

Material Safety Data Sheet



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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name:

BIOMEDICAL ACRYLIC RESIN

Company:

XYZprinting, Inc.

Address:

No.147, Sec. 3, Beishen Rd., Shenkeng Dist., New Taipei City, Taiwan (R.O.C.)

Information Phone No.: 886-2-7705 8001

Emergency Phone No.: 886-2-7705 8001

2. HAZARD IDENTIFICATION

EMERGENCY OVERVIEW

Color: Clear

Physical State: Liquid

Odor: Low odor

Classification of the substance or mixture:

Serious eye damage/eye irritation: Category 1

Skin sensitisation: Category 1

Specific target organ toxicity (repeated exposure): Category 2

Chronic hazards to the aquatic environment: Category 2

GHS LABELLING

Hazard pictograms:



GHS05



GHS07



GHS08



GHS09

Signal word:

Danger

HAZARD STATEMENTS

H315: Causes skin irritation.

H317: May cause an allergic skin reaction.

H319: Causes serious eye irritation.

H373: May cause damage to organs through prolonged or repeated exposure.

H413: May cause long lasting harmful effects to aquatic life.

PRECAUTIONARY STATEMENTS

Prevention:

P261: Avoid breathing dust/fumes/gas/mist/vapours/spray.

P272: Contaminated work clothing should not be allowed out of the workplace.

P273: Avoid release to the environment.

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

Response:

P302+P352: IF ON SKIN: Wash with plenty of soap and water.

P333+P313: If skin irritation or rash occurs: Get medical advice/attention.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

Prepare on 2017/05/15

PBT: —
vPvB: —

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS No	Approx. Weight (%)
Acrylate oligomer	72869-86-4	30~80
Acrylic monomer	7646-67-5/5117-12-4	20~60
Photo initiator	75980-60-8	0.5~6

4. FIRST AID MEASURES

Inhalation:

Remove victim to fresh air immediately. Give oxygen or artificial respiration as needed.

Skin contact:

Remove contaminated clothing immediately. Wash skin thoroughly with mild soap/water. Flush with lukewarm water for 15 minutes. Seek medical attention if ill effect or irritation develops. Contaminated clothing should be washed before reuse.

Eyes contact:

In case of eye contact, immediately flush eyes with running warm water for at least 20 minutes, keep eyelids open. If vapor is inhaled, remove to fresh air or remove contaminated source materials before flushing. Obtain emergency medical attention. Keep contaminated water from contacting the unaffected eye.

Ingestion:

If large quantity swallowed, give half a litre of water to drink if victim is completely conscious/alert. Do not induce vomiting. Obtain emergency medical attention.

The most important symptoms and hazardous effects:

Possibly cause irritation effects to the eyes and skin. May cause esophagus pain, illness or nausea if over-inhaled.

The protection of first-aiders:

First aid in safe area. If first aid is required in unsafe area, applicable personal protective equipment listed in section 8 "EXPOSURE CONTROLS MEASURES" is required.

Notes to physicians:

Supply oxygen if inhaled. If swallowed, consider give gastric lavage followed by activated charcoal.

5. FIRE-FIGHTING MEASURES

Suitable fire extinguishing media:

CO₂, foam, or dry powder.

Specific hazards may be encountered during fire-fighting:

Fire hazard because of high volatility. Vapors are heavier than air and may travel along the ground to a source of ignition (pilot light, flames, sparks, heaters, smoking, electric motors, static discharge, or other ignition sources) some distance away. Never use welding or cutting torch on or near drum (even empty) as the container may break or explode in the scene of fire.

Specific fire-fighting methods:

Retreat from the spot and try extinguishing the fire from a safe distance or protected location. Stop spillage before attempting to extinguish fire. If the spillage cannot be stopped and there is no hazard nearby, allow the fire to extinguish by itself.

If the spillage is not stopped before the effort to extinguish fire, the vapor can form an explosive mixture with the fire and ignite again. Separate unignited substances and protect personnel.

Special equipment / instructions for the protection of firefighters:

Oxygen mask, protective gloves, and protective suit should be worn.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:

Block the area with spillage or leakage immediately. Limit the staffs entry unless applicable protective equipment or protective suit are worn until the leak area is completely cleaned.

Environmental precautions:

1. Extinguish all ignition sources
2. Ventilate the leak area.
3. Ventilate the confined space before entry.

Clean-up procedures:

Absorb spillage with absorbent material, and place the in covered container for disposal in accordance with local regulations.

7. SAFE HANDLING AND STORAGE MEASURE

Handling procedures:

Open the container only at a well-ventilated location and carefully loosen the seal before opening this product. When using this product, (a) avoid inhaling this substance; (b) avoid ingestion; and (c) use respiratory protection equipment when dust or mist is present. Please wear safety goggles, chemical-resistant gloves and protective garments to avoid contact, and wash hands thoroughly after handling.

Storage procedures:

This product is a light-sensitive material, which should be kept in a cool, ventilated room, and away from sunlight, ultraviolet and other light or heat sources to avoid deterioration.

When the product is left unused in the tank 3 or more days, store the remaining resin in a opaque container to avoid pollution.

Store at 10~32°C (50~89.6°F), and maintain transport temperature below 60°C (140°F), while avoiding sunlight exposure or heat source. Use product within three months of receipt for optimum results.

Store at a cool, dry, well-ventilated place away from direct sunlight, avoid heat, ingition source and incompatibilities (for example, oxidizing agents, strong acids/bases).

8. EXPOSURE CONTROLS MEASURES

Engineering controls:

Provide sufficient local exhaust ventilation to keep concentration of airborne under threshold limit value.

Control parameters:

Component	IOELVs (UK)*	STEL*	CEILING*	BEIs*
Acrylate oligomer	None	None	None	None
Acrylic monomer	None	None	None	None
Photo initiator	None	None	None	None

*IOELVs - Indicative Occupational Exposure Limit Values

*TLV - Threshold Limit Value

*PEL - Permissible Exposure Limit

*WEEL - Workplace Environmental Exposure Level by the American Industrial Hygiene Association

No occupational exposure limit values exist for the materials contained in this product.

Personal protective equipment:

Respiratory protection:

Organic vapor chemical cartridge, air-supplying respirator, and self-contained respirator.

Hand protection:

Impervious gloves made of butyl rubber, teflon, polyurethane and polyvinyl acetate.

Eye protection:

Eye protection such as chemical splash goggles and/or face shield must be worn.

Skin and body protection:

Coveralls working clothes, working boots, eye washer and emergency shower.

Hygiene measures:

1. Promptly remove soiled clothing, wash thoroughly before reuse or disposal.
2. No smoking or eating at working area.
3. Wash hand thoroughly after handling this product.
4. Maintain the cleanness of working area.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Light yellow liquid	
Odor	Low odor	
pH value	AP 6.8 - 7.2	
Boiling Point	>170°C	
Flash point	>100°C	Test Method: Closed cup

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.

Conditions to be avoided:

Lighting, sparks, open flame, heating, ignition sources, or long-term exposure to heats.

Materials to avoid:

Strong oxidizers, alkaline, acidic substances.

Hazardous decomposition products:

Oxocarbon may be released during a fire involving this product.

11. TOXICOLOGICAL INFORMATION

Routes of exposure:

Skin, inhalation, ingestion, eyes.

Symptoms:

Headache, nausea vomiting, prostration, unconsciousness, skin irritation and dermatitis.

Acute toxicity:

After inhalation:

Aerosols, or vapors which may be generated at elevated processing temperatures, may cause respiratory tract irritation. Symptoms of irritation may include nausea, dizziness 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 rash, swelling of the affected area and may cause dermatitis.

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 ingestion hazard.

Chronic toxicity or long term toxicity:

Depending on the level and duration of exposure, repeated and prolonged exposure can lead to stomatitis, dermatitis, conjunctivitis and gastrointestinal discomfort.

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:

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. Industrial waste must be incinerated as appropriate. Waste must be stored in safe containers until processing.

14.TRANSPORT INFORMATION

United nations number (UN No): Not regulated for transport

UN Proper shipping name: Not regulated

Transport hazard class(es): Not regulated

Packing group: Not regulated

Dangerous for the environment : No

Marine pollutant : No

Other information : No supplementary information available

- Overland transport

Transport regulations (ADR) : Not applicable

- Transport by sea

Transport regulations (IMDG) : Not applicable

- Air transport

No data available

- Inland waterway transport

Transport regulations (ADN) : Not applicable

Carriage prohibited (ADN) : No

Not subject to ADN : No

- Rail transport

Transport regulations (RID) : Not applicable

Carriage prohibited (RID) : No

Specific transport measures and precautionary conditions: N/A

15.REGULATORY INFORMATION

1. Rules for Occupational Safety and Health in Facilities

2. Regulations of Hazard Communication on Dangerous and Harmful Materials

3. Regulations Governing Road Traffic Safety

4. Governing Methods of and Facilities for Storage, Clearance and Disposal of Industrial Wastes

5. Public Hazardous Materials and Flammable Pressurized Gases Establishment Standards and Safety Control Regulations

16.OTHER INFORMATION

Remark:

“ – “ = not available ; “ / “ = not applicable

Legal disclaimer:

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.

While XYZprinting, Inc. believed that data contained herein are accurate and derived from qualified sources the data are not be taken as a warranty or representation for solely for your consideration, investigation and verification. Any use of these data and information must be determined by the user to be in accordance with applicable federal, state and local and regulation.