

SDS

Safety Data Sheet



3F., No. 287, Niupu Rd., Xiangshan Dist.,
Hsinchu City 300, Taiwan (R.O.C.)

Phrozen Resin Black Stiff Resin

Tel | 886-3-540-0076 E-mail | Ray.wu@phrozen3d.com Website | <http://www.phrozen3d.com>

1. Identification of the Substance/Preparation and of the Company/Undertaking

Product Name	Phrozen Black Stiff Resin
Synonyms	-
Chemical Name	Mixture of Acrylate, Photoinitiator, and Pigment
Type	Liquid
Application	UV/Visible Light curable resin for 3D printing
Manufacturers	普羅森科技股份有限公司 Phrozen Tech Co. Ltd. 03-5400076 No.2, Ln. 496, Niupu S. Rd., Xiangshan Dist., Hsinchu City 300, Taiwan (R.O.C.) Ray.wu@phrozen3d.com
Emergency Phone	+886916781577 Local police number

2. Hazards Identification

According to EC Directives 1999/45/EC:

Hazards pictograms:



Xi: IRRITANT

Risk advice to man and the environment:

R36/38

Irritating to eyes and skin.

R43

May cause sensitization by skin contact.

R51/53

Toxic to aquatic organisms, may cause long-term adverse

effects in

the aquatic environment.

According to GHS:

Hazard pictograms



Signal Word

Warning

GHS Classification:

Skin corrosion/irritation (Category 2)

Serious eye damage/eye irritation (Category 2B)

Respiratory or skin sensitization - skin sensitization (Category 1)
 Hazardous to the aquatic environment - chronic aquatic toxicity
 (Category 3)

Hazard Statements: H315 Causes skin irritation.
 H317 May cause an allergic skin reaction.
 H320 Causes eye irritation.
 H412 Harmful to aquatic life with long
 lasting effects.

Precautionary Statements: **Prevention**

P264 Wash skin thoroughly after
 handling.
 P273 Avoid release to the environment.
 P280 Wear protective gloves/protective
 clothing/eye protection/face protection.

Response

P285 In case of inadequate ventilation wear
 respiratory protection.
 P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for
 several minutes. Remove contact lenses, if
 present and easy to do. Continue rinsing.
 P302 + P352 IF ON SKIN: Wash with plenty of soap and
 water.
 P332 + P313 If skin irritation occurs: Get medical advice/
 attention.
 P337 + P313 If eye irritation persists: Get medical advice/
 attention.
 P342 + P31 If experiencing respiratory symptoms: Call a
 POISON CENTER or doctor/physician.
 P362 Take off contaminated clothing and
 wash before reuse.
 P391 Collect spillage.

Storage

P403+P235 Store in a well-ventilated place. Keep cool.

Disposal

P501 Dispose of contents/container to comply with
 national or local regulations.

3. Composition/Information on Ingredients

Chemical Nature: Substance Mixture

Hazardous components

Chemical Name	CAS-No.	Concentration [%]	Classification (67/548/EEC)	Classification ((EC) No 1272/2008)
Acrylated monomers	/	0-50	Xi, Xn, R22, R41, R43, R48	H302, H317, H318, H373
Acrylate-Oligomers	/	10-50	Xi, R36	
Ingredient determined not to be hazardous		to 100		

For the full text of the R phrases mentioned in this Section, see Section 16.

4. First Aid Measures

General:
medical

In all cases of doubt, when symptoms persist, seek

attention. **NEVER GIVE ANYTHING BY MOUTH TO AN UNCONCIOUS PERSON.**

Inhalation:
warm and at rest. If

Remove to fresh air, keep patient

unconscious, place in recovery position and seek medical advice.

Skin contact:
Wash skin thoroughly with

Remove contaminated clothing.

soap and water or use recognized skin cleanser. **DO NOT USE SOLVENTS OR THINNERS.**

Eye contact:
for at least 10

Irrigate copiously with clean, fresh water

minutes, holding the eyelids apart and seek medical advice.

Ingestion:
immediate medical

If accidentally swallowed, obtain

attention. Keep at rest. **DO NOT INDUCE VOMITING.**

5. Fire-Fighting Measures

Extinguishing Media:

- suitable:
powders, water spray.

Alcohol resistant foam, CO₂,

- unsuitable:
Exposure hazards:
to decomposition

Water jet

Fire may produce dense smoke. Exposure

products may cause a health hazard.

Protective equipment for
required.
firefighters:

Appropriate breathing apparatus may be

Advice:
exposed to fire with water. Do not

Cool closed containers

allow run off from fire fighting to enter drains or water courses.

6. Accidental Release Measures

Personal Precautions:
the area. Avoid

Exclude sources of ignition and ventilate

breathing vapors or dusts. See the production measures mentioned in sections 7 and 8.

Environmental Precautions:
sewage, inform

If the product contaminates lakes, rivers or

appropriate authorities in accordance with local regulations.

Methods for cleaning-up:
combustible

Contain and collect spillage with **non-**

absorbent materials (e.g. sand, earth, vermiculite,...) and

place in container for disposal according to local regulations (see section 13). Do not allow to enter drains or water courses.
Clean preferably with a detergent - Avoid use of solvents.

7. Handling and Storage

Handling:
- 8 - 11.

Before any handling, see sections 3

Persons with a history of skin sensitization problems should not be employed in any process in which this preparation is used.

Avoid skin and eye contact. Avoid inhalation of vapor or dust.

Smoking, eating and drinking should be prohibited in application area. For personal protection, see section 8.

Never use pressure empty: container is not a pressure vessel. Always keep in containers of same materials as the original one. Comply with the health and safety at work laws.

Precaution to be taken in Storage:

Stable under recommended storage and handling conditions. Avoid exposure to temperatures higher than 40°C. Avoid strong UV sources. Avoid prolonged exposure to light. Avoid free radicals producing initiators, peroxides. Store in a dark, well ventilated and cool place in tightly closed containers in order to avoid uncontrollable polymerization or hardening. No smoking. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

8. Exposure Controls/Personal Protection

Exposure Limits
occupational exposure limit

Contains no substances with values.

Technical measures/precautions:
practicable,

Provide adequate ventilation. Where reasonably this should be achieved by the use of local exhaust ventilation and good general extraction.

Protective Measures:

- Respiratory Protection:
- Hand Protection:

No particular measures.
Wear appropriate protective gloves. Protect grease can protect unexposed skin in advance, but invalid to exposed skin. As the products are chemicals mixture. The durability of the gloves

material can't be calculated in advance. So the gloves should be test before use. Please clean immediately after contact with skin.

- Eye Protection:
protect against splash of

Use safety eyewear designed to

liquids. Avoid contact lenses.

- Skin and Body Protection:

Wear appropriate work clothing.

9. Physical and Chemical Properties

Form:	Liquid/viscous
Color:	Typical
Odor:	Typical
Melting point/range:	Not applicable
Boiling point:	Not applicable
Relative density:	Not applicable
Flash point:	>100°C
Flammability:	Not applicable
Self-ignition temperature:	Not applicable
Oxidizing properties:	Not applicable
Water solubility:	immiscible
Vapor pressure:	< 110 K Pa at 50 °C
Partition coefficient:	Not applicable
Viscosity, kinematic:	>= 7 mm ² /s at 40 °C

10. Stability and Reactivity

Stability:
and handling

Stable under recommended storage conditions (see section 7).

Conditions to avoid:
which are unstable

This preparation contains materials

under the following conditions:

Exposure to temperatures higher than 40°C; - To strong UV sources; – Prolonged exposure to light. These could cause the product to polymerise exothermically.

Materials to avoid:
exposure to light.

Heat; strong UV sources; prolonged

11. Toxicological Information

There are no data available on the preparation itself. The components of the preparation present some known toxicological risks:

Acute toxic:	This information is not available.
Skin corrosion/irritation:	May result in irritation symptoms such as redness, blistering, dermatitis, etc.
Serious eye damage/eye irritation: irritation.	The liquid splashed in the eyes may cause
Respiratory or skin sensitization:	May cause allergic skin reactions.
Germ cell mutagenicity assessment:	Contains no ingredient listed as a mutagen.
Carcinogenicity assessment: carcinogen.	Contains no ingredient listed as a
Reproductive toxicity assessment:	Contains no ingredient listed as toxic to reproductive no data available.
STOT-Single exposure:	No data available.

STOT-repeated exposure:	No data available.
Aspiration toxicity: allergic reaction.	May cause respiratory irritation and cause
Further information:	Acrylic components of the preparation have irritating properties. Prolonged or repeated contacts with the skin or mucous membranes may result in irritation symptoms such as redness, blistering, dermatitis, etc. Cases of allergic skin reactions have been observed.

The inhalation of aerial droplets or aerosols may cause irritation of the respiratory tracts.

12. Ecological Information

There are no data available on the preparation itself.
Do not empty into drains or watercourses.
Waste and emptied containers must be disposed in accordance with local regulations.

13. Disposal Considerations

Waste from residue/unused incineration or products: disposal in compliance with local	Residual chemical should be disposed by other modes of
	legislation.
Contaminated packaging: disposed of as	Contaminated, empty containers must be
	chemical waste. Clean packaging material should be subjected to waste management schemes (recovery recycling, reuse) according to local legislation.

14. Transport Information

Special precautions with respect to transport:	Not applicable.
Transport Railway and Road:	Not restricted.
Transport Air:	Not restricted.
Transport Sea:	Not restricted.
Storage and Transport	Store in cool place and out of direct sunlight. Store away from sources of heat or ignition. Store away from oxidizing agents. Ensure containers are in good condition and properly sealed.

15. Regulatory Information

National regulatory information

International Chemical Weapons Convention (CWC) Schedules of Toxic Chemicals and Precursors : Neither banned nor restricted

REACH – Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) : Neither banned nor restricted

Candidate List of Substances of Very High Concern for Authorisation : This product does not contain substances of very high concern.

16. Other Information

Further information:

This data sheet was prepared in accordance with Regulation (EC) No. 1907/2006.

For the full text of the R phrases mentioned in Section 3:

Xi

Irritant.

Xn

Harmful.

N

Dangerous for the

environment

R22

Harmful if swallowed.

R36/38

Irritating to eyes and skin.

R36/37/38

Irritating to eyes, respiratory system

and skin.

R41

Risk of serious damage to

the eyes.

R43

May cause sensitization by

skin contact.

R48

Danger of serious damage to health by prolonged exposure.

R50/53

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R51/53

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Edition description:

This product should be stored, handled and used in accordance with good industrial hygiene practices and in conformity with any legal regulations. The information contained herein is based on the present state of our knowledge and is intended to describe our products from the point of view of safety requirements. It should therefore not be construed as guaranteeing specific properties.