

Material Safety Data Sheet

Product Name : SLA Resin

1.COMPANY IDENTIFICATION

Company	XYZprinting, Inc.
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2.HAZARD IDENTIFICATION

Classification of the substance or mixture : Non Hazardous Material

Label elements : —

Symbol: —

Signal word: —

Hazard substance: —

Hazard statement: —

Precautionary: —

Statements: —

Other hazards : Slight irritation to skin, heat generation when polymerization, carbon oxide generation when decomposition by heat.

3.COMPOSITION / INFORMATION ON INGREDIENTS

Substance Identity	CAS No.	Approx. Weight (%)
Urethane Acrylate	Confidential	35~50
Acrylic Monomer	Confidential	40~50
Photoinitiator	Confidential	0~5

4.FIRST AID MEASURES

The first-aid measures for different exposure routes :

Inhalation : If overcome by exposure, remove victim to fresh air immediately. Give oxygen or artificial respiration as needed. Obtain emergency medical attention. Prompt action is essential.

Skin contact : Immediately remove contaminated clothing. Wash skin thoroughly with mild soap/water. Flush with lukewarm water for 15 minutes. If sticky, use waterless cleaner first. Seek medical attention if ill effect or irritation develops.

Eyes contact : In case of eye contact, immediately rinse with clean water for 20-30 minutes. Retract eyelids often. Obtain emergency medical attention.

Ingestion : If large quantity swallowed, give lukewarm water (pint) if victim completely conscious/alert. Do not induce vomiting/risk of damage to lungs exceeds poisoning risk. Obtain emergency medical attention.

The most important symptoms and hazardous effects : Slight skin irritation

The protection of first-aiders : Wear C class protective equipment and first aid in safety area.

Notes to physicians : Slight skin irritation, Symptoms may include localized redness or rash and swelling of the affected area, Symptoms may be delayed.

5.FIRE-FIGHTING MEASURES

Suitable fire extinguishing media : Water, foam, carbon dioxide or dry chemical.

Specific hazards may be encountered during fire-fighting :

High temperatures, inhibitor depletion, accidental impurities, or exposure to radiation or oxidizers may cause spontaneous polymerizing reaction generating heat / pressure. Closed containers may rupture or explode during runaway polymerization.

Specific fire-fighting methods :

Full protective equipment, including self contained breathing apparatus is needed to protect fire fighters from exposure.

Special equipment / instructions for the protection of firefighters :

Chemical splash goggles and/or face shield, respiratory protection equipment, protective gloves, apron, boot.

6.ACCIDENTAL RELEASE MEASURES

Personal precautions : Wear proper protective equipment, avoid raw material contact and vapor inhalation.

Environmental precautions : 1. Extinguish all ignition sources and ventilate area.
2. Dispose/report per regulatory requirements.

Clean-up procedures : 1. Avoid contact spilled or released material
2. Reduce spill or release in safety condition.
3. Soak up small spill with inert solids (such as vermiculite, clay) and sweep/shovel into vented disposal container.
4. Dike and recover large spill. Obtain emergency help by fire or emergency unit.

7.HANDLING AND STORAGE

Handling procedures : This product is inhibited to prevent uncontrolled polymerization. A polymerization can generate heat and pressure and may cause product container to rupture. Check inhibitor content often and add inhibitor to bulk liquid if needed.

Storage procedures : Maintain head space in storage containers to support oxygen requirements of the inhibitor(s). Do not blanket or mix with oxygen free gas, and prevent material from freezing (inhibitor can separate from product as a solid). Store drums above 10°C/50°F and below 32°C/90°F. Bulk storage temperature range:15-27°C/59-80°F. Store drums away from heat sources, strong oxidizers, radiation and other initiators. Use product within six months of receipt for optimum results. If material freezes, heat and mix to redistribute the inhibitor. Product may also be heated to facilitate handling. Heat product container slowly to 40°C/104°F for not more than 24 hours. Convection ovens or warm water bath (preferred due to more efficient heat transfer) are recommended for heating. Do not use drum heater. An air space, preferably an air bubble flow, should be provided for at all times during heating.

8. EXPOSURE CONTROLS MEASURES

- Engineering controls :
1. Using no spark, grounding ventilation system, and separate from general ventilation system.
 2. Exhaust waste gas to outdoor, and take applicable measure to protect environment.
 3. Using local exhaust ventilation and closed processing system when mass production.
 4. Complement exhaust air by ventilation system with supply plenty fresh air.

Control parameters				
Substance name	TWA	STEL	CEILING	BEIs
Urethane acrylate	—	—	—	—
Acrylic monomer	—	—	—	—
Acrylic resin	—	—	—	—
Photoinitiators	—	—	—	—

Personal protective equipment :

Respiratory protection : If this material is handled at elevated temperature or under mist forming conditions, NIOSH/MSHA approved respiratory protection equipment should be used.

Hand protection : Chemical-resistant gloves should be wore when handing this product.

Eye protection : Chemical splash goggles and /or face shield must be worn when possibility exists for eye contact due to splashing or spraying liquid, airborne particles, or vapor. Contact lenses should not be worn

Skin and body protection : Depending on the conditions of use, protective gloves, apron, boots, head and face protection should be worn. This equipment should be cleaned thoroughly after each use.

- Hygiene measures :
1. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.
 2. Use good personal hygiene practices. Wash hands before eating, drinking, smoking, or using toilet facilities.
 3. Promptly remove soiled clothing/wash thoroughly before reuse. Shower after work using plenty of soap and water.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, colour, etc) : Liquid at 25°C	Odor : Low Odor
Odor threshold : —	Melting point/freezing point : —
pH value : AP 6.8 - 7.2	Boiling point/boiling range : 120°C
Flammability (solid, gas) : —	Flash point : 110°C
Decomposition temperature : —	Test method : Closed cup
Autoignition temperature : —	Explosion limits : —
Vapor pressure : —	Vapor density : —
Density : 1.12~1.13	Solubility : Water: Negligible
Partition coefficient of n-octanol/water : —	Evaporation rate : —

10.CHEMICAL STABILITY AND REACTIVITY INFORMATION

Chemical Stability : Stable on normal condition.

Possible hazardous reactions occurring under specific conditions :

Heat and pressure generation when polymerization and the result in closed container broken and cracked.

Conditions to be avoided : High temperatures, localized heat sources (i.e., drum or band heaters), oxidizing conditions, freezing conditions, direct sunlight, ultraviolet radiation, inert gas blanketing.

Materials to avoid : Strong oxidizers, strong reducers, free radical initiators, inert gases, oxygen scavengers.

Hazardous decomposition products : Acrid smoke-fumes/carbon monoxide/carbon dioxide and perhaps other toxic vapors may be released during a fire involving this product.

11.TOXICOLOGICAL INFORMATION

Routes of exposure : Skin, inhalation, ingestion, eyes.

Symptoms :

After inhalation : No significant signs or symptoms indicative of any adverse health hazard are expected to occur at standard conditions due to the low volatility of this material. However, aerosols, or vapors which may be generated at elevated processing temperatures, may cause respiratory tract irritation. Symptoms of irritation may include coughing, mucous production and shortness of breath.

After skin contact : Although no appropriate human or animal health effects data are known to exist, this material is expected to be a skin irritant. Symptoms of irritation may include redness or rash, swelling of the affected area and blistering. Repeated or prolonged skin contact may cause a more severe skin response such as ulcers and scarring. Symptoms of skin exposure may be delayed 24-48 hours. Although no appropriate human or animal health effects data is known to exist, this material may cause an allergic skin reaction (sensitization) in susceptible individuals upon repeated exposure.

After eye contact : Although no appropriate human or animal health effects data are known to exist, this material is expected to cause eye irritation. May cause moderate irritation with symptoms including burning sensation, tearing, redness or swelling.

After ingestion : Although no appropriate human or animal health effects data are known to exist, this material is expected to be a slight ingestion hazard.

Acute toxicity : —

Chronic toxicity or long term toxicity : —

12.ECOLOGICAL INFORMATION

Ecological toxicity : —

Persistence and degradability : —

Bio-accumulative potential : —

Mobility in soil : —

Other adverse effects : —

13.WASTE DISPOSAL MEASURES

Methods of waste disposal :

1. Residues and spilled material may be hazardous waste due to potential for internal heat generator. Disposal must be in accordance with applicable federal, state, or local regulations.
2. The container for this product can present explosion or fire hazards, even when emptied. To avoid risk of injury, do not cut, puncture, or weld on or near this container. Since the emptied containers retain product residue, follow label warnings even after container is emptied.

14. TRANSPORT INFORMATION

Not dangerous good

United nations number (UN No) : /

UN Proper shipping name : /

Transport hazard class(es) : /

Packing group number : —

Marine pollutant : NO

Specific transport measures and precautionary conditions : —

15.REGULATORY INFORMATION

Applicable regulations : N/A

16.OTHER INFORMATION

Remark : “ — “ = not available ; “ / “ = not applicable

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