

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 16.02.2022

Version number 1

Revision: 03.11.2021

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

- **1.1 Product identifier**
 - **Trade name:** SHERAprint-model desert
 - **Article number:** SD400410
- **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 printing material
- **1.3 Details of the supplier of the safety data sheet**
 - **Manufacturer/Supplier:**

SHERA Werkstoff-Technologie GmbH & Co. KG
Espohlstraße 53
D-49448 Lemförde
GERMANY
sdb@shera.de
+ 49 (0) 54 43 . 99 33 . 0
- **Further information obtainable from:** Department of product security.
- **1.4 Emergency telephone number:**



Giftinformationszentrum-Nord: +49 (0) 551-19240
(Information in german or english)

SECTION 2: Hazards identification

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

Skin Irrit. 2	H315 Causes skin irritation.
Eye Irrit. 2	H319 Causes serious eye irritation.
Skin Sens. 1	H317 May cause an allergic skin reaction.
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 CLP regulation.
 - **Hazard pictograms:**



GHS07 GHS09
 - **Signal word:** Warning
 - **Hazard-determining components of labelling:**

Aliphatic Diacrylate
Acryliertes Harz
Phosphine oxide
 - **Hazard statements:**

H315 Causes skin irritation.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
H411 Toxic to aquatic life with long lasting effects.
 - **Precautionary statements:**

P261 Avoid breathing mist/vapours/spray.
P273 Avoid release to the environment.
P280 Wear protective gloves / protective clothing.
P302+P352 IF ON SKIN: Wash with plenty of water.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

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P337+P313 If eye irritation persists: Get medical advice/attention.

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:**

	Aliphatic Diacrylate	25-90%
	Aquatic Chronic 2, H411; Skin Sens. 1B, H317	
	Acryliertes Harz	5-40%
	Aquatic Chronic 2, H411; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1B, H317	
CAS: 444649-70-1 EC number: 814-233-8 Reg.nr.: 01-2120271347-53	Acrylate resin	5-40%
	Aquatic Chronic 2, H411	
CAS: 75980-60-8 EINECS: 278-355-8 Index number: 015-203-00-X Reg.nr.: 01-2119972295-29	Phosphine oxide	0.1-2.5%
	Repr. 2, H361f; Aquatic Chronic 2, H411; Skin Sens. 1, H317	

- **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.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:**
In case of skin irritation, seek medical treatment.
Remove dirty clothing and wash before using again.
Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** Rinse out mouth and then drink plenty of water.
- **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:**
CO₂, powder or water spray. Fight larger fire with alcohol resistant foam.
Use fire extinguishing methods suitable to surrounding conditions.
- **5.2 Special hazards arising from the substance or mixture**
In case of fire, the following can be released:

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Carbon dioxide (CO₂).

Carbon monoxide (CO).

Pyrolysis products, toxic.

• 5.3 Advice for firefighters**• Protective equipment:**

Wear self-contained respiratory protective device.

Wear fully protective suit.

• Additional information

Collect contaminated fire fighting water separately. It must not enter the sewage system.

SECTION 6: Accidental release measures

• 6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.

Use respiratory protective device against the effects of fumes / dust / aerosol.

Wear protective clothing.

Avoid contact with skin and eyes.

• 6.2 Environmental precautions

Inform respective authorities in case of seepage into water course or sewage system.

Dilute with plenty of water.

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.

Ensure good ventilation / exhaustion at the workplace.

Prevent formation of aerosols.

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

Store only in the original receptacle.

Keep container in a well-ventilated, cool and dry place.

Store only in the tightly closed original container at room temperature.

Keep away from light.

Might polymerize with high heat release.

Storage temperature between 4 and 28°C.

• Information about storage in one common storage facility: Not required.**• Further information about storage conditions:**

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

• Storage class: No information available.**• 7.3 Specific end use(s)** No further relevant information available.

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SECTION 8: Exposure controls/personal protection

• 8.1 Control parameters

• **Ingredients with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

• **Additional information:** The lists valid during the making were used as basis.

• 8.2 Exposure controls

• **Appropriate engineering controls** No further data; see item 7.

• **Individual protection measures, such as personal protective equipment**

• **General protective and hygienic measures:**

Ensure good ventilation / exhaust at the workplace.

Pregnant women should strictly avoid inhalation or skin contact.

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

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

• **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:**

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** Goggles recommended during refilling

• **Body protection:** Protective work clothing.

SECTION 9: Physical and chemical properties

• 9.1 Information on basic physical and chemical properties

• **General Information**

• Colour:	Beige
• Odour:	characteristic
• Melting point/freezing point:	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:	Not applicable.
• Auto-ignition temperature:	Product is not selfigniting.

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· Decomposition temperature:	Not determined.
· pH	Not determined.
· Viscosity:	
· Kinematic viscosity	Not determined.
· Dynamic at 20 °C:	500-1,000 mPas
· Solubility	
· water:	Insoluble.
· Partition coefficient n-octanol/water (log value)	Not determined.
· Vapour pressure:	Not determined.
· Density and/or relative density	
· Density:	Not determined.
· Relative density	Not determined.
· Vapour density	Not determined.
· 9.2 Other information	
· Appearance:	
· Form:	Fluid
· Important information on protection of health and environment, and on safety.	
· Explosive properties:	Product does not present an explosion hazard.
· Solvent content:	
· VOC (EC):	0,00 %
· Solids content:	0.0 %
· Change in condition:	
· Evaporation rate	Not determined.
· Information with regard to physical hazard classes	
· Explosives	Void.
· Flammable gases	Void.
· Aerosols	Void.
· Oxidising gases	Void.
· Gases under pressure	Void.
· Flammable liquids	Void.
· 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 flammable 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 data available.
- **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.

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• 10.4 Conditions to avoid

The product hardens under the influence of visible and UV light. Therefore, keep them in closed containers at 4 ° C -28 ° C with complete exclusion of light.

• 10.5 Incompatible materials

Oxidizing agents.

Reducing agents.

Acids.

Alkalis (alkalis).

Metal.

• 10.6 Hazardous decomposition products

If the product is exposed to fire, it can release caustic acrylate vapours.

SECTION 11: Toxicological information

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

• **Acute toxicity:** Based on available data, the classification criteria are not met.

• LD/LC50 values relevant for classification:

Aliphatic Diacrylate

Oral	LD50	>2,000 mg/kg (Rat)
Dermal	LD50	>2,000 mg/kg (Rabbit)

Acryliertes Harz

Oral	NOAEL	>1,000 mg/kg (Rat)
	LD50	>2,000 mg/kg (Rat)
Dermal	LD50	>2,000 mg/kg (Rabbit)

75980-60-8 Phosphine oxide

Oral	LD50	>5,000 mg/kg (Rat)
Dermal	LD50	>2,000 mg/kg (Rat)

• Skin corrosion/irritation

Causes skin irritation.

• Serious eye damage/irritation

Causes serious eye irritation.

• Respiratory or skin sensitisation

May cause an allergic skin reaction.

• **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.

• 11.2 Information on other hazards

• Endocrine disrupting properties

None of the ingredients is listed.

SECTION 12: Ecological information

• 12.1 Toxicity

• Aquatic toxicity:

Aliphatic Diacrylate

EC50/48h	2.36 mg/l (Daphnia (Daphnia magna)) (OECD 202)
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Acryliertes Harz

EC50/48h >34 mg/l (Daphnia (Daphnia magna)) (OECD 202)

75980-60-8 Phosphine oxide

EC50/48 h 3.53 mg/l (Daphnia (Daphnia magna))

EC10 1.56 my (Algae)

EC50/72 h >2.01 mg/l (Algae)

LC50/48 h 6.53 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:**
Harmful to aquatic organisms.
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water.
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation:**
Smaller quantities could be cured with light and can be disposed of as household waste. Larger quantities shall be disposed of as special waste in accordance with local regulations.
- **Waste disposal key:**
The waste disposal code as prescribed in the European Waste 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:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

SECTION 14: Transport information

- | | |
|--|--|
| <ul style="list-style-type: none"> • 14.1 UN number or ID number • ADR, IMDG, IATA | UN3082 |
| <ul style="list-style-type: none"> • 14.2 UN proper shipping name • ADR | 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Aliphatic Diacrylate, Acryliertes Harz) |
| <ul style="list-style-type: none"> • IMDG | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Aliphatic Diacrylate, Acryliertes Harz), MARINE POLLUTANT |

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· IATA	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Aliphatic Diacrylate, Acryliertes Harz)
· 14.3 Transport hazard class(es)	
· ADR, IMDG, IATA	
	
· Class	9 Miscellaneous dangerous substances and articles.
· Label	9
· 14.4 Packing group	
· ADR, IMDG, IATA	III
· 14.5 Environmental hazards:	
· Marine pollutant:	Symbol (fish and tree)
· Special marking (ADR):	Symbol (fish and tree)
· Special marking (IATA):	Symbol (fish and tree)
· 14.6 Special precautions for user	Warning: Miscellaneous dangerous substances and articles.
· Hazard identification number (Kemler code):	90
· EMS Number:	F-A,S-F
· Stowage Category	A
· 14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
· 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. (ALIPHATIC DIACRYLATE, ACRYLIERTES HARZ), 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

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- **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**

H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H361f Suspected of damaging fertility.
H411 Toxic 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
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
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
Repr. 2: Reproductive toxicity . Category 2
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard . Category 2

- *** Data compared to the previous version altered.**

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