

# MATERIAL SAFETY DATA SHEET

## Photopolymer Resin STD

According to Regulation (EC) No. 1907/2006 & Regulation (EC) No. 1727/2008

Revision Date: April 18, 2016

1. IDENTIFICATION	
Product Identifier :	UV Resin
Manufacturer :	Global 3D Systems, Inc.
Website :	www.g3dsys.com
Email :	g3d@g3dsys.com

2. INGREDIENTS		
Ingredient Name	Composition (Wt%)	CAS No./EC No.
Acrylate Monomer	0%~40%	230-811-7/7328-17-8
Acrylate Monomer	0%~40%	84170-74-1/617-546-6
Acrylate Monomer	0%~40%	51728-26-8/500-111-9
Acrylate Monomer	0%~40%	13048-33-4
Acrylate Monomer	0%~40%	5888-33-5
Acrylated Urethane Polymer	10%~50%	Proprietary
Acrylated Urethane Polymer	10%~50%	68987-79-1

3. HAZARDS IDENTIFICATION	
<b>Classification</b>	EYE DAMAGE/IRRITATION - Category 2 HAZARDOUS TO THE AQUATIC ENVIROMENT - Category 3 SENSITIZATION - SKIN - Category 1 SKIN IRRITATION - Category 2 TOXIC TO REPRODUCTION - Category 2
<b>Signal Word</b>	Warning
<b>Pictogram</b>	
<b>Hazard Statements</b>	Causes serious eye damage Causes skin irritation Harmful to aquatic life with long lasting effects May cause an allergic skin reaction Suspected of damaging fertility or the unborn child.
<b>First-Aid Response</b>	If exposed or concerned: Get medical advice/attention. If in eyes: Rinse cautiously with water for several minutes. Get medical advice/attention. If on skin: Wash with soap and plenty of water. If skin irritation or rash occurs: Get medical advice/attention.
<b>Prevention</b>	Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid release to the environment Contaminated work clothing must not be allowed out of the workplace. Do not handle until all safety precautions have been read and understood. Understand special instructions before use. Wash thoroughly after handling. Wear eye protection/face protection. Wear protective gloves. Wear protective clothing.
<b>Storage</b>	Store away from sunlight, heat, pet and child.

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<b>Disposal</b>	In accordance with local regulations.
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#### 4. FIRST-AID MEASURES

<b>Inhalation</b>	Inhalant overly may cause headache, dizziness, excitation of breath and vomiting. Remove to fresh air area. If not breathing, administer artificial resuscitation. Seek medical attention immediately.
<b>Skin Contact</b>	Wash thoroughly with soap and water; remove soiled clothing and wash before re-use.
<b>Eye contact</b>	Immediately flush with clean water for more than 15 minutes. Seek medical attention.
<b>Ingestion</b>	Seek medical attention immediately and do not induce vomiting.

#### 5. FIRE FIGHTING MEASURES

<b>Fire and Explosion Hazards</b>	High temperature, inhibitor depletion, accidental impurities, exposure to radiation or oxidizers may cause spontaneous polymerizing reaction generating heat. Closed containers may rupture or explode during runaway polymerization.
<b>Suitable Extinguishing Media</b>	Dry chemical powder, alcohol resistant foam, water spray/water fog for cooling, carbon dioxide.
<b>Firefighting instructions</b>	Wear self-contained breathing apparatus and full protective gear before enter fire area. Fight fire from safe distance/protected location. Use water spray/fog for cooling, and use dry chemical powder/foam/carbon dioxide to extinguish fire.

#### 6. EXPOSURE CONTROL/PERSONAL PROTECTION

<b>Inhalation</b>	<b>Exposure</b> : No significant signs or symptoms of due to the low volatility, but aerosols and vapors may be generated during elevated processing temperature, and may cause respiratory irritation (may include coughing and shortness of breath). <b>Protection</b> : NIOSH/MSHA approved respiratory protection mask, equipment.
<b>Eye</b>	<b>Exposure</b> : Symptoms may include blinking, redness and excessive tearing. <b>Protection</b> : Safety glasses, goggles, face shield.
<b>Skin</b>	<b>Exposure</b> : Symptoms of irritation may include localized redness, swelling or rash. <b>Protection</b> : Nitrile or polyethylene gloves and aprons, don't use cotton gloves.

#### 7. HANDLING AND STORAGE

<b>Handling</b>	Avoid contact with eyes and skin. Wear protective equipment when handling this material (See Section 6 of MSDS). Follow all MSDS/label precautions after container is emptied because they may retain resin residues. Use indoors with good ventilation. Do not mix with incompatible material (oxidants) to avoid the risk of fire and explosion.
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<b>Storage</b>	Store indoors and dry area at temperature below 38°C/100°F . Store in tightly closed containers when not in use. Store away from sunlight, heat, pet and child.
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### 8. PHYSICAL AND CHEMICAL PROPERTIES

Physical state : Liquid	PH : N/A
Color : Clear	Odor : Slight
Viscosity : 200-450 cps at 25°C	Density : 1.06 g/cm <sup>3</sup>
Solubility : N/A	Melting Point/Boiling Point/Boiling Range : N/A
Flash Point : N/A	Auto-ignition Temperature : N/A
Decomposition Temperature : N/A	Explosion limits : N/A
Vapor Pressure : N/A	Vapor Density : N/A

### 9. STABILITY AND REACTIVITY

**Chemical Stability** : Stable under MSDS recommended storage conditions

**Possibility of Hazardous Reactions** : No data available.

**Condition to Avoid** : Keep away from high temperatures, localized heat sources, oxidizing conditions, freezing conditions, direct sunlight and ultraviolet radiation

**Substance to Avoid** : Oxidant, strong oxidizing agents

**Hazardous Decomposition Products Under Fire** : Carbon dioxide and carbide.

### 10. TOXICOLOGICAL INFORMATION

**Routes of Entry** : Eyes contact, skin contact, inhalation

**Toxicity to Animals** : No data available

**Chronic toxicity on Humans** : Long-term contact without protection may cause dermatitis (e.g. localized redness, swelling or rash).

### 11. ECOLOGICAL INFORMATION

**Potential environmental impact** :

Harmful to water organisms at high concentrations

React with hydroxyl radicals slowly while it is released into the atmosphere.

Biodegradable while it is released into the water or soil.

### 12. DISCARDING DISPOSAL

Wastes shall be stored in the safety containers, and waste disposal must be in accordance with appropriate local regulations. A large number of wastes and absorbed pollutants can be burned by incinerator

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### 13. TRANSPORT INFORMATION

Transport in room temperature, isolation and crushproof packing.

DOT Road Shipment information (49CFR 172.101) : N/A

DOT Air Shipment (IATA) : N/A

Ocean Shipment (IMDG) : N/A

UN Number : N/A

UN Proper Shipping Name : N/A

Specific transport method and notice : N/A

### 14. LAWS AND REGULATIONS INFORMATION

<b>United States Regulations</b>	<b>U.S. TSCA Inventory Status</b> : Ingredients of this product are listed on the TSCA inventory or are exempted from listing. <b>Other U.S. Federal Regulations</b> : None. <b>California Safe Drinking Water and Toxic Enforcement Act (Prop 65)</b> : Ingredients within this product are not on the Proposition 65 Lists. <b>RCRA 40 CFR</b> : None.
<b>Canadian Regulations</b>	<b>Canadian DSL/NDSL Inventory Status</b> : Ingredients of this product are on the DSL Inventory, or are exempted from listing. <b>Other Canadian Regulations</b> : N/A <b>WHMIS</b> : This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR. <b>WHMIS Classification and Symbols</b> : Class D Division 2 Materials causing other toxic effects.
<b>European Economic Community Information</b>	<b>EU Labeling and Classification</b> : This product meets the definition of the hazard class as defined by the European Economic Community Guidelines. <b>EU Classification</b> : [Xi] Irritant [N] Dangerous to the Environment <b>EU Risk Phrases</b> : R36/37/38: Irritating to eyes, skin and respiratory system . R43: May cause sensitization by skin contact. R53: May cause long term adverse effects in the aquatic environment. <b>EU Safety Phrases</b> : S24/25: Avoid contact with skin and eyes. S26: In case of contact with eye, rinse immediately with plenty of water and seek medical advice. S46: If swallowed, seek medical advice immediately and show this container or label. S51: Use only in a well-ventilated area. S61: Avoid release to the environment. S62: If swallowed, do not induce vomiting: seek immediate medical advice.
<b>Australian Information</b>	Ingredients of this product are listed on the International Chemical Inventory list.
<b>Japanese Information</b>	Ingredients of this product are on the ENCS Inventory list.
<b>China Information</b>	Ingredients of this product are on the inventory list.

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### 15. DISCLAIMERS

The information in this MSDS was acquire from the sources that we believe are reliable, but the information is provided without any warranty regarding the accuracy. The conditions of handling, storage, usage and disposal of the product may be beyond our control and knowledge. For this and other reasons, we do not take responsibility and expressly disclaim liability for loss and damage that connected with the handling, storage, usage and disposal of this product.

If this product is used as an ingredient in another product, this MSDS information may not be applicable. This MSDS has been prepared in accordance with the requirements of the OSHA Hazard Communication Standard (29 CFR 1910.1200).