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Material Safety Data Sheet(MSDS)

Section 1. Product and Company Identification

Product identifier : S300 Standard Resin
 Chemical name : Polyurethane Acrylate UV Curing Resin
 Other means of identification : Standard Resin for LCD Printing
 Product type : Liquid
 Recommended use : For use with 3D Printer, NOT for human use
 Company : Shenzhen Esun Industrial Co.,Ltd.
 Website : www.brightcn.net
 ADD : Wuhan University Building A403-I,No.6
 Yuexing2 Road, Nanshan District, Shenzhen,
 China
 Tel : (086)-0755-26031975
 (086)-0755-26031982
 E-mail : lj@brightcn.net

Section 2. Hazard(s) Identification


Classification of the substance or mixture:

LONG-TERM AQUATIC HAZARD- Category 4
 SERIOUS EYE DAMAGE/EYE IRRITATION- Category 2
 SKIN SENSITIZATION-Category 1
 ACUTE TOXICITY- Category 4

GHS label elements:



Signal word : Warning
 Hazard statements : H302-Swallowing poison
 H317-May be harmful in contact with skin
 H319 –Strong eye irritation

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H413-It may be harmful to aquatic organisms due to long-term impact

Precautionary statements

Prevention:

P280-Wear protective gloves, eye and face protectors

P273- Avoid emissions into the environment

P261- Avoid breathing vapour

Response:

P305+P351+P338- If in eyes: Rinse cautiously with water for several minutes.If

contact lenses are worn, remove and continue to rinse.

P337+P313 If eye irritation persists, get medical attention.

P302+P352 If on skin : Wash with plenty of soap and water.Please wash the contaminated clothes before reuse.

P308+P313 If it causes skin inflammation or rash;Please go to a doctor.

Storage: Not applicable

Disposal:

P501 Dispose of items and containers in accordance with local and national regulations.


Other hazards which do not result in classification: None known

Section 3. Composition/Information on Ingredients

Substance/mixture: mixture

Chemical concentration: 100

Chemical Name	CAS No.	% by Weight
Urethane acrylate	68987-79-1	30%
Acryloylmorpholine	5117-12-4	28%
Tricyclodecane dimethanol diacrylate	42594-17-2	25%
Diphenyl(2,4,6-trimethylbenzoyl)phosphine Oxide	75980-60-8	4.5%
UV Color pigment	1333-86-4/482-89-3	2%

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As far as the supplier is aware of the concentration, the health or safety aspects of this material have not been fully evaluated.

Section 4. First-Aid Measures

Description of necessary first aid measures

Eye contact:

If in eyes: rinse cautiously with water for a few minutes and always open the eyes and face. If you wear contact lenses, remove the contact lens and continue to rinse for 10 minutes. get medical attention.

Inhalation: Remove from site to air-conditioned area. If breathing is difficult, give oxygen and get medical attention immediately.

Skin contact:

Remove contaminated clothing and rinse thoroughly with medical alcohol, soap and water.

Ingestion:

Drink enough warm water to induce vomiting. get doctor attention.

Indication of immediate medical attention and special treatment needed ,if necessary

Treat for symptoms. If large amounts of poison have been ingested or inhaled, contact a toxicology expert immediately.

Section 5. Fire-Fighting Measures

Dangerous characteristic:


If open fire, high heat combustible, and release toxic gases. When exposed to light, it reacts violently and gives off intense heat, turning the liquid into a solid.

Hazardous thermal decomposition product :

Carbon monoxide and carbon dioxide.

Suitable:

Water mist, anti-ethanol foam, dry powder or carbon dioxide fire extinguishing.

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Not suitable: None known.

Remarks:

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus(SCBA) with a full face-piece operated in positive pressure mode. Move the container from the fire to an open area if possible. Spray water to keep the fire container cool until the end of the fire. Containers in a fire must be immediately discolored or audible from a safety relief device.

Section 6. Handling and Storage

Precautions for safe handling

Protective measures:


Closed operation. Operators must be specially trained and strictly abide by the operating procedures. It is suggested that operators should wear self-inhalation filter respirator, chemical safety glasses, protective clothing and rubber gloves.

Advice on general occupational hygiene:

Keep away from fire and heat. Smoking is strictly prohibited in the workplace. Use explosion-proof ventilation systems and equipment. Do not weld, cut, etc before removing liquid. Avoid contact with oxidants. The container and the transmission device need to be grounded to prevent static electricity. The filling speed should be controlled, and there is a grounding device to prevent the accumulation of static electricity. Equipped with the corresponding varieties and quantities of fire equipment and leakage emergency treatment equipment. Product residue (liquid) remains in empty containers and may be dangerous.

Conditions for safe storage:

Store in a cool, dry, ventilated place in a dark, airtight container. Prevent direct sunlight, and oxidant, acid, alkali and other separate storage, do not mix storage. The opened container must be re-sealed and held upright to prevent

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leakage. The storage area shall be provided with emergency equipment and suitable materials to deal with leakage.

Advice on storage temperature: 18-35°C

Section 7. Physical and Chemical Properties

Physical state: Liquid

Colour: White, Gray, Red, black, Yellow

Odor: Slight, ester-like

Melting point: Not available

Boiling point: Not available

Flash point: Not available

Evaporation rate: Not available

Flammability: Not available

Vapour pressure: Not available

Vapour density: Not available

Decomposition temperature: Not available

Viscosity: 200±100mPa·s (25°C)

Relative density (g/ml, H₂O=1): 1.159 (25°C), 1.155 (25°C), 1.157 (25°C), 1.154(25°C), 1.158 (25°C)

Solubility: Soluble in ethanol, ethyl acetate, benzene and other organic solvents, insoluble in water

Section 8. Stability and Reactivity


Chemical stability: The product is stable

Hazardous decomposition products:

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Conditions to avoid: Oxidizing acid, alkali and water; Strong illuminant

Possibility of hazardous reactions:

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light may cause spontaneous violent chemical reaction.give off strong heat and irritating gas, liquid into solid.

Hazardous decomposition products: Carbon monoxide and carbon dioxide

Selection 9.Toxicological information

Acute toxicity: None known

Major irritant effects

Skin: Irritating to skin and mucous membranes

Eye: Stimulate an eye

Sensitisation: None known significant effects or critical hazards

Potential chronic health effects

Carcinogenicity: None known significant effects or critical hazards

Reproductive toxicity: None known significant effects or critical hazards

Consultations for sex: None known significant effects or critical hazards

Respiratory risk: None known significant effects or critical hazards

Symptoms associated with physical, chemical, and toxicological properties

Eye contact: Pain or irritation, tears, redness

The suction: No specific data

Skin contact: Excitement, redness

Eat: No specific data


Section 10: Ecological Information

Water hazard category 1:

Do not expose undiluted or large products to groundwater, waterways or sewage systems.Do not release materials into the environment without permission.

Mobility in soil: Not available.

Other adverse effects: None known significant effects or critical hazards.

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Section 11. Disposal Considerations

Disposal methods:

refer to relevant state, local and national regulations. Deliver the product to the hazardous waste handler. Must be dealt with in accordance with government regulations.

Uncleaned packaging:

The packaging should be discarded in accordance with official regulations.

Section 12. Transport Information

	UN	IMDG	IATA
UN No.	Not regulated	Not regulated	Not regulated
UN proper shipping name	-	-	-
Hazard class(es)	-	-	-
Packing group	-	-	-
Environmental hazards	No	No	No
Marine Pollutant	No	No	No


Land transport(ADG): Not regulated for transport of dangerous goods.

Air transport(ICA0-IATA/DGR): Not regulated for transport of dangerous goods.

Sea transport(IMDG-Code/GGVSee): Not regulated for transport of dangerous goods.

Transport in bulk according to Annex II of MARPOL and the IBC code.

Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

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Section 13. Other Information

This information can only be used as a supplement to other information. Please use and protect the health and safety of your employees. This information is provided without warranty, and the user fails to use the product in accordance with the material safety data sheet, or USES it in connection with other products and operations at his own risk.

Filling department: R&D department

ADR: Accord européen sur le transport des marchandises dangereuses par Route

MDG: Route for the international matirisla of dangerous goods by sea

DOT: U.S. department of transportation

IATA: International air transport association

EINECS: European Inventory of Existing Chemical Substance

CAS: Chinese Academy of Sciences

VbF: Verordnung über brennbare Flüssigkeiten, Österreich

LC50: Lethal concentration, 50% lethal dose, 50%

vPvB: very Persistent and very Bioaccumulative

ACGIH: American Conference of Governmental Industrial Hygienists (USA)

OSHA: Occupational safety and health administration (USA)

NTP: National Toxicology Program (USA)

IARC: International Agency for Research on Cancer

EPA: Environmental Protection Agency (USA)