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## SECTION 1 : IDENTIFICATION

1.1	Product identifier			
	Product name	Ceramic pro, White		
	Recommended use and	restrictions on use		
	Recommended use	For use in Phrozen 3D-printers		
	Restrictions on use	Do not use in the situation that easily generate aerosol, steam.		
1.2	Name, address and phone of manufacturer , importers or supplier			
	Manufacturer	Phrozen Tech Co., Ltd.287 Niupu Rd, Xiangshan Dist,		
		Hsinchu City 30091, TAIWAN( R.O.C )		
	Phone	+886-3621-0505		
12	Frankrigeney, phone / Fox	1006 2621 DEDE / 1006 2520 6501		

**1.3 Emergency phone / Fax** +886-3621-0505 / +886-3539-6591

## SECTION 2 : HAZARD IDENTIFICATION

### 2.1 Hazard classification

Acute toxicity: oral Category 5 , Skin corrosion/irritation Category 2 , Serious eye damage/eye irritation Category 1 , Skin sensitization Category 1, STOT RE 2 (oral)

Hazardous to the aquatic environment, chronic toxicity (long-term) Category 3

### 2.2 Signal statement

Corrosion, Exclamation mark, Health hazard



### 2.3 Pictograms

2.4 Signal word Danger

## 2.5 Hazard statements

Causes skin irritation

May cause an allergic skin reaction

Causes serious eye irritation

May cause damage to organs through prolonged or repeated oral exposure.

Harmful to aquatic life with long lasting effects.



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### 2.6 Precautionary statements

If medical advice is needed, have product container or label at hand. Keep out of reach of children.

Obtain special instructions before use.

Do not breathe dust/fume/gas/mist/vapours/spray.

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

IF IN EYES: Rinse cautiously with water for several minutes.

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

Immediately call a POISON CENTER/doctor.

Store locked up.

Dispose of contents/container to hazardous or special waste collection point.

### 2.7 Other hazard

None

## SECTION 3 : COMPOSITION / INFORMATION ON INGREDIENTS

Components	CAS number	Weight %	Classification acc. to GHS
Silicon dioxide	7631-86-9	50- 55%	-
Oxybis(methyl-2,1-ethanediyl) diacrylate	57472-68-1	10 - 15 %	Skin Corr./Irrit. 2 / H318 Eye Dam./Irrit. 1 / H315 Skin Sens. 1/ H317
(2,4,6-Trioxo-1,3,5-triazine-1,3,5(2 H,4H,6H)-triyl)tri-2,1-ethanediyl tri acrylate	40220-08-4	10 - 15%	Skin Sens. 1/ H317 Skin Corr./Irrit. 2 / H318 Aquatic Chronic 2 / H411
Additives1	Trade Secret	7 – 10%	Acute Tox. 4 (oral) / H302 Eye Dam./Irrit. 1 / H315 Skin Sens. 1 / H317 STOT RE 2 / H373
Additives2	Trade Secret	3 – 5%	Skin Corr./Irrit. 2 / H319 Eye Dam./Irrit. 2 / H315 STOT SE 3 / H335 Aquatic Chronic 3 / H412



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Additives3	Trade Secret	0.3 - 1%	Skin Sens. 1 / H317, Aquatic Chronic 4 / H413

## SECTION 4 : FIRST AID MEASURES

#### 4.1 First-aid advice and recommendations for different routes of exposure

#### 4.1.1. Inhalation

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

#### 4.1.2. Skin Contact

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

#### 4.1.3. Eyes Contact

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

#### 4.1.4. Ingestion

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

### 4.2 Most important symptoms and hazardous effecects

None

### 4.3 Protection of First-aid personnel

None

4.4 Note for physician

None

## SECTION 5 : FIRE-FIGHTING MEASURES

- 5.1 Applicable extinguishing media Water spray, BC-powder, Carbon dioxide (CO<sub>2</sub>)
- 5.2 Specific hazards confronted during fire fighting Nitrogen oxides (NOx), Carbon monoxide (CO)
- 5.3 Specific fire-fighting procedure None



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### 5.4 Specific protecttive equipments for fire-fighters

In case of fire and/or explosion do not breathe fumes. Co-ordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately.

Fight fire with normal precautions from a reasonable distance.

### SECTION 6 : ACCIDENTAL RELEASE MEASURES

#### 6.1. Personal precations

Wear breathing apparatus if exposed to vapours/dust/spray/gases.

#### 6.2. Environmental precations

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

#### 6.3. Cleaning methods

Wipe up with absorbent material (e.g. cloth, fleece). Collect spillage: sawdust, kieselgur(dia tomite), sand, universal binder. Covering of drains.

Place in appropriate containers for disposal. Ventilate affected area.

### SECTION 7: SAFETY HANDLING AND STORAGE

#### 7.1. Handling

Use local and general ventilation. Use only in well-ventilated areas.

Do not eat, drink and smoke in work areas.

Remove contaminated clothing and protective equipment before entering eating areas. Wash hands after use.

Never keep food or drink in the vicinity of chemicals.

Never place chemicals in containers that are normally used for food or drink.

#### 7.2. Storage

Storage at the area of cool,dry. Keep away from heat ,direct sunlight, rainy and rapid temperature . Storage temperature between 15°C/ 59°C to 35°C / 95°F. Close the lid tightly when not in use.



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## SECTION 8 : EXPOSURE CONTROLS / PERSONAL PROTECTION

#### 8.1. Engineering controls

Provide adequate ventilation to the areas where the product is stored and/or handled.

#### 8.2. Control Parameters

Components	TWA	STEL	CEILING	BEI s
Silicon dioxide	10mg / m <sup>3</sup>	15mg /m <sup>3</sup>	-	-

### 8.3. Personal protective equipment

#### 8.3.1 Respiratory protection

Suitable respiratory protection for higher concentrations or long-term effect : Gas filter for gases/vapours of organic compounds (boiling point >65 °C, e. g. EN 1 4387 Type A)

#### 8.3.2 Hand protection

Chemical protection gloves are suitable, which are tested according to EN 374. For example : NBR: acrylonitrile-butadiene rubber / butyl rubber (butyl) Material thickness :  $\geq 0.4$ mm /  $\geq 0.7$  mm

#### 8.3.3 Eye protection

Use safety goggles. (splash goggles) (e.g. EN 166)

### 8.3.4 Skin 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).

#### 8.4. Hygiene measures

Do not eat, drink and smoke in work areas.

Wash thoroughly after handling.

Keep clean of operation area.

Take off polluted clothing as soon as possible after work. The clothing can be re-wear only after washed in clean or discard.

### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Apperance and color	Whitish viscous liquid	Odor	Typical acrylate	
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Odor threshold	N/A	Melting point	N/A
pH value	6 - 8	Boiling point	>100 °C
Flammable	N/A	Flash point	>100 °C
Decomposition Temp	N/A	Testing method	Close up
Natural Temp	N/A	Explosive limit	N/A
Vapor pressure	N/A	Vapor density	N/A
Density	1.645 g /cm³ at 20 °C	Solubility	N/A
Octanol/water distrib ution coefficient (log Kow)	N/A	Evaporaion rate	N/A

### SECTION 10: STABILITY AND REACTIVITY

#### 10.1. Stability

Stable under normal condition.

#### 10.2. Possible hazardous reation under specific conditions

None

### 10.3. Must avoid condition

UV-radiation/sunlight.

### **10.4. Must avoid substances** Free radical initiators

### 10.5. Hazardous decomposted product

None

### SECTION 11: TOXICOLOGICAL INFORMATION

Information on toxicological effects

Test data are not available for the complete mixture.



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## 11.1. Exposure paths

None

#### 11.2. Symptoms

None

#### 11.3. Acute toxicity

Components	route	Species	End point	Value
4-Acryloylmorpholine	Oral	Rat	LD50	588 mg/kg
	Dermal	Rat	LD50	> 2,000 mg/kg

#### 11.4. Chronic toxicity

None

### 11.5. Reproductive and/or Developmental Effects

None

## SECTION 12: ECOLOGICAL INFORMATION

The product has not been tested. The statement has been derived from the properties of the individual components.

### 12.1. Ecological toxicity

Aquatic toxicity (acute) of components of the mixture					
Components	End point	Value	Species	Exposure time	
Oxybis(methyl-2,1-et	LC50	4.64 mg/l	fish	96 h	
hanediyl) diacrylate	EC50	22.3 mg/l	aquatic invertebrates	48 h	
Aqua	Aquatic toxicity (chronic) of components of the mixture				
Components	End point	Value	Species	Exposure time	
Oxybis(methyl-2,1-et	EC50	>1,000 mg/l	microorganisms	30 min	
hanediyl) diacrylate					

### 12.2. Per sistence and degradability

Degradability of components of the mixture				
Components	Process	Degradation rate	Time	Source
Oxybis(methyl-2,1 -ethanediyl)	DOC removal	90–100 %	28d	OECD
diacrylate				



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### 12.3. Bio-accumulative potential

Components	BCF	Log kow	BOD/COD
Oxybis(methyl-2,1		0.01 – 0.39 (pH value: 7, 24 °C)	
-ethanediyl)			
diacrylate			

#### 12.4. Mobility in soil

None

#### 12.5. Other adverse effects

None

### SECTION 13: DISPOSAL CONSIDERATIONS

#### 13.1. Waste disposal methods

Waste shall be separated into the categories that can be handled separately by the local o r national waste management facilities.

#### 13.2. Sewage disposal method

Do not empty into drains. Avoid release to the environment.

#### 13.3. Contaminated Packaging disposal method

Handle contaminated packages in the same way as the substance itself.

### SECTION 14: TRANSPORT INFORMATION

Land transport USDOT	Not classified as dangerous goods under transport regulations.
Sea transport IMDG	Not classified as dangerous goods under transport regulations.
Air transport IATA/ICAO	Not classified as dangerous goods under transport regulations.
Further information	N/A



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Other requirements	N/A

### SECTION 15: REGULATORY INFORMATION

- **15.1. List of substances subject to authorisation (REACH, Annex XIV) / SVHC- candidate list** None of the ingredients are listed
- 15.2. Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

None of the ingredients are listed

**15.3.** Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

None of the ingredients are listed

### 15.4. Regulation on persistent organic pollutants (POP)

None of the ingredients are listed.

### 15.5. National inventories

Country	Inventory	Status
AU	AU AICS	all ingredients are listed
CA	DSL	all ingredients are listed
СА	NDSL	all ingredients are listed
CN	IECSC	all ingredients are listed
EU	ECSI	all ingredients are listed
EU	REACH Reg.	all ingredients are listed
JP	CSCL-ENCS	not all ingredients are listed
JP	ISHA-ENCS	not all ingredients are listed
NZ	NZIOC	all ingredients are listed
TR	CICR	all ingredients are listed
TW	TCSI	all ingredients are listed
US	TSCA	all ingredients are listed

#### Legend

AIIC	Australian Inventory of Industrial Chemicals
DSL	Domestic Substances List (DSL)
IECSC	Inventory of Existing Chemical Substances Produced or Imported in China



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EU	EC Substance Inventory (EINECS, ELINCS, NLP)
EU	REACH registered substances
CSCL-ENCS	List of Existing and New Chemical Substances (CSCL-ENCS)
ISHA-ENCS	Inventory of Existing and New Chemical Substances (ISHA-ENCS)
NZIoC	New Zealand Inventory of Chemicals
CICR	Chemical Inventory and Control Regulation
TCSI	Taiwan Chemical Substance Inventory
TSCA	Toxic Substance Control Act

## **SECTION 16: OTHER INFORMATION**

Reference	US OSHA HCS 29 CFR 1910.1200/ ECHA / OECD	
Table formulation	Name : Phrozen Tech. Co. Ltd	
unit	Address / Phone : 287 Niupu Rd, Xiangshan Dist, Hsinchu City 30091,	
	TAIWAN( R.O.C ) /+ 886-3-6210505	
Table formulator	Job title : Occupational Safety & Health manager	
	Name : Chun-Yao, Kuo	
Table formulation	2024.11.15	
Date		
Remarks	In the above described information, the symbol "N/A" means no	
	relevant information currently.	

To the best of our knowledge the information contained herein is accurate. However, Phrozen Tech. Co. Ltd. makes no warranty, expressed or implied, regarding the accuracy of these results to be obtained from the use thereof. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist. Phrozen Tech. Co. Ltd. assumes no responsibility for injury from the use of the product described herein.

# **END OF SAFETY DATASHEET**