POWER RESINS

P O W E R R E S I N S

DARK

SAFETY DATA SHEET

SECTION I Identification of the substance / mixture and of the company / undertaking

1.1 Product identifier
Trade name: PowerResins
Revision: 06.10.2021
Synonym / Description: Photocurable paint for DLP/SLA 3D printers for direct investment casting of jewelry/ acrylic paint for UV cure for figurines

1.2 Relevant identified uses of the substance or mixture and uses advised against
Application of the substance / the preparation
Resin for for DLP/SLA 3D printers/ UV curable paint for figurines

1.3 Details of the supplier of the safety data sheet
Manufacturer/Supplier:

3BFab Teknoloji A.Ş.

lhlamurkuyu Mah. Çanakkale Cad. Eren Plaza No: 5 Kat: 4 PK: 34771 Ümraniye / Istanbul, Türkiye

+90 216 612 00 94

1.4 Emergency telephone number:

+90 216 612 00 94

SECTION 2 Hazards identification

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

The substance is not classified according to the CLP regulation.

2.2 Label elements
- ***Labelling according to Regulation (EC) No 1272/2008*** Void
- ***Hazard pictograms*** Void
- ***Signal word*** Void
- ***Hazard statements*** Void

Precautionary statements

P280 Wear protective gloves / eye protection / face protection.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P302+P352 IF ON SKIN: Wash with plenty of soap and water. P313 Get medical advice/attention.
- Additional information:

Contains isocyanates. May produce an allergic reaction.

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

SECTION 3 Composition / Information on Ingredient

Components	Approximate % by weight	C.A.S. No. & EINECS No	Hazard Statements in accor- dance with EC 1272/2008	UK/EU Classification according to Directive 67/548/EEC
A. Methacrylated oligomers	Proprietary	Proprietary	Not a hazardous substance or mixture	Xi; Irritant, R36/37/38, R43 S3, S7/9, S20, S26, S29, S37/39
B. Methacrylated monomer	Proprietary	Proprietary	H315, H317, H320, H335	Xi; Irritant, R36/37/38, R43 S3, S7/9, S20, S26, S29, S37/39
C. Photoinitiator(s)	Proprietary	Proprietary	H303, H402	

SECTION 4 First aid measures

4.1 Description of first aid measures
- General information:

C.A.S. reserved (atoxic oligomers)
C.A.S. 75980-60-8
Immediately remove any clothing soiled by the product.
Involve doctor immediately.
- ***After inhalation:***

In the case of accidental inhalation of monomers provide fresh air, rest and warmth.
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:***

Immediately wash with water and soap and rinse thoroughly.
Avoid contact with UV- and sunlight.
- ***After eye contact:***

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

Call a doctor immediately.
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 Fire-Fighting Measures

Flash Point: > 100 °C
Method: Setaflash
Ignition Temperature: No data Lower Explosion Limit: No data Upper Explosion Limit: No data
Extinguishing Media: CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Special Firefighting Procedures: Firefighters should wear full protection clothing and self-contained breathing apparatus (SCBA). Thoroughly decontaminate firefighting equipment including all firefighting apparel after the incident.
Exposure Hazard(s): Material — Irritant
When burned, the following hazardous products of combustion can occur: Carbon oxides
Hazardous organic compounds

SECTION 6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Ensure adequate ventilation
Keep people at a distance and stay on the windward side.

6.2 Environmental precautions:
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.

6.3 Methods and material for containment and cleaning up:
Dispose contaminated material as waste according to item 13.

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
No special measures required.
Ensure good ventilation/exhaustion at the workplace. Open and handle receptacle with care.
- ***Information about fire - and explosion protection:***

Keep ignition sources away - Do not smoke. Protect from heat.

7.2 Conditions for safe storage, including any incompatibilities
- ***Storage:***
- ***Requirements to be met by storerooms and receptacles:*** No special requirements.
- ***Information about storage in one common storage facility:*** Not required.
- ***Further information about storage conditions:***

Store in cool, dry conditions in well sealed receptacles. Protect from heat and direct sunlight.
Store receptacle in a well ventilated area.
Store under lock and key or with access restricted to technical experts or their assistants only. Do not store at temperatures above 40 °C.

7.3 Specific end use(s) No further relevant information available.

SECTION 8 Exposure controls/personal protection

Additional information about design of technical facilities: No further data; see item 7.

8.1 Control parameters

• *Ingredients with limit values that require monitoring at the workplace:* Not required.
• *Additional information:* The lists valid during the making were used as basis.

8.2 Exposure controls

- *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.
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.
Respirator must be worn if exposed to dust.

- *Protection of hands:* Protective gloves
- *Material of gloves*

Products without solvents added: wear nitrile gloves. Replace gloves immediately when torn or any change in appearance (dimension, colour, flexibility etc) is noticed.

- 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 protection:*

Tightly sealed goggles
Goggles recommended during refilling

- *Body protection:* Impervious protective clothing

SECTION 9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

- *General Information*
- *Appearance:*
  Form: Liquid
  Colour: Black
- *Odour:* Ester-like
- *Odour threshold:* Not determined.
- *pH-value:* Not determined.
- *Change in condition*
  - *Melting point/Melting range:* Undetermined
  - *Boiling point/Boiling range:* Undetermined
- *Flash point:* > 100 °C
- *Flammability (solid, gaseous):*Not applicable.
- *Ignition temperature:*
- *Decomposition temperature:*Not determined.
- *Self-igniting:*Product is not selfigniting.
- *Danger of explosion:*Not determined.
- *Explosion limits:*
  - *Lower:* Not determined
  - *Upper:* Not determined
- *Vapour pressure:* Not determined.
- *Density at 20 °C:* 1.1 g/cm³
- *Relative density:* Not determined.
- *Vapour density:* Not determined.
- *Evaporation rate:* Not determined.
- *Solubility in / Miscibility with water:* < 1 g/l
- *Partition coefficient (n-octanol/water):* Not determined.
- *Viscosity:*
  - *Dynamic (25 °C):* 6000-10000 mPas
  - *Kinematic:* Not determined.

9.2 Other information No further relevant information available.

SECTION 10 Stability and reactivity

10.1 Reactivity No further relevant information available.

10.2 Chemical stability

Thermal decomposition / conditions to be avoided: No decomposition if used and stored according to specifications. Polymerisation occurs when exposed to white light, ultraviolet light or heat.

10.3 Possibility of hazardous reactions No dangerous reactions known.

10.4 Conditions to avoid No further relevant information available.

10.5 Incompatible materials:

Avoid contact with radical forming initiators, peroxides, strong alkalies or reactive metals to prevent exothermic polymerisation.

10.6 Hazardous decomposition products: No dangerous decomposition products known.

SECTION 11 Toxicological information

11.1 Information on toxicological effects
Acute toxicity Based on available data, the classification criteria are not met
- *LD/LC50 values relevant for classification:* Aliphatic urethane dimethacrylate
  - *Oral LD50 > 5000 mg/kg (rat) literature*
- *Primary irritant effect:*
  - *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.
  - *CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)*
  - *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.

SECTION 12 Ecological information

12.1 Toxicity
Aquatic toxicity: No further relevant information available.
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.
Additional ecological information:
General notes:
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.
12.5 Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.
12.6 Other adverse effects No further relevant information available

SECTION 13 Disposal considerations

12.1 Toxicity
Aquatic toxicity: No further relevant information available.
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.
Additional ecological information:
General notes:
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.
12.5 Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.
12.6 Other adverse effects No further relevant information available

SECTION 14 Transport information

14.1 UN-Number
- *ADR, ADN, IMDG, IATA* Void

14.2 UN proper shipping name
- *ADR, ADN, IMDG, IATA* Void

14.3 Transport hazard class(es)
- *ADR, ADN, IMDG, IATA Class* Void

14.4 Packing group
- *ADR, IMDG, IATA* Void

14.5 Environmental hazards:
Not applicable
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code
Not applicable
UN "Model Regulation": Void

SECTION 15 Regulatory Information

The following provides a summary of the legal requirements.

Ingredient	EPA* TSCA	CA Prop 65		European Community Standards	Listed as dangerous chemicals per ESIS	EEC Symbol	DSL	NDSL
A. Methacrylated oligomers	Yes	No	Yes	None	No	Xi; Irritant, R36/37/38, R43 S3,S7/9, S20, S26, S29, S37/39	Yes	
B. Methacrylated monomer	Yes	No	Yes	None	No	Xi; Irritant, R36/37/38, R43 S3,S7/9, S20, S26, S29, S37/39	Yes	Yes
C. Photoinitiator(s)	Yes	No	Yes	None	No	H303, H402	Yes	No

All the components present in this product at concentrations equal to or greater than 0.1% are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.
Ubstance Preparation Classification: ***Irritant***

FULL TEXT OF ANY R-PHRASES AND S-PHRASES

- **Risk Phrases:**
  - R36/37/38 — Irritating to eyes, respiratory system and skin
  - R43 — May cause sensitization by skin contact
- **Safety Phrases:**
  - ***S3 — Keep in a cool place***
  - ***S7/9 — Keep container***
  - ***S20 — When using do not eat or drink***
  - ***S26 — In case of contact with eyes, rinse immediately with plenty of water and seek medical advice***
  - ***S29 — Do not empty into drains***
  - ***S36 — Wear suitable protective clothing***
  - ***S37/39 — Wear suitable gloves and eye/face protection***

SARA 302:
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
Pursuant to Title III of the Superfund Amendments and Reauthorization Act of 1986, (SARA) and 40 CFR 372 Part 372, this product does not contain chemicals subject to the reporting requirements under
Section 313.

SECTION 16 Other information

The data are based on the current state of our knowledge, and are intended to describe the product with regard to the requirements of safety. The data should not be taken to imply any guarantee of a particular or general specification. It is the responsibility of the user of the product to ensure to his satisfaction that the product is suitable for the intended purpose and method to use. We do not accept responsibility for any harm caused by the use of this information. Furthermore nothing contained here in shall be construed as a recommendation to use any product in conflict with existing patents covering any material or its use. In all cases, our general conditions of sale apply.

- ***Abbreviations and acronyms:***

ADR: Accord européen sur le transport 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 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
IATA: International Air Transport Association
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent