

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 21.09.2023



Version number 4

Revision: 21.09.2023

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

- **1.1 Product identifier**
- **Trade name: SHERAprint-cast&press**
- **Article number: SD400095**
- **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:**
SHERA Werkstoff-Technologie GmbH
Espholstraße 53
D-49448 Lemförde
GERMANY
sdb@shera.de
+ 49 (0) 54 43 - 9933 - 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.
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 GB CLP regulation.
- **Hazard pictograms:**
 
GHS07 GHS09
- **Signal word:** Warning
- **Hazard-determining components of labelling:**
dimethacrylate
Acrylic resin
2,2-bis(acryloyloxymethyl)butyl acrylate
Phosphine oxide
- **Hazard statements:**
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
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 / eye protection.
P302+P352 IF ON SKIN: Wash with plenty of water.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P391 Collect spillage.
P501 Dispose of contents / container in accordance with local / regional / national / international regulations.

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· 2.3 Other hazards

In the presence of radical formers (e.g. peroxide), reducing substances and/or heavy metal ions, polymerisation is possible when heat develops.

· Results of PBT and vPvB assessment:

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· 3.2 Mixtures

· **Description:** Mixture of acrylic resins and initiators.

· Dangerous components:

	dimethacrylate Aquatic Chronic 2, H411; Skin Sens. 1B, H317	40-80%
	Acrylic resin Aquatic Chronic 2, H411; Skin Irrit. 2, H315; Skin Sens. 1, H317	10-40%
CAS: 15625-89-5 EINECS: 239-701-3 Index number: 607-111-00-9 Reg.nr.: 01-2119489896-11	2,2-bis(acryloyloxymethyl)butyl acrylate Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317	1-<5%
	Phosphine oxide Skin Sens. 1, H317; Aquatic Chronic 4, H413	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

· **General information:** In case of troubles or persistent symptoms, consult an medical.

· 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:

After contact with skin, wash immediately with plenty of water and soap.

If skin irritation continues, consult a doctor.

Remove dirty clothing and wash before using again.

· **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

· **After swallowing:** 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:

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· **For safety reasons unsuitable extinguishing agents:** Water with full jet.

· 5.2 Special hazards arising from the substance or mixture

In case of fire, the following can be released:

Carbon monoxide (CO).

Carbon dioxide (CO₂).

Pyrolysis products, toxic.

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- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.
- **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**
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation.
Avoid contact with skin and eyes.
Do not breathe vapour or spray.
Use respiratory protective device against the effects of fumes / dust / aerosol.
Keep away from ignition sources.
- **6.2 Environmental precautions** 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**
Ensure good ventilation / exhaustion at the workplace.
Prevent formation of aerosols.
Do not breathe vapours.
Store in cool, dry place in tightly closed receptacles.
Keep away from heat and direct sunlight.
- **Information about fire - and explosion protection:**
Protect from direct sunlight.
In case of fire, cool endangered receptacles with water spray.
Protect from heat.
Keep ignition sources away - Do not smoke.
- **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 away from light.
Keep container tightly closed.
Might polymerize with high heat release.
Storage temperature between 4 and 25°C.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **Storage class:** No information available.
- **7.3 Specific end use(s)** No further relevant information available.

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.

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- **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.

Ensure good ventilation / exhaustion at the workplace.

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.

Pregnant women should strictly avoid inhalation or skin contact.

- **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.

Protective gloves should be changed regularly, in particular after intensive contact with the product.

- **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**



Tightly sealed goggles

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

SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**

- **General Information**

· Colour:	Orange
· Odour:	characteristic
· Melting point/freezing point:	Undetermined.
· Boiling point or initial boiling point and boiling range	>100 °C
· Flammability	Not applicable.
· Lower and upper explosion limit	
· Lower:	Not determined.
· Upper:	Not determined.
· Flash point:	>100 °C
· Decomposition temperature:	Not determined.

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· pH	Not determined.
· Viscosity:	
· Kinematic viscosity	Not determined.
· Dynamic:	Not determined.
· Solubility	
· water:	Not miscible or difficult to mix.
· 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.	
· Ignition temperature:	Product is not selfigniting.
· Explosive properties:	Product does not present an explosion hazard.
· Solvent content:	
· Organic solvents:	4.9 %
· 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:** Keep away from heat. Protect from direct sunlight.
- **10.3 Possibility of hazardous reactions**
Polymerization with heat release is possible in connection with radical forming agents (e.g. peroxides), reducing agents and/or heavy metal ions.
- **10.4 Conditions to avoid**
Protect from exposure to light.

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Only store in the original container at a temperature of between 4 and 25°C.

Can polymerise with severe heat development.

• **10.5 Incompatible materials**

Oxidizing agents.

Reducing agents.

Acids.

Alkalis (alkalis).

Metal.

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

• **LD/LC50 values relevant for classification:**

dimethacrylate

Oral	LD50	>5,000 mg/kg (Rat) (OECD 401)
		>2,000 mg/kg (Rabbit) (OECD 402)

15625-89-5 2,2-bis(acryloyloxymethyl)butyl acrylate

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

Phosphine oxide

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

• **Skin corrosion/irritation**

Causes skin irritation.

• **Serious eye damage/irritation** Based on available data, the classification criteria are not met.

• **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:**

dimethacrylate

LC50/96 h	10.1 mg/l (Fish)
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Acrylic resin

EC50/48h	20 mg/l (crustaceans) (OECD 201)
LC50/96 h	4 mg/l (Fish)

15625-89-5 2,2-bis(acryloyloxymethyl)butyl acrylate

EC50/48h	19.9 mg/l (Daphnia (Daphnia magna))
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LC50/96 h 0.87 mg/l (Fish)

Phosphine oxide

LC50/96 h >0.09 mg/l (Fish)

EC50/48 h >1.175 mg/l (Daphnia (Daphnia magna))

- **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 1 (German Regulation) (Self-assessment): slightly hazardous for water.

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

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.

SECTION 14: Transport information

- **14.1 UN number or ID number**

- **ADR, IMDG, IATA**

UN3082

- **14.2 UN proper shipping name**

- **ADR**

3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (dimethacrylate, Acrylic resin)

- **IMDG**

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (dimethacrylate, Acrylic resin), MARINE POLLUTANT

- **IATA**

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (dimethacrylate, Acrylic resin)

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- **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**

- **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:** (-)
- **Remarks:** > 5 l: 9

- **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

- **IATA**

- **Remarks:** > 5 l: Class 9

- **UN "Model Regulation":**

UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DIMETHACRYLATE, ACRYLIC RESIN), 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.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.
- H411 Toxic to aquatic life with long lasting effects.
- H413 May cause long lasting harmful effects to aquatic life.

- **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)
- 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
- Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
- Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
- Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2
- Aquatic Chronic 4: Hazardous to the aquatic environment - long-term aquatic hazard – Category 4

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

GB