



## Material Safety Data Sheet Phrozen Aqua Gray

Product Name	Phrozen Aqua Gray
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. +8865400076#14 3F., No. 287, Niupu Rd., HSIN CHU CITY 30091, Taiwan sales@phrozen3d.com
Emergency Phone	+886916781577 Local police number



Irritant

Substance Name	% by weight	CAS No / EC No./ EC Index
(1-methyl-1,2-ethanediyl)bis([oxy(methyl-2,1-ethanediyl)] diacrylate	15~20%	42978-66-5 / 256-032-2 / 607-249-00-X
Hexamethylene diacrylate	20~30%	13048-33-4 / 235-921-9 / 607-109-00-8
Acrylate Oligomers	30~50%	55818-57-0/
Titanium dioxide/Pigment	0.1~2%	13463-67-7/
Phenyl bis(2,4,6-trimethyl benzoyl)phosphine oxide	1~4%	162881-26-7 / - / -
Additive	0~2%	-

For full text of the R-Phrase(s) mentioned in this section, Please refer to Section 16.

### 2. HAZARDS IDENTIFICATION

**Most important hazards** Harmful if swallowed.  
Irritating to eyes, respiratory system and skin.  
May cause sensitization by skin contact.

### 3.FIRST AID MEASURES

<b>Inhalation</b>	Keep at rest. Move to fresh air. Consult a physician.
<b>Skin contact</b>	Take off contaminated clothing and shoes immediately. Rinse immediately with plenty of water and seek medical advice
<b>Eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Consult a physician.
<b>Ingestion</b>	Do not induce vomiting. Keep at rest. Consult a physician.

### 4.FIRE-FIGHTING MEASURES

<b>Suitable extinguishing media :</b>	Use dry chemical, carbon dioxide, water spray or alcohol resistant foam.
<b>Extinguishing media which must not be used for safety reason</b>	High volume water jet
<b>Specific hazards</b>	Prevent product from entering drains. Possible decomposition products are: COx, NOx
<b>Special protective equipment for firefighters</b>	Wear self-contained breathing apparatus and protective suit.

### 5.ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions</b>	See also Section 8. Ensure adequate ventilation. Wear personal protective equipment. Remove all sources of ignition. Avoid contact with skin and eyes. Do not breathe vapors or spray mist.
<b>Methods for cleaning up</b>	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Shovel into suitable container for disposal. After cleaning, flush away traces with water.

### 6.HANDLING AND STORAGE

<b>Storage</b>	Keep tightly closed in a dry, cool and well-ventilated place. (@25°C) Keep away from oxidizing agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions. Keep away from sources of ignition - No smoking.
<b>Handling</b>	Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing. Do not breathe vapors or spray mist. Use only in well-ventilated areas. No information available

**Specific use(s)**

### 7.EXPOSURE CONTROLS/PERSONAL PROTECTION

<b>Personal protective equipment</b>	
<b>Respiratory protection</b>	In case of insufficient ventilation, wear suitable respiratory equipment. (filter type A)
<b>Hand protection</b>	Protective gloves (EN 374) Nitrile rubber
<b>Eye protection</b>	Goggles (EN 166)
<b>Hygiene measures</b>	Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice.

### 8.PHYSICAL AND CHEMICAL PROPERTIES

<b>General information</b>	
<b>Appearance</b>	Liquid
<b>Color</b>	Refer to product label
<b>odour</b>	Characteristic
<b>Important health, safety and environmental information</b>	

<b>pH</b>	Not applicable
<b>Boiling point/boiling range</b>	> 110 °C
<b>Melting point/melting range</b>	No data available
<b>Flash point</b>	> 110 °C
<b>Evaporation rate</b>	< 1
<b>Vapour density</b>	> 1
<b>Autoignition temperature</b>	No data available
<b>Oxidising properties</b>	Not applicable
<b>Vapour pressure</b>	No data available
<b>Relative density</b>	1.11
<b>Water solubility</b>	Insoluble
<b>Explosion limits</b>	No data available
<b>Viscosity</b>	80~100 cp (@25°C)
<b>Partition coefficient (n-octanol/water)</b>	No data available

## 9.STABILITY AND REACTIVITY

<b>Stability</b>	Stable at normal conditions
<b>Conditions to avoid</b>	Keep away from heat ,sources of ignition
<b>Materials to avoid</b>	Incompatible with strong acids and oxidising agents
<b>Hazardous decomposition products</b>	COx, VOC

## 10.TOXICOLOGICAL INFORMATION

<b>Acute toxicity</b>	Acrylate Monomers: > 5000 mg/kg Photoinitiators: > 2000 mg/kg
<b>Inhalation</b>	Irritating to respiratory system.
<b>Skin contact</b>	May cause sensitisation by skin contact. Repeated contact may cause allergic reactions in very susceptible persons. Irritating to skin.
<b>Eye contact</b>	Irritating to eyes.
<b>Ingestion</b>	Harmful if swallowed.
<b>Chronic toxicity</b>	May cause sensitisation by skin contact.

## 11.ECOLOGICAL INFORMATION

<b>Bioaccumulation</b>	No data is available on the product itself.
<b>Ecotoxicity effects</b>	(1-methyl-1,2-ethanediyl)bis([oxy(methyl-2,1-ethanediyl)] diacrylate : LC50/96h/fish : 4,5mg/l - 10mg/l (Leuciscus idus) (1-methyl-1,2-ethanediyl)bis([oxy(methyl-2,1-ethanediyl)] diacrylate : EC50/48h/ daphnia : 88,7mg/l (Daphnia magna) (1-methyl-1,2-ethanediyl)bis([oxy(methyl-2,1-ethanediyl)] diacrylate : EC50/72h/ algae : >28mg/l (Scenedesmus subspicatus)
<b>Ecotoxicity effects</b>	Photoinitiators: LC50/96h >0.09-1mg/l Photoinitiators: EC50/48h/Daphnia >1.175-10mg/l Photoinitiators: IC50/72h/Algae >0.26-1mg/l
<b>Mobility</b>	Insoluble
<b>Persistence and degradability</b>	No data is available on the product itself.

## 12.DISPOSAL CONSIDERATION

**Waste from residues** Dispose of in accordance with local regulations

## 13.TRANSPORT INFORMATION

**Class**

**ADR/RID**

**UN-No**

**Proper shipping name**

**Class**

**Packing group**

**IMDG**

Not applicable

Not applicable

Not applicable

Not applicable

<b>UN-No</b>	Not applicable
<b>Class</b>	Not applicable
<b>Packing group</b>	Not applicable
<b>Proper shipping name</b>	Not applicable

**ICAO/IATA****It is not subject to current regulations for transportation of hazardous goods. (IMDG)**

<b>UN-No</b>	Not applicable
<b>Class</b>	Not applicable
<b>Packing group</b>	Not applicable
<b>Proper shipping name</b>	Not applicable

**14.REGULATORY INFORMATION**

**Labeling** The preparation is classified as dangerous in accordance with Directive 1999/45/EC.

**Symbol(s)** Xi-Irritant

**R-phrases(s)** -R22- Harmful if swallowed.

R36/38 – Irritating to eyes and skin.

R36/37/38 – Irritating to eyes, respiratory system and skin.

R43-May cause sensitization by skin contact.

S37- Wear suitable gloves.

**S-phrases(s)**

**15.OTHER INFORMATION**

**Text of R phrases mentioned in Section 2**

R22– Harmful if swallowed.

R36/38 – Irritating to eyes and skin.

R37/38 – Irritating to eyes, respiratory system and skin.

R43 – May cause sensitization by skin contact.

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**Sources of key data used to compile the data sheet**

Contents and format of this MSDS are in accordance with EEC Commission Directive 2001/58/EC, 1999/45/EC, 67/548/EC.

**DISCLAIMER OF LIABILITY**

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