



Safety Data Sheet

Phrozen Protowhite Rigid

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Version: 2.0

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(30790200/SDS_GEN_US/EN)

1. Identification

Product identifier used on the label

Phrozen Protowhite Rigid

Recommended use of the chemical and restriction on use

Recommended use*: Stereolithography; Monomer in ultraviolet ink jet application; In an enclosed system

Unsuitable for use: Application that generates aerosol, mist, or vapor

* The "Recommended use" identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Details of the supplier of the safety data sheet

Company:

PHROZEN TECH CO., LTD
3F., No. 287, Niupu Rd, Xiangshan Dist.,
Hsinchu City 30091, Taiwan, R.O.C

Telephone: +886 3540-0076

Emergency telephone number

24 Hour Emergency Response Information

CHEMTREC: 1-800-424-9300
BASF HOTLINE: 1-800-832-HELP (4357)

Other means of identification

Chemical family: Blend based on: acrylic resin, additives

2. Hazards Identification

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Classification of the product

Acute Tox.	4 (oral)	Acute toxicity
Skin Corr./Irrit.	2	Skin corrosion/irritation
Eye Dam./Irrit.	1	Serious eye damage/eye irritation
Skin Sens.	1	Skin sensitization
STOT RE	2	Specific target organ toxicity — repeated exposure

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Aquatic Acute	2	Hazardous to the aquatic environment - acute
Aquatic Chronic	3	Hazardous to the aquatic environment - chronic
Repr.	2 (fertility)	Reproductive toxicity
Repr.	2 (unborn child)	Reproductive toxicity

Label elements

Pictogram:



Signal Word:

Danger

Hazard Statement:

H318	Causes serious eye damage.
H315	Causes skin irritation.
H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H373	May cause damage to organs through prolonged or repeated exposure.
H361	Suspected of damaging fertility. Suspected of damaging the unborn child.
H412	Harmful to aquatic life with long lasting effects.
H401	Toxic to aquatic life.

Precautionary Statements (Prevention):

P280	Wear protective gloves, protective clothing and eye protection or face protection.
P260	Do not breathe dust/gas/mist/vapours.
P273	Avoid release to the environment.
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P272	Contaminated work clothing should not be allowed out of the workplace.
P270	Do not eat, drink or smoke when using this product.
P264	Wash contaminated body parts thoroughly after handling.

Precautionary Statements (Response):

P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or physician.
P308 + P313	IF exposed or concerned: Get medical attention.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P330	Rinse mouth
P362 + P364	Take off contaminated clothing and wash it before reuse.

Precautionary Statements (Storage):

P405	Store locked up.
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Precautionary Statements (Disposal):

P501	Dispose of contents/container in accordance with local regulations.
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Hazards not otherwise classified

No applicable information available.

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Labeling of special preparations (GHS):

The following percentage of the mixture consists of components(s) with unknown hazards regarding the acute toxicity: 0 - 1 %

3. Composition / Information on Ingredients

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Proprietary acrylate

CAS Number: Trade Secret

Content (W/W): ≥ 0.0 - $< 3.0\%$

Synonym: No data available.

diphenyl(2,4,6,-trimethylbenzoyl)phosphine oxide

CAS Number: 75980-60-8

Content (W/W): ≥ 0.3 - $< 3.0\%$

Synonym: Diphenyl(2,4,6-trimethylbenzoyl)phosphineoxide

Phenyl acrylate

CAS Number: Trade Secret

Content (W/W): ≥ 1.0 - $< 5.0\%$

Synonym: No data available.

2-Propen-1-one, 1-(4-morpholinyl)-

CAS Number: 5117-12-4

Content (W/W): ≥ 50.0 - $< 75.0\%$

Synonym: No data available.

Acrylate derivative

CAS Number: Trade Secret

Content (W/W): ≥ 3.0 - $< 5.0\%$

Synonym: No data available.

Urethane-acrylate oligomer

CAS Number: Trade Secret

Content (W/W): ≥ 25.0 - $< 50.0\%$

Synonym: No data available.

4. First-Aid Measures

Description of first aid measures

General advice:

Remove contaminated clothing.

If inhaled:

Keep patient calm, remove to fresh air, seek medical attention. Immediately administer a corticosteroid from a controlled/metered dose inhaler.

If on skin:

Immediately wash thoroughly with plenty of water, apply sterile dressings, consult a skin specialist.

If in eyes:

Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

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If swallowed:

Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms: The most important known symptoms and effects are described in section 2 and/or in section 11., (Further) symptoms and / or effects are not known so far

Information on: Phenyl acrylate

Symptoms: Overexposure may cause:, Eye irritation, skin irritation, erythema, nausea, headache, vomiting, dizziness, diarrhea, abdominal cramps

Indication of any immediate medical attention and special treatment needed

Note to physician

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:
water spray, dry powder, foam

Unsuitable extinguishing media for safety reasons:
water jet

Special hazards arising from the substance or mixture

Hazards during fire-fighting:

harmful vapours, carbon oxides, nitrogen oxides

Evolution of fumes/fog. The substances/groups of substances mentioned can be released in case of fire.

Advice for fire-fighters

Protective equipment for fire-fighting:

Wear self-contained breathing apparatus and chemical-protective clothing.

Further information:

If exposed to fire, keep containers cool by spraying with water. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Do not breathe vapour/spray. Ensure adequate ventilation. Avoid contact with the skin, eyes and clothing. Use personal protective clothing. Information regarding personal protective measures, see section 8.

Keep people away and stay on the upwind side.

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Environmental precautions

Do not discharge into drains/surface waters/groundwater. Contain contaminated water/firefighting water.

Methods and material for containment and cleaning up

For large amounts: Dike spillage. Pump off product.
For residues: Pick up with inert absorbent material (e.g. sand, earth etc.).
Dispose of absorbed material in accordance with regulations.

7. Handling and Storage

Precautions for safe handling

Avoid inhalation of mists/vapours. Avoid contact with the skin, eyes and clothing. Wear suitable protective clothing and gloves. Provide good ventilation of working area (local exhaust ventilation if necessary).

Protection against fire and explosion:

Heated containers should be cooled to prevent polymerization. Take precautionary measures against static discharges.

Conditions for safe storage, including any incompatibilities

Segregate from foods and animal feeds.

Further information on storage conditions: Protect against heat. Protect from the effects of light. The stabilizer is only effective in the presence of oxygen. Ensure adequate inhibitor and dissolved oxygen level.

Protect from temperatures below: 0 °C

Changes in the properties of the product may occur if substance/product is stored below indicated temperature for extended periods of time.

Protect from temperatures above: 40 °C

Changes in the properties of the product may occur if substance/product is stored above indicated temperature for extended periods of time.

8. Exposure Controls/Personal Protection

No substance specific occupational exposure limits known.

Advice on system design:

Provide local exhaust ventilation to control vapours/mists.

Personal protective equipment

Respiratory protection:

Wear a NIOSH-certified (or equivalent) organic vapour/particulate respirator. A NIOSH-certified respirator with an APF of at least 50 is required. Observe OSHA regulations for respirator use (29 CFR 1910.134).

Hand protection:

Wear chemical resistant protective gloves., Polyethylene-Laminate (PE laminate) - ca. 0.1 mm coating thickness, chloroprene rubber (CR) - 0.5 mm coating thickness, nitrile rubber (NBR) - 0.4 mm coating thickness, Manufacturer's directions for use should be observed because of great diversity of types.

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Eye protection:

Tightly fitting safety goggles (chemical goggles) and face shield.

Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust), Impermeable protective clothing

General safety and hygiene measures:

Store work clothing separately. Hands and/or face should be washed before breaks and at the end of the shift.

9. Physical and Chemical Properties

Form:	soft resin-like, pourable
Odour:	acrylic-like
Odour threshold:	Not determined due to potential health hazard by inhalation.
Colour:	white
pH value:	6 - 8 (20 °C)
Freezing point:	not determined
Boiling point:	> 100 °C
Flash point:	> 100 °C
Flammability:	not highly flammable
Lower explosion limit:	For liquids not relevant for classification and labelling. The lower explosion point may be 5 - 15 °C below the flash point.
Upper explosion limit:	For liquids not relevant for classification and labelling.
Autoignition:	not determined
Vapour pressure:	not determined
Density:	1.0 g/cm ³ (20 °C)
Vapour density:	not determined
Partitioning coefficient n-octanol/water (log Pow):	not applicable for mixtures
Self-ignition temperature:	not self-igniting
Thermal decomposition:	approx. 173.5 °C, 410 kJ/kg (DSC (OECD 113))
Solubility in water:	sparingly soluble
Solubility (qualitative):	soluble solvent(s): organic solvents,
Evaporation rate:	not determined

10. Stability and Reactivity

Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

Corrosion to metals:

Corrosive effects to metal are not anticipated.

Oxidizing properties:

not fire-propagating

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Chemical stability

The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions

The product is stabilized against spontaneous polymerization prior to despatch.
The product can polymerize if the shelf life or storage temperature are greatly exceeded. Heat develops during polymerization. Reacts with peroxides and other radical components.

Conditions to avoid

Avoid heat. Avoid UV-light and other radiation with high energy. Avoid direct sunlight. Avoid prolonged storage. Avoid inhibitor loss.

Incompatible materials

free radical initiators

Hazardous decomposition products

Decomposition products:

Hazardous decomposition products: No hazardous decomposition products if stored and handled as prescribed/indicated.

Thermal decomposition:

approx. 173.5 °C (DSC (OECD 113))

11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity

Assessment of acute toxicity: Of moderate toxicity after single ingestion. Virtually nontoxic after a single skin contact. Virtually nontoxic by inhalation. The product has not been tested. The statement has been derived from the properties of the individual components.

Oral

Type of value: ATE
Value: 1,110 mg/kg

Inhalation

Type of value: ATE
Value: > 20 mg/l
Determined for vapor

Type of value: ATE
Value: > 5 mg/l
Determined for mist

Dermal

Type of value: ATE
Value: > 5,000 mg/kg

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Assessment other acute effects

Based on available data, the classification criteria are not met.

Irritation / corrosion

Assessment of irritating effects: Causes serious eye damage. Irritating to skin.

Sensitization

Assessment of sensitization: Sensitization after skin contact possible.

Aspiration Hazard

No aspiration hazard expected.

Chronic Toxicity/Effects

Repeated dose toxicity

Assessment of repeated dose toxicity: Repeated oral exposure may affect certain organs.

Genetic toxicity

Assessment of mutagenicity: Based on available data, the classification criteria are not met.

Carcinogenicity

Assessment of carcinogenicity: The whole of the information assessable provides no indication of a carcinogenic effect.

Reproductive toxicity

Assessment of reproduction toxicity: May impair fertility. The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: diphenyl(2,4,6,-trimethylbenzoyl)phosphine oxide

Assessment of reproduction toxicity: The results of animal studies suggest a fertility impairing effect.

Teratogenicity

Assessment of teratogenicity: May cause harm to the unborn child. The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: diphenyl(2,4,6,-trimethylbenzoyl)phosphine oxide

Assessment of teratogenicity: At high doses there are indications of a developmental effect.

Other Information

The product has been assessed on the basis of the components' available data. To some extent data gaps exist for individual components. According to our present knowledge and experience dangers which are not covered by the current labeling are not to be expected.

12. Ecological Information

Toxicity

Aquatic toxicity

Assessment of aquatic toxicity:

Acutely toxic for aquatic organisms. May cause long-term adverse effects in the aquatic environment. The product has not been tested. The statement has been derived from the properties of the individual components.

Persistence and degradability

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Assessment biodegradation and elimination (H2O)

Not readily biodegradable (by OECD criteria).

Bioaccumulative potential

Assessment bioaccumulation potential

The product has not been tested.

Mobility in soil

Assessment transport between environmental compartments

No data available.

Additional information

Add. remarks environm. fate & pathway:

Treatment in biological waste water treatment plants has to be performed according to local and administrative regulations.

Other ecotoxicological advice:

The product has been assessed on the basis of the components' available data. To some extent data gaps exist for individual components. According to our present knowledge and experience dangers which are not covered by the current labeling are not to be expected. Do not discharge product into the environment without control.

13. Disposal considerations

Waste disposal of substance:

Dispose of in accordance with national, state and local regulations. Do not discharge into drains/surface waters/groundwater.

Container disposal:

Recommend crushing, puncturing or other means to prevent unauthorized use of used containers. Dispose of in accordance with national, state and local regulations.

14. Transport Information

Land transport

USDOT

Not classified as a dangerous good under transport regulations

Sea transport

IMDG

Not classified as a dangerous good under transport regulations

Air transport

IATA/ICAO

Not classified as a dangerous good under transport regulations

Further information

For non-insulated packaging up to a size of 200 Liter the current Dangerous Goods classification is confirmed, and no temperature-controlled transport is necessary.

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15. Regulatory Information

Federal Regulations

Registration status:

Chemical TSCA, US released; restriction on use / listed

TSCA §5. Based on EPA's assessment that includes analogue data, a substance in this product has the potential to cause:

Carcinogenicity;

Genetic toxicity;

Specific target organ toxicity.

Hazard(s) not classifiable under GHS criteria.

This product contains a substance (CASRN 5117-12-4) which may cause internal organ and reproductive effects.

When using this product, use skin protection.

TSCA § 5(a) final Significant New Use Restriction (SNUR)

40 CFR 721.5185

EPCRA 311/312 (Hazard categories): Refer to SDS section 2 for GHS hazard classes applicable for this product.

Safe Drinking Water & Toxic Enforcement Act, CA Prop. 65:

WARNING: This product can expose you to chemicals including TITANIUM DIOXIDE (AIRBORNE, UNBOUND PARTICLES OF RESPIRABLE SIZE), which is known to the State of California to cause cancer, and TOLUENE, which is known to the State of California to cause birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.

NFPA Hazard codes:

Health: 3 Fire: 1 Reactivity: 0 Special:

16. Other Information

SDS Prepared by:

BASF NA Product Regulations

SDS Prepared on: 2021/11/05

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