

**SAFETY DATA SHEET****Consumer Series Resin - Aqua Resin: Mist Gray***Page 1 of 11***SECTION 1 : IDENTIFICATION****1.1 Product identifier**

**Product name** Consumer Series Resin - Aqua Resin: Mist Gray

**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

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

**SECTION 2 : HAZARD IDENTIFICATION****2.1 Hazard classification**

Skin corrosion/irritation Category 2 , Serious eye damage/eye irritation Category 2A ,

Skin sensitization Category 1 ,

Hazardous to the aquatic environment, long-term (Chronic) Category 2

**2.2 Signal statement**

Exclamation mark, Health hazard, Environment

**2.3 Pictograms**

**2.4 Signal word** Warning

**2.5 Hazard statements**

Causes skin irritation

Causes serious eye irritation

May cause an allergic skin reaction

Toxic to aquatic life with long lasting effects

**2.6 Precautionary statements**

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

## SAFETY DATA SHEET

### Consumer Series Resin - Aqua Resin: Mist Gray

Page 2 of 11

Wash hand and face thoroughly after handling.

Use only outdoors or in a well-ventilated area.

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

#### 2.7 Other hazard

None

### SECTION 3 : COMPOSITION / INFORMATION ON INGREDIENTS

| Components                                                                                                       | CAS number   | Weight % | Classification acc. to GHS                                                                                                                    |
|------------------------------------------------------------------------------------------------------------------|--------------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| 4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid | 55818-57-0   | 50-60%   | Skin Sens. 1 / H317<br>Aquatic Acute 1 / H400<br>Aquatic Chronic 2 / H411                                                                     |
| 3,3,5-Trimethylcyclohexyl Acrylate                                                                               | 86178-38-3   | 30-40%   | Skin Irrit. 2 / H315<br>Eye Irrit. 2 / H319<br>Skin Sens. 1B / H317<br>STOT SE 3 / H335<br>Aquatic Acute 1 / H400<br>Aquatic Chronic 2 / H411 |
| Additives1                                                                                                       | Trade Secret | 1-5%     | Carc. 2 / H351                                                                                                                                |
| Additives2                                                                                                       | Trade Secret | 1-5%     | -                                                                                                                                             |
| Additives3                                                                                                       | Trade Secret | 1-5%     | Acute Tox. 4 / H312<br>Skin Sens. 1B / H317<br>Aquatic Chronic 2 / H411                                                                       |

### SECTION 4 : FIRST AID MEASURES

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

## SAFETY DATA SHEET

### Consumer Series Resin - Aqua Resin: Mist Gray

Page 3 of 11

#### 4.1.1 Inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. In case of respiratory tract irritation, consult a physician. Provide fresh air.

#### 4.1.2 Skin Contact

Wash with plenty of soap and water.

#### 4.1.3 Eyes Contact

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, freshwater for at least 10 minutes, holding the eyelids apart.

#### 4.1.4 Ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

#### 4.2. Most important symptoms and hazardous effects

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

Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>)

#### 5.3 Specific fire-fighting procedure

None

#### 5.4 Specific protective 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.

## SAFETY DATA SHEET

### Consumer Series Resin - Aqua Resin: Mist Gray

Page 4 of 11

#### SECTION 6 : ACCIDENTAL RELEASE MEASURES

##### 6.1. Personal precautions

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

##### 6.2. Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

##### 6.3. Cleaning methods

Wipe up with absorbent material (e.g. cloth, fleece). Collect spillage: sawdust, kieselgur (diatomite), 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°F to 35°C / 95°F.

Close the lid tightly when not in use.

#### SECTION 8 : EXPOSURE CONTROLS / PERSONAL PROTECTION

##### 8.1. Engineering controls

Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to

**SAFETY DATA SHEET****Consumer Series Resin - Aqua Resin: Mist Gray**

Page 5 of 11

maintain concentrations of particulates and solvent vapour below the OEL, suitable respiratory protection must be worn.

Ensure that eyewash stations and safety showers are proximal to the work-station location.

**8.2. Control Parameters**

| Components       | TWA                    | STEL                  | CEILING | BEI s |
|------------------|------------------------|-----------------------|---------|-------|
| Titanium dioxide | 10 mg / m <sup>3</sup> | 15 mg /m <sup>3</sup> | -       | -     |
| Carbon black     | 3.5mg / m <sup>3</sup> | 7mg /m <sup>3</sup>   | -       | -     |

**8.3. Personal protective equipment****8.3.1. Respiratory protection**

If exposure limits are exceeded or if irritation or other symptoms are experienced, use a full-face respirator with multi-purpose combination(US) or type AXBEK (EN 14387) respirator cartridges.

**8.3.2. Hand protection**

Wear protective gloves (such as butyl rubber), passing the tests according to EN 374 (EU),US F739 or AS/NZS 2161.1 standard.

**8.3.3. Eye protection**

Wear protective goggle (Conform to EC EN 166 or US-NIOSH).

**8.3.4. Skin protection**

Use clothing that provides complete protection to the skin.

**8.4. Hygiene measures**

Forbid smoking, eating and drinking in working places.

Washing hands after handling products.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

|                     |                     |               |                  |
|---------------------|---------------------|---------------|------------------|
| Apperance and color | Gray viscous liquid | Odor          | Typical acrylate |
| Odor threshold      | N/A                 | Melting point | N/A              |
| pH value            | 6 - 8               | Boiling point | 226.1 °C         |
| Flammable           | N/A                 | Flash point   | N/A              |

## SAFETY DATA SHEET

### Consumer Series Resin - Aqua Resin: Mist Gray

Page 6 of 11

|                                                  |                                  |                 |     |
|--------------------------------------------------|----------------------------------|-----------------|-----|
| Decomposition Temp                               | N/A                              | Testing method  | N/A |
| Natural Temp                                     | 299°C                            | Explosive limit | N/A |
| Vapor pressure                                   | 12.8 Pa at 25 °C                 | Vapor density   | N/A |
| Density                                          | 1.15 g /cm <sup>3</sup> at 20 °C | Solubility      | N/A |
| Octanol/water distribution 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

Oxidisers, Reducing agents

### 10.5. Hazardous decomposed product

None

## SECTION 11: TOXICOLOGICAL INFORMATION

### Information on toxicological effects

Test data are not available for the complete mixture.

### 11.1. Exposure paths

None

### 11.2. Symptoms

None

## SAFETY DATA SHEET

### Consumer Series Resin - Aqua Resin: Mist Gray

Page 7 of 11

#### 11.3. Acute toxicity

| Components       | route  | Species | End point | Value        |
|------------------|--------|---------|-----------|--------------|
| Titanium dioxide | Oral   | Rat     | LD50      | >10000 mg/kg |
|                  | Dermal | Rabbit  | LD50      | >10000 mg/kg |
| Carbon black     | Oral   | Rat     | LD50      | >8000mg/kg   |
|                  | Dermal | Rabbit  | LD50      | >3000mg/kg   |

#### 11.4. Chronic toxicity

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 |
| Titanium dioxide                                                                                                   | LC50      | >1000 mg/l  | fish                  | 96 h          |
|                                                                                                                    | EC50      | >1000 mg/l  | aquatic invertebrates | 48 h          |
| Ethyl Phenyl(2,4,6-trimethylbenzoyl)phosphinate                                                                    | LC50      | 1.89mg/l    | fish                  | 96h           |
|                                                                                                                    | EC50      | 1.01mg/l    | aquatic invertebrates | 48h           |
|                                                                                                                    | EC50      | 1.6mg/l     | algae                 | 72h           |
| Carbon black                                                                                                       | LC50      | >1000mg/l   | fish                  | 96h           |
|                                                                                                                    | LC50      | >10000mg/l  | algae                 | 72h           |
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid | EL50      | 105mg/l     | algae                 | 72h           |
|                                                                                                                    | ErC50     | 17mg/l      | algae                 | 72h           |
| 3,3,5-trimethylcyclohexyl acrylate                                                                                 | LC50      | 1.9mg/l     | fish                  | 96h           |
|                                                                                                                    | EC50      | 14.43mg/l   | aquatic invertebrates | 48h           |
|                                                                                                                    | ErC50     | >0.59mg/l   | algae                 | 72h           |
| Aquatic toxicity (chronic) of components of the mixture                                                            |           |             |                       |               |
| Components                                                                                                         | End point | Value       | Species               | Exposure time |
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid | EC50      | >1,000 mg/l | microorganisms        | 3 h           |

## SAFETY DATA SHEET

### Consumer Series Resin - Aqua Resin: Mist Gray

Page 8 of 11

| n products with 1-chloro-2,3-epoxypropane, esters with acrylic acid |           |             |                       |               |
|---------------------------------------------------------------------|-----------|-------------|-----------------------|---------------|
| Ethyl phenyl(2,4,6-trimethylbenzoyl)phosphinate                     | EC50      | >1,000 mg/l | microorganisms        | 180min        |
| <b>Aquatic toxicity (acute) of components of the mixture</b>        |           |             |                       |               |
| Components                                                          | End point | Value       | Species               | Exposure time |
| Titanium dioxide                                                    | LC50      | >1000 mg/l  | fish                  | 96 h          |
|                                                                     | EC50      | >1000 mg/l  | aquatic invertebrates | 48 h          |
| Ethyl Phenyl(2,4,6-trimethylbenzoyl)phosphinate                     | LC50      | 1.89mg/l    | fish                  | 96h           |
|                                                                     | EC50      | 1.01mg/l    | aquatic invertebrates | 48h           |
|                                                                     | EC50      | 1.6mg/l     | algae                 | 72h           |
| Carbon black                                                        | LC50      | >1000mg/l   | fish                  | 96h           |
|                                                                     | LC50      | >10000mg/l  | algae                 | 72h           |

#### 12.2. Persistence and degradability

| <b>Degradability of components of the mixture</b>                                                                   |                  |                  |      |        |
|---------------------------------------------------------------------------------------------------------------------|------------------|------------------|------|--------|
| Components                                                                                                          | Process          | Degradation rate | Time | Source |
| 4,4'-Isopropylidene diphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid | oxygen depletion | 42%              | 28d  | ECHA   |
| 3,3,5-trimethylcyclohexyl acrylate                                                                                  | oxygen depletion | 16.8%            | 28d  | ECHA   |
| Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide                                                                     | oxygen depletion | 0 -10%           | 28 d | ECHA   |

#### 12.3. Bio-accumulative potential

| Components                                                                                                          | BCF | Log <sub>ow</sub>              | BOD/COD |
|---------------------------------------------------------------------------------------------------------------------|-----|--------------------------------|---------|
| 4,4'-Isopropylidene diphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid |     | 1.6 – 3.8(pHvalue : 6.4, 23°C) |         |

## SAFETY DATA SHEET

### Consumer Series Resin - Aqua Resin: Mist Gray

Page 9 of 11

|                                                          |  |                             |  |
|----------------------------------------------------------|--|-----------------------------|--|
| poxypropane, ester<br>s with acrylic acid                |  |                             |  |
| 3,3,5-trimethylcyclo<br>hexyl acrylate                   |  | 4.6                         |  |
| Diphenyl(2,4,6-trim<br>ethyl benzoyl)<br>phosphine oxide |  | 2.91 (pH value: 4.4, 25 °C) |  |

#### 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 or 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

|                                   |                                                                |
|-----------------------------------|----------------------------------------------------------------|
| <b>Land transport</b><br>USDOT    | Not classified as dangerous goods under transport regulations. |
| <b>Sea transport</b><br>IMDG      | Not classified as dangerous goods under transport regulations. |
| <b>Air transport</b><br>IATA/ICAO | Not classified as dangerous goods under transport regulations. |
| <b>Further information</b>        | N/A                                                            |

## SAFETY DATA SHEET

### Consumer Series Resin - Aqua Resin: Mist Gray

Page 10 of 11

|                    |     |
|--------------------|-----|
| Other requirements | N/A |
|--------------------|-----|

#### Additional information for IMDG CODE 3.4.1

According to the general provisions 2.10.2.7, if the volume of the product is less than 5L or the mass is less than 5kg when transported, and the packaging complies with the general provisions in 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8, the product is not regarded as dangerous goods transportation.

## 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        | not all ingredients are listed |
| CA      | NDSL       | not 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       | not all ingredients are listed |
| TW      | TCSI       | all ingredients are listed     |

## SAFETY DATA SHEET

### Consumer Series Resin - Aqua Resin: Mist Gray

Page 11 of 11

|    |      |                                |
|----|------|--------------------------------|
| US | TSCA | not 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 |
| 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, OECD, REACH                                                                                            |
| Table formulation unit | Name : Phrozen Tech. Co. Ltd<br>Address / Phone : 287 Niupu Rd, Xiangshan Dist, Hsinchu City 30091, TAIWAN( R.O.C ) / +886-3621-0505 |
| Table formulator       | Job title : Occupational Safety & Health manager<br>Name : Chun-Yao, Kuo                                                             |
| Table formulation Date | 2023.11.14                                                                                                                           |
| 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**