



# Tough Resin

**Photoreactive Resin for Dazz 3D S130 Printer**

## **Safety Data Sheet**

GHS/CLP Labeling  
Hazard pictograms:



**Signal word:** Warning

**Revision Date: 08/12/2016**

**Version: 1.1**

---

## 1. Product and Company Information

**Product Identification:** Photoreactive Resin

**Product Class:** Methacrylated monomer, Methacrylated oligomers, photoinitiators, proprietary pigment and additive package

**Product Use:** For use in Dazz 3D printer

**Company:** Dazzle Laser Forming Technology CO., Ltd.

K-2F, Junxiangda Building A, No.9 Zhongshanyuan Rd., Nanshan Dist., Shenzhen, Guangdong, China -818052

**Date of Preparation:** 08/12/2016

**For Emergencies:** +86-0755-33372859

## 2. Hazards Identification in Accordance

### EMERGENCY OVERVIEW

**COLOR:** WHITE

**PHYSICAL STATE:** LIQUID

**ODOR:** LIGHT ACRYLIC

### \*Classification of the substance or mixture:

Serious eye damage/eye irritation, Category 1

Skin corrosion/irritation, Category 1

### GHS/CLP LABELLING

Hazard pictograms:



Signal word: Warning

---

## HAZARD STATEMENTS

- H315 Causes skin irritation  
H317 May cause an allergic skin reaction  
H318 Causes serious eye damage  
H335 May cause respiratory irritation

## PRECAUTIONARY STATEMENT(S)

### Prevention:

- P261 Avoid breathing gas/mist/vapors/spray  
P264 Wash skin thoroughly after handling  
P272 Contaminated work clothing should not be allowed out of the workplace  
P273 Avoid release into the environment  
P280 Wear protective gloves/protective clothing/eye protection/face protection

### Response:

- P302 + P352: IF ON SKIN (or hair) : Wash with plenty of soap and water.  
P305 + P351 + P338 : IF IN EYES : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310: IF SWALLOWED : Immediately call a POISON CENTER or doctor/physician.  
P362 : Take off contaminated clothing and wash before reuse.  
P391 : Collect spillage.

## SUPPLEMENTAL HEALTH INFORMATION

### Potential Health Effects:

Irritating to eyes, respiratory system and skin. Prolonged or repeated exposure may cause: headache, drowsiness, nausea, weakness (severity of effects depends on extent of exposure).

### Other:

This product may release fume and/or vapor of variable composition depending on processing time and temperature. Possible cross sensitization with other acrylates and methacrylates.

## 3. Composition/Information on Ingredient

Components	Approximate % by weight	C.A.S. No.	Hazard Statements	UK/EU Classification
Methacrylated oligomers	Proprietary	Proprietary	H315,H317,H318,	Xi; Irritant, R36/37/38, R43 S3, S7/9, S20, S26, S29, S37/39
Methacrylated monomer	Proprietary	Proprietary	H315,H317,H318, H335	Xi; Irritant, R36/37/38, R43 S3, S7/9, S20, S26, S29, S37/39
Photoinitiator(s)	Proprietary	Proprietary		
Pigments	Proprietary	Proprietary		
Specialty Additives	Proprietary	Proprietary		

## 4. First-Aid Measures

### Emergency Overview:

This product is a white colored liquid with a characteristic odor. This product may cause skin and eye irritation. The inhalation of high vapor concentration may cause a headache and nausea.

### Inhalation:

In case of exposure to a high concentration of vapor or mist, remove person to fresh air. Seek medical attention immediately.

### Eye Contact:

Immediately flush with plenty of clean water (under eye lids) for at least 20 minutes. Hold eyelids apart to ensure flushing. Washing within one minute of contact is essential to achieve maximum effectiveness. Seek medical attention immediately.

### Skin Contact:

Remove contaminated clothing and rinse contact area thoroughly with soap and water. Particular attention should be paid to hair, nose, and ears, and other areas not easily cleaned. Wash clothing before reuse.

### Ingestion:

If ingested, dilute with water by giving glasses of water or milk to the victim. Do not give anything by mouth if the victim is rapidly losing consciousness, is unconscious, or convulsing. Do not induce vomiting. If vomiting occurs naturally, keep airways clear. Get medical attention.

---

## 5. Fire-Fighting Measures

**Flash Point:** > 93°C/ 200 °F

**Method:** PMCC

**Ignition Temperature:** No data

**Lower Explosion Limit:** No data

**Upper Explosion Limit:** No data

**Combustion and Explosion Hazards:**

High temperatures, flame retardant removers, accidental mixing, or exposure to radiation or oxidizing agents may cause spontaneous polymerization reactions and generate heat and pressure. When the polymer is removed, the closed container may crack or rupture.

**Extinguishing Media:**

Use carbon dioxide or dry chemical for small fires; aqueous foam or water spray for large fires.

**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.

## 6. Accidental Release Measures

**Procedures of Personal Precautions:** Wear adequate personal protective clothing and Equipment

**Environmental Precautions:** Contain spill to prevent spread into drains, sewers, water supplies, or soil. Avoid release into the environment. Dispose of in accordance with local regulations.

## 7. Handling and Storage

**Handling Precautions:** User Exposure — This product should be used in well-ventilated areas.

Product may cause irritation. Avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wash hands with soap and water before eating, drinking, smoking, applying cosmetics, or using toilet facilities. Launder contaminated clothing before reuse. Contaminated leather articles, including shoes, cannot be decontaminated and should be destroyed to prevent reuse. Solvents should never be used to clean hands or skin because they increase the penetration of the material into skin.

**Storage Precautions:** Suitable —Store in a cool, dry place out of direct sun light, in opaque or amber containers. Store the containers at 10 - 28° C (50 - 82 ° F). when in storage. Keep containers closed. Avoid ignition sources.

## 8. Exposure Controls & Personal Protection

---

### EXPOSURE LIMITS

Components	PEL	TLV
Methacrylated oligomers	None	None
Methacrylated monomer	None	None
Photoinitiator(s)	None	None
Specialty Additives	None	None

#### **Respiratory Protection;**

If this material is handled at elevated temperature, under mist forming conditions or in case of accidental release of large quantities of product use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls.

#### **Eye and Face Protection:**

Chemical splash goggles or a face shield is recommended during operations where splashing could occur.

#### **Skin Protection:**

Avoid all skin contact. Depending on the conditions of use, cover as much of the exposed skin area as possible by wearing gloves, aprons, long pants, and long sleeved shirts.

**Ventilation Controls:** Ensure adequate ventilation.

#### **Other Controls:**

For operations where contact can occur a safety shower and eye wash facility should be available. Always use good personal hygiene and housekeeping practices. Wash hands thoroughly after handling.

## 9. Physical & Chemical Properties

**Appearance:** Liquid, White

**Odor:** Light Acrylate

**Specific Gravity:** 1.06-1.10 g/cm<sup>3</sup>

**Viscosity:** 400-500 m.Pa.s (25 °C)

**Boiling Point:** >100 °C

**Flash Point:** >100 °C

**Upper Explosion Limit:** no data

**Lower Explosion Limit:** no data

**Vapour Pressure:** Not established

**Volatile Characteristics:** Negligible

**Solubility in Water:** Only very slightly soluble

**Solubility in Organic Solvents:** Soluble in organic solvents

---

**Electric Conductivity:** Insulation

## 10. Stability and Reactivity

### Storage Precautions:

Suitable — Store in a cool, dry place out of direct sun light, in opaque or amber containers. Store the containers at 10 - 28° C (50 - 82 ° F). when in storage. Keep containers closed. Avoid ignition sources.

### Conditions to Avoid:

Storage > 38 ° C (100 ° F), exposure to light, loss of dissolved air, and contamination with incompatible materials.

### Incompatible Materials to Avoid:

Polymerization initiators, including peroxides, strong oxidizing agents, alcohols, copper, copper alloys, carbon steel, iron, rust, and strong bases.

**Hazardous Polymerization:** Hazardous polymerization may occur.

### Hazardous Decomposition Products:

Hazardous decomposition products may include oxides of carbon, nitrogen and various hydrocarbon fragments.

## 11. Toxicological Information

NPCA HMIS	NPCA HMIS	Class
Health		2
Flammability		1
Reactivity		2
A. Methacrylated oligomers		Acute Oral Toxicity (rat) LD50>2000mg/kg
B. Methacrylated monomer		Acute Oral Toxicity (rat) LD50>3000mg/kg
C. Photoinitiator (s)		No data available
D. Specialty Additives		No data available

Individual components of this product are not reported to produce mutagenic effects in humans. None of the components of this material are listed by IARC, NTP, OSHA or ACGIH as carcinogens.

## 12. Ecological Information

Keep product from waterways and watersheds. This substance is not readily biodegradable. Dispose of in accordance with all applicable federal, state and local regulations.

- 
- A. Methacrylated oligomers No data available
  - B. Methacrylated monomer May be harmful to various species of fish, algae and water microorganisms
  - C. Photoinitiator(s) No data available
  - D. Specialty additives No data available

### 13. Disposal Considerations

Dispose of in accordance with governmental regulations (community, national or regional). Contact a licensed professional waste disposal service to dispose of this mixture. As with all foreign substances, do not allow to enter storm or sewer drainage systems. Avoid release into the environment. Dispose of as unused product. Expose the open emptied container to light until material has solidified, then dispose.

### 14. Transport Information

**UN-Number**

DOT, TDG, ADN, IMDG, IATA: Non-regulated material

**UN-Proper Shipping name**

DOT, TDG, AND, IMDG, IATA: Non-regulated material

**Transport hazard class(es)**

DOT, TDG, ADN, IMDG, IATA

**Class:** Non-regulated material

### 15. Regulatory Information

**Toxic Substance Control Act, TSCA (American) :**

All components of this product are listed or excluded from the TSCA inventory of the US Environmental Protection Agency.

**TSCA Section 12 (b):**

All of the chemical substances appearing on this list are subject to the Toxic Substances Control Act (TSCA) section 12(b) export notification requirements.

**California Proposition 65:**

This product not contains a chemical known to the State of California to cause cancer birth defects or other reproductive harm



---

## 16. Other Information

### **Disclaimer:**

The information and recommendations contained herein are believed to be correct, but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. We assumes no responsibility and shall not be held liable for any damage resulting from handling or from contact with the above product.

**Revision Date:** 08/12/2016

**Version:** 1.1

