



DSI 3D RESIN
3D PRINTING MATERIALS

Cast Resin

3D Print MATERIALS

Material safety data sheet (MSDS)
according to Regulation (EC) No 1907/2006 (REACH)
Version 1.1 / EN

26 November 2018

Hazard pictograms



Signal word: Carefully

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SECTION 1: IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product Name	DSI 3D "Dental Cast Resin"
CAS #	Mixture

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

Identified uses	Resin for 3D printing models direct casting technique.
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1.3. Details of the supplier of the safety data sheet

Company Name	DSI Ltd.
Company Address	59 haAvoda str., Ashdod 7706300 Israel
Contact Name	Shlomi Krasner
Phone / Fax	+972.893.172.35
E-mail	info@dsisrael.com

1.4. Emergency telephone number



Phone / Fax	+972.893.172.35
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SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008	Skin sensitization, category 1B. Chemical products with chronic aquatic toxicity, class 2.
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2.2. Label elements

Hazard pictograms	
Signal word	
Hazard statements	

Precautionary statements	
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Carefully.

H317: May cause an allergic skin reaction.

H411: This is toxic to aquatic organisms with long-term effects.

P261: Avoid breathing dust / fume / gas / mist / vapours / substances in an atomized state.

P272: Do not remove contaminated clothing from the workplace.

P273: Avoid release to the environment.

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

P302 + P352: If on skin: Wash with plenty of soap and water.



P333 + P313: If skin irritation or rash occurs, seek medical advice.
P321: Application of special measures (see label information).
P363: Wash contaminated clothing before use.
P391: Collect spillage.
P501: Dispose of contents in accordance with Federal regulations.

2.3. Other hazards

Product does not contain any PBT or vPvB substances.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Not applicable.

3.2. Mixtures

Substance name	EC No	CAS No	Classification	Concentration
Urethane methacrylate oligomer*	-	-	GHS07 GHS09 Warning Skin Sens. 1B; H317 Aquatic Chronic 2; H411	50-70% **
Polyethyleneglycol dimethacrylate*	-	-	GHS07 Warning Skin Sens. 1B; H317	30-50% **
Diphenyl (2,4,6-trimethylbenzoyl) phosphine oxide	278-355-8	162881-26-7	GHS09 Warning Aquatic Acute 4; H413, Skin Sens. 1; H317	1-3% **

* The exact name of the components, CAS number, EC number are not provided, as they are a trade secret of the manufacturer (supplier).

** The exact percentage of the components is not provided, as it is a trade secret of the manufacturer (supplier).

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

General information	Get medical attention if required.
Inhalation	Remove victim to fresh air and keep at rest in a comfortable for breathing. Do not block the access of air. Loosen tightly fitting pieces of clothing, such as a collar, tie, belt, or waistband. If breathing is difficult, breathing, qualified personnel should give oxygen. In case of respiratory arrest, use artificial respiration and seek medical advice immediately.
Skin contact	Change contaminated clothing. After contact with skin, wash with plenty of water and soap for 10 minutes. If skin irritation or rash occurs get medical help.
Eye contact	Rinse your eyes, flush eyes with plenty of water for 15 minutes in a well open eye slit. Remove contact lenses if you use them and if it is easy to do. Continue rinsing eyes. If irritation persists, consult your doctor.
Ingestion	Rinse your mouth, drink 1.5-2 cups of warm water with activated charcoal, saline laxative. Do not induce vomiting unless required to do so by medical personnel. In case of spontaneous vomiting, keep head below hips to prevent breathing vomit into the lungs. To seek medical help. Do not induce vomiting in an unconscious person.

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

Inhalation	Not installed.
Skin contact	May cause an allergic skin reaction. Side effects in case of prolonged contact: redness, irritation, rash.
Eye contact	Not installed.
Ingestion	Not installed.

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

Notes to physician	Treat symptomatically. If the products of decay during combustion got into the respiratory system, symptoms may occur later. The victim may need medical supervision within 48 hours.
Specific treatments	No specific treatment.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media	Use carbon dioxide, powder, foam, fine water.
Unsuitable extinguishing media	Do not use direct water jets.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products	Fire and explosion proof.
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5.3. Advice for fire-fighters

Special protective actions for fire-fighters	During a fire, promptly isolate the scene by removing all persons from the vicinity of. Use normal fire fighting procedures not forgetting about the danger that can come from other materials. For cooling of the closed containers which are in the fire center, to use the sprayed water. Hold on to the windward side. Collect contaminated fire fighting water separately. It is unacceptable to enter the sewer system.
Special protective equipment for fire-fighters	In case of fire it is necessary to wear a self-contained breathing apparatus (SCBA) and a full set of protective clothing that meets the standard EN 469.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	Forms a slippery surface at spill. Clean up leaks immediately to prevent falling on slippery surfaces. To eliminate sources of sparks and flames. Avoid contact.
For emergency responders	Use proper PPE as indicated in Section 8.

6.2. Environmental precautions

Environmental precautions	Do not allow to enter waste water, groundwater. Inform the relevant organizations in case of damage to the environment.
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6.3 Methods and materials for containment and cleaning up

Methods for cleaning up	Absorb with vermiculite or other inert absorbent materials. Send for disposal (see Section 13). Spill area, wash with warm water using chemical cleaners.
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SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Protective measures	If necessary, use personal protective equipment (see Section 8). Do not eat, drink or smoke during use of product. Wash hands before breaks and after work.
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7.2. Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions	Store in the closed original container in a cool, dry well-ventilated place away from incompatible materials, direct sunlight, sources of ignition and heat.
Packaging materials	Metal or plastic container.

7.3. Specific end uses

Recommendations	Use only for its intended purpose in accordance with the instructions for use and/or packing instructions.
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SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Control parameters

Exposure limit values	No components with occupational exposure limits.
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8.2. Exposure controls

Appropriate Engineering Measures	Facilities must be provided by a system of local and General ventilation. Work with the product in a well-ventilated area. Normal precautions should be taken when handling chemicals.
Individual protection measures, such as personal protective equipment.	
Eye and face protection	It is recommended to use safety goggles according to EN 166 in case of risk of splashing.
Skin protection	Protective rubber or neoprene gloves according to EU 89/686/EEC and standard EN 374.
Body Protection	Working protective clothing with long sleeves.
Respiratory protection	Not required in the presence of good ventilation. When working with the product for a long time at elevated temperatures, it is recommended to use full face masks equipped with combined filters or filters of ABEK (EN 14387).
Environmental exposure controls	Do not empty into drains.
Hygiene Measures	To maintain the work place clean. Do not eat, drink or smoke while working. Wash hands before breaks and at the end of the working day. Take off contaminated clothing and wash before reuse.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical State	Liquid.
Colour	Opaque liquid, depending on the color.
Odour	Not odour.
pH	No data available.
Melting point/Freezing point	No data available.
Initial boiling point/boiling range	No data available.
Flash point	>100°C.
Evaporation rate	No data available.
Flammability Limits	No data available.
Explosive limits	No data available.
Vapour pressure	No data available.
Vapour density	Not applicable.
Relative Density	1.06
Solubility(ies)	Insoluble.
Partition coefficient Octanol/Water	No data available.
Auto-ignition temperature	No data available.
Decomposition temperature	No data available.
Viscosity @20±2°C.	800-1000 mPa*s.
Explosive properties	Non-explosive.
Oxidizing Properties	No.
Possibility of hazardous reactions	Not applicable.

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

There are no hazardous reactions in compliance with the requirements/instructions for storage and use.

10.2. Chemical stability

Product is stable, if the regulations/notes for storage and handling.

10.3. Possibility of hazardous reactions

None under normal processing.

10.4. Conditions to avoid

Exposure to open fire and high temperatures, direct sunlight and water. It is polymerized under the influence of white light, ultraviolet radiation and when heated.



10.5. Incompatible materials

Strong acids (including inorganic), alkalis, peroxides, amines, organic sulfur compounds, heavy metals, oxidizing agents, reducing agents, bases, alcohols, initiators of radical polymerization.

10.6. Hazardous decomposition products

In the case of compliance with the regulations/notes for storage and use, hazardous decomposition products are not highlighted. In case of fire: see Section 5.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity

No acute toxicity – based on component data:

Substance name	EC No	CAS No	Classification	Concentration
Urethane methacrylate oligomer*	-	-	GHS07 GHS09 Warning Skin Sens. 1B; H317 Aquatic Chronic 2; H411	50-70% **
Polyethyleneglycol dimethacrylate*	-	-	GHS07 Warning Skin Sens. 1B; H317	30-50% **
Diphenyl (2,4,6-trimethylbenzoyl) phosphine oxide	278-355-8	162881-26-7	GHS09 Warning Aquatic Acute 4; H413, Skin Sens. 1; H317	1-3% **

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Skin corrosion/irritation	Not irritating.
Serious eye damage/eye irritation	Not irritating.
Respiratory or skin sensitisation	May cause an allergic skin reaction.
Germ cell mutagenicity	Not classified.
Carcinogenicity	IARC, NTP, OSHA, ACGIH: Not listed by IARC.
Reproductive toxicity	Not classified.
STOT – SE	Not classified.
STOT – RE	Not classified.
Aspiration hazard	No data available.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Aquatic toxicity

Acute toxicity for aquatic organisms is missing, has chronic toxicity for algae and cyanobacteria – based on data on the components.

Substance name	EC No	CAS No	Classification	Concentration
Urethane methacrylate oligomer*	-	-	GHS07 GHS09 Warning Skin Sens. 1B; H317 Aquatic Chronic 2; H411	50-70% **
Polyethyleneglycol dimethacrylate*	-	-	GHS07 Warning Skin Sens. 1B; H317	30-50% **
2-hydroxyethyl methacrylate	212-782-2	868-77-9	GHS07 Warning Eye Irrit. 2; H319 Skin Sens. 1B; H317	1-5% **
Diphenyl (2,4,6-trimethylbenzoyl) phosphine oxide	278-355-8	162881-26-7	GHS09 Warning Aquatic Acute 4; H413, Skin Sens. 1; H317	1-3% **

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12.2. Persistence and Degradability

Biodegradation	No data available.
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12.3. Bioaccumulative potential

Bioaccumulative potential	No data available.
Partition coefficient	It has low mobility in the soil.

12.4. Mobility in soil

Mobility	Is not likely mobile in the environment due its low water solubility.
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12.5. Results of PBT and vPvB assessment

This product does not contain any PBT or vPvB substances.

12.6. Other adverse effects

No data available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Product / Packaging disposal	For utilization it is necessary to contact the relevant company. Otherwise, disposal is carried out in accordance with Federal environmental regulations.
Contaminated packaging	Dispose of the package as well as the contents.

SECTION 14: TRANSPORT INFORMATION

14.1. Transport information

ADR/RID Not regulated.
IMDG/IMO Not regulated.
ICAO/IATA Not regulated.
ADN Not regulated.



SECTION 15: REGULATORY INFORMATION

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

EU regulations	EU Regulation (EC) No 1907/2006 (REACH). EU Regulation (EC) No 1272/2008 (CLP).
Other EU regulations	Directive 89/686/EEC: personal protective equipment. ISO EN 374-1:2016: Gloves that protect against chemicals and microorganisms. Part 1. Terminology and requirements for gloves for protection against chemicals. EN 166: 2002: personal eye protection. General technical requirements. EN 469: 2005: protective clothing for firefighters. Requirements for protective clothing for firefighters. EN 14387:2004+A1:2008: means of individual protection of respiratory organs. The gas filters and combined. General technical requirements. Test method. Marking.

15.2. Chemical Safety Assessment

No data available.

SECTION 16: ADDITIONAL INFORMATION

16.1. Complete list of H-phrases

H317: May cause an allergic skin reaction.
H319: Causes serious eye irritation.
H402: Harmful to aquatic life.
H411: Toxic to aquatic organisms with long-term effects.

16.2. Abbreviations and acronyms

CAS: Chemical Abstracts Service (division of the American Chemical Society).
EC: European Community number.
ACGIH: American Conference of Governmental Industrial Hygienists.
NIOSH: National Institute for Occupational Safety and Health.
OSHA: Occupational Safety and Health Administration.
IARC: International Agency for Research on Cancer.
NTP: National Toxicology Program.
vPvB: Very persistente and very bioaccumulative.
PBT: Polybutylene Terephthalate.
PPE: Personal protective equipment.
SCBA: Self-contained breathing apparatus.
EL50: 50% Effect Loading.
LC50: Median lethal concentration.

LD50: Median lethal dose.
LL50: 50% Lethal Loading.
NOEC: No Observable Effect Level.
bw: body weight.
STOT SE: Specific target organ toxicity – single exposure.
STOT RE: Specific target organ toxicity – repeated exposure.
ADR/RID: Accord Dangereuses Route/International Carriage of Dangerous Goods by Rail.
IMDG/IMO: International Maritime Dangerous Goods/International Maritime Organisation.
ICAO/IATA: International Civil Aviation Organization/International Air Transport Association.
ADN: International Carriage of Dangerous Goods by Inland Waterways.

16.3. Training advice

Read the safety data sheet before using the product.

16.4. Further information

Date of issue: 26.11.2018.

Version no. 1.1.

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall DSI Ltd. be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if DSI Ltd. has been advised of the possibility of such damages.