-single exposure May cause respiratory irritation.
- · 11.2 Information on other hazards
- · Endocrine disrupting properties

None of the ingredients is listed.

## **SECTION 12: Ecological information**

#### · 12.1 Toxicity

	Aquatic toxicity:			
	72869-86-47,7,9(or7,9,9)-trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahexadecane-1,16-diyl bismethacrylate			
Ì	EC50/48 h >1.2 mg/l (Daphnia (Daphnia magna)) (OECD 202)			
	LC50/96 h   10.1 mg/l (Fish) (OECD 203)			
Ì	7534-94-3 exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-ylmethacrylate			
İ	LC50/96 h   1 79 mg/l (Fish)			

LC50/96 h | 1.79 mg/l (Fish)

EC50/48 h >2.57 mg/l (Daphnia (Daphnia magna))

EC50/72 h | 1.68 mg/l (Algae)

#### 93962-84-6 Dicyclopentanylmethylacrylate

EC50/48 h | 2.64 mg/l (Daphnia (Daphnia magna)) (OECD 202)

LC50/96 h 1.8 mg/l (Fish) (OECD 203)

#### 27813-02-1 methacrylic acid, monoester with propane-1,2-diol

LC50/96 h 493 mg/l (Fish)

EC50 380 mg/kg (Daphnia (Daphnia magna))

#### 868-77-9 2-hydroxyethyl methacrylate

LC50/96 h | 227 mg/l (Fish)

## 84434-11-7 ethyl phenyl(2,4,6-trimethylbenzoyl)phosphinate

LC50/96 h | 1.89 mg/l (Fish)

- · 12.2 Persistence and degradability No further relevant information available.
- 12.3 Bioaccumulative potential No further relevant information available.
- · 12.4 Mobility in soil No further relevant information available.
- 12.5 Results of PBT and vPvB assessment
- · PBT: Not applicable.
- vPvB: Not applicable.
- · 12.6 Endocrine disrupting properties

The product does not contain substances with endocrine disrupting properties.

- · 12.7 Other adverse effects
- · Remark: Harmful to fish.
- · Additional ecological information:
- · General notes:

Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water Do not allow product to reach ground water, water course or sewage system.

Harmful to aquatic organisms.

#### **SECTION 13: Disposal considerations**

- · 13.1 Waste treatment methods
- · Recommendation:

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

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#### Waste disposal key:

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The waste disposal code as prescribed in the EuropeanWaste Catalogue (EWC) depends on the waste producer and can thus vary for a product. The waste disposal code should thus be obtained separately from the waste producer in each case.

- · Uncleaned packaging:
- · Recommendation:

Non contaminated packagings may be treated like household garbage.

Packagings that may not be cleansed are to be disposed of in the same manner as the product.

Non contaminated packagings may be reused.

14.1 UN number or ID number ADR, IMDG, IATA	UN3082
14.2 UN proper shipping name ADR IMDG	3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE LIQUID, N.O.S. (7,7,9(or7,9,9)-trimethyl-4,13-dioxo-3,14 dioxa-5,12-diazahexadecane-1,16-diyl bismethacrylate Dicyclopentanylmethylacrylate) ENVIRONMENTALLY HAZARDOUS SUBSTANCE LIQUID, N.O.S. (7,7,9(or7,9,9)-trimethyl-4,13-dioxo-3,14 dioxa-5,12-diazahexadecane-1,16-diyl bismethacrylate
IATA	Dicyclopentanylmethylacrylate), MARINE POLLUTANT ENVIRONMENTALLY HAZARDOUS SUBSTANCE LIQUID, N.O.S. (7,7,9(or7,9,9)-trimethyl-4,13-dioxo-3,14 dioxa-5,12-diazahexadecane-1,16-diyl bismethacrylate Dicyclopentanylmethylacrylate)
ADR, IMDG, IATA	
ADR, IMDG, IATA	
Class	9 Miscellaneous dangerous substances and articles. 9
Class	
Class Label 14.4 Packing group	9
Class Label 14.4 Packing group ADR, IMDG, IATA 14.5 Environmental hazards: Marine pollutant: Special marking (ADR):	9 III Symbol (fish and tree) Symbol (fish and tree) Symbol (fish and tree) Warning: Miscellaneous dangerous substances and
Class Label  14.4 Packing group ADR, IMDG, IATA  14.5 Environmental hazards: Marine pollutant: Special marking (ADR): Special marking (IATA):	9 III Symbol (fish and tree) Symbol (fish and tree) Symbol (fish and tree)

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· Transport/Additional information:	
ADR	
· Limited quantities (LQ):	5L
Excepted quantities (EQ):	Code: E1  Maximum net quantity per inner packaging: 30 ml  Maximum net quantity per outer packaging: 1000 ml
· Transport category:	3
Tunnel restriction code:	(-)
IMDG	
Limited quantities (LQ):	5L
Excepted quantities (EQ):	Code: E1
,	Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
UN "Model Regulation":	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (7,7,9(OR7,9,9) TRIMETHYL-4,13-DIOXO-3,14-DIOXA-5,12 DIAZAHEXADECANE-1,16-DIYL BISMETHACRYLATE DICYCLOPENTANYLMETHYLACRYLATE), 9, III

## **SECTION 15: Regulatory information**

- · 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- · Directive 2012/18/EU
- · Named dangerous substances ANNEX I None of the ingredients is listed.
- · Seveso category E2 Hazardous to the Aquatic Environment
- · Qualifying quantity (tonnes) for the application of lower-tier requirements 200 t
- · Qualifying quantity (tonnes) for the application of upper-tier requirements 500 t
- · National regulations:
- · Information about limitation of use:

Employment restrictions concerning juveniles must be observed.

Employment restrictions concerning pregnant and lactating women must be observed.

· 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

## **SECTION 16: Other information**

This information is based on the state of knowledge and experience pertaining on the date of issue. The information is not to be taken as a guarantee of product properties and do not constitute the basis for a contractual legal relationship. The details must not be changed or transferred to other products. Duplication in an unchanged state is permissible.

### · Relevant phrases

H302 Harmful if swallowed.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

H411 Toxic to aquatic life with long lasting effects.

H412 Harmful to aquatic life with long lasting effects.

- · Department issuing SDS: Department of product security.
- · Abbreviations and acronyms:

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

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IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Acute toxicity – Category 4

Skin Irrit. 2: Skin corrosion/irritation - Category 2

Eye Irrit. 2: Serious eye damage/eye irritation - Category 2

Skin Sens. 1: Skin sensitisation – Category 1

Skin Sens. 1B: Skin sensitisation – Category 1B

STOT SE 3: Specific target organ toxicity (single exposure) - Category 3

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard — Category 2 Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard — Category 3

· \* Data compared to the previous version altered.

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