

SAFETY DATA SHEET

Gingiva Mask

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SECTION 1 : IDENTIFICATION

1.1 Product identifier

Product name Gingiva Mask

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

Acute toxicity: oral Category 4 , Skin corrosion/irritation Category 2 ,

Serious eye damage/eye irritation Category 1 , Skin sensitization Category 1

Reproductive toxicity Category 1B,

Specific target organ toxicity single exposure(respiratory tract irritation) Category 3

Specific target organ toxicity(repeated exposure) Category 2

Hazardous to the aquatic environment - chronic hazard Category 2

2.2. Signal statement

Corrosion, Exclamation mark, Health hazard, Environment



2.3. Pictograms

2.4. Signal word WARNING

2.5. Hazard statements

May be harmful if swallowed

Cause skin irritation

May cause an allergic skin reaction

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Cause serious eye damage

2.6. Precautionary statements

- Do not handle until safety precautions have been taken
- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources
- Keep container tightly closed
- Do not breathe dust/fume/gas/mist/vapors/spray
- Avoid breathing dust, fume, gas, mist, vapors, spray
- Do not get in eyes, on skin or on clothing
- Wash thoroughly after handling
- Use only outdoors or in a well-ventilated area.
- Hazardous polymerization may occur upon depletion of inhibitors.
- Contaminated work clothing should not be allowed out of the workplace.
- Avoid release to the environment.
- Wear protective gloves/ eye protection/face protection.

2.7. Other hazard

None

SECTION 3 : COMPOSITION / INFORMATION ON INGREDIENTS

Components	CAS number	Weight %	Classification acc. to GHS
polymer with 1,6-diisocyanatohexane	76246-04-3	70 – 80%	-
Diurethane dimethacrylate, mixture of isomers	72869-86-4	20 – 30%	Skin Sens. 1 / H317 Aquatic Acute 3 / H402 Aquatic Chronic 3 /H412
Additives1	Trade Secret	<5%	Repr. 1B / H360FD
Additives2	Trade Secret	1 – 2%	-

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SECTION 4 : FIRST AID MEASURES

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

4.1.1. Inhalation

If overcome by exposure, ventilate the premises. Remove victim from contaminated area to well ventilated areas or outdoors. If needed, provide oxygen or artificial respiration. Get immediate medical attention

4.1.2. Skin Contact

Immediately take off all contaminated clothing. Wash skin immediately with mild soap/water for at least 15 minutes. If resin is not completely removed, use a waterless cleaner first. Seek medical advice if irritation persists.

4.1.3. Eyes Contact

Wash eyes under the eyelid immediately with water for 20-40 minutes. See medical advice if irritation, pain, tears or redness persists.

4.1.4. Ingestion

DO NOT INDUCE VOMITING. If vomiting occurs naturally, keep airways clear. Immediately obtain medical attention.

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, foam

5.2. Specific hazards confronted during fire fighting

Nitrogen oxides (NO_x), Carbon monoxide (CO), Carbon dioxide (CO₂)

5.3. Specific fire-fighting procedure

None

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5.4. Specific protective equipments for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6 : ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions

Use masks, gloves and protective clothing.

6.2. Environmental precautions

Limit leakages with earth or sand. If the product has flown off into a water course, into the drainage system, or has contaminated the ground vegetation, notify the responsible authorities.

6.3. Cleaning methods

Rapidly collect the product. To do so, wear a mask and protective clothing. When the product is in a liquid form, stop it from entering the drainage system. Recover the product for re-use if possible, or for elimination in compliance with waste disposal regulations in force. The product might, when appropriate, be absorbed by inert material.

SECTION 7 : SAFETY HANDLING AND STORAGE

7.1. Handling

Avoid contact with and inhalation of vapors and/or dust. Do not eat or drink or smoke while working.

Keep away from amines, strong bases, acids and strong oxidants.

7.2. Storage

Keep away from amines, strong bases, acids and strong oxidants.

Storage temperature: between 15°C/59°C to 35°C/95°F

Keep in a dry place, in t original containers tightly closed, avoid heat/ignition and light sources. Prevent contamination by foreign materials and water.

For industrial use only, keep away from children.

**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

None

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

Required where ventilation/aspiration is insufficient or exposure is prolonged, or applications in which the product is sprayed or heated. Required in case of machinery or applications that release dust.

8.3.2. Hand protection

Use protective gloves. For an extended exposure of the product, wear nitrile/neoprene gloves. Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact). The exact break through time can be obtained from the protective glove producer and this has to be observed. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time

8.3.3. Eye protection

Use safety goggles.

8.3.4. Skin protection

Use clothing that provides complete protection to the skin.

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-worn only after washed in clean or discard.

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance and color	Pink viscous liquid	Odor	Typical acrylate
Odor threshold	N/A	Melting point	N/A
pH value	N/A	Boiling point	> 250°C /482F
Flammable	N/A	Flash point	> 110°C /230F
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	1.18 g/cm ³ at 25°C /77F	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

Storage > 38C/100F, exposure to light, loss of dissolved air, and contamination with incompatible materials.

10.4. Must avoid substances

Polymerization initiators, including peroxides, strong oxidizing agents, alcohols, copper, copper alloys, carbon steel, iron, rust, and strong bases.

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10.5. Hazardous decomposed product

Hazardous decomposition products may include oxides of carbon, nitrogen and various hydrocarbon fragments.

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

11.3. Acute toxicity

Components	route	Species	End point	Value
Diurethane dimethacrylate, mixture of isomers	Oral	Rat	LD50	> 5,000mg/kg
Diphenyl(2,4,6-trimethyl benzoyl) phosphine oxide	Oral	Rat	LD50	> 5,000 mg/kg
	Dermal	Rat	LD50	> 2,000 mg/kg

11.4. Chronic toxicity

None

11.5. Reproductive and/or Developmental Effects

Components	route	Species	End point	Value
Diphenyl(2,4,6-trimethyl benzoyl) phosphine oxide	Ingestion	Rat	NOAEL pre mating into lactation for female	200 mg/kg/day

SECTION 12: ECOLOGICAL INFORMATION

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

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12.1. Ecological toxicity

Aquatic toxicity (acute) of components of the mixture				
Components	End point	Value	Species	Exposure time
Diurethane dimethacrylate, mixture of isomers	LC50	10.1 mg/l	fish	96 h
	EC50	>1.2 mg/l	aquatic invertebrates	48 h
Diphenyl(2,4,6-trimethyl benzoyl) phosphine oxide	LC50	1.4mg/l	fish	96 h
	EC50	3.53 mg/l	aquatic invertebrates	48 h
	ErC50	>2.01 mg/l	algae	72h
Aquatic toxicity (chronic) of components of the mixture				
Components	End point	Value	Species	Exposure time
Diphenyl(2,4,6-trimethyl benzoyl) phosphine oxide	EC50	>1,000 mg/l	microorganisms	180 min

12.2. Per sistence and degradability

Degradability of components of the mixture				
Components	Process	Degradation rate	Time	Source
Diurethane dimethacrylate, mixture of isomers	aerobic	22%	28d	OECD
Diphenyl(2,4,6-trimethyl benzoyl) phosphine oxide	oxygen depletion	0-10%	29d	ECHA

12.3. Bio-accumulative potential

Components	BCF	Log kow	BOD/COD
Diphenyl(2,4,6-trimethyl benzoyl) phosphine oxide	-	3.1 (pH value: 6.4, 23 °C)	-

12.4. Mobility in soil

None

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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

Empty remaining contents. Dispose of as unused product. Do not re-use empty containers.

In accordance with local and national regulations.

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
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.

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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	AICS	not all ingredients are listed
CA	DSL	not all ingredients are listed
CA	NDSL	not all ingredients are listed
CN	IECSC	not all ingredients are listed
EU	ECSI	not all ingredients are listed
EU	REACH Reg.	not all ingredients are listed
JP	CSCL-ENCS	not all ingredients are listed
JP	ISHA-ENCS	not all ingredients are listed
NZ	NZIoC	not all ingredients are listed
TR	CICR	not all ingredients are listed
TW	TCSI	not all ingredients are listed
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)

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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

SECTION 16: OTHER INFORMATION

Reference	US OSHA HCS 29 CFR 1910.1200 / ECHA /OECD
Table formulation unit	Name : Phrozen Tech. Co. Ltd 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 Date	2023.11.15
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