

# Safety Data Sheet

Product Name: Dental Model

Revision date: /

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Referde to GB/T16483、GB/T17519

SDS number: HGD/QT-MXSZ-07-02

Version: 00

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

**Chinese names of chemicals :** 模型树脂

**English names of chemicals:** Dental Model

**Product Model:** M 3.0

**Company Name:** Shandong Huge Dental Material Corporation

**Address:** No.68 shanghai Road, Donggang District Rizhao City

**City, State, Zip Code:** Shandong Province, 276800, P.R.China

**Telephone:** 0633-2277285

**Website:** www.hugedental.com

**Relevant identified uses of the substance or mixture and uses advised against:** Additive  
Manufacturing

## SECTION 2: Hazards identification

### Emergency Situation Summary:

Swallowing harmful; may cause skin allergic reaction; may cause serious eye damage; long-term swallowing or repeated exposure may cause organ damage; present this safety data sheet to the physician at the scene.

### GHS risk categories:

#### Classification of substances/mixtures:

| Health                                                                                                          | Environmental                              | Physical      |
|-----------------------------------------------------------------------------------------------------------------|--------------------------------------------|---------------|
| Eye damage Category 1(H318)<br>Reproductive Toxicity Category 2 (H361)<br>Skin Sensitization Category 1A (H317) | Aquatic Chronic Toxicity Category 2 (H411) | Not Hazardous |

### Label elements:



### Health Hazards:

Harmful if swallowed.

May cause an allergic skin reaction.

Causes serious eye damage.

Long-term or repeated exposure may cause damage to organs.

Do not breathe mist/vapours/spray.

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

Wash hands thoroughly after handling.

If skin contact occurs: Wash with plenty of soap and water.

If skin allergy or rash develops: Seek medical advice/attention.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

If swallowed: Rinse mouth. Call a POISON CENTER or doctor immediately.

Dispose of contents/container in accordance with local/national regulations.

Not mentioned risks — Always follow information on the Safety Data Sheet.

#### Environmental Hazards:

Toxic to aquatic life.

Toxic to aquatic life with long-lasting effects.

#### Physical and Chemical Hazards:

None

### SECTION 3: Composition/information on ingredients

**Main Components:** Polyurethane acrylate, acrylate, methacrylate, photoinitiator.

#### Hazardous Components

| Chemical Name                                   | CAS No.    | Content % |
|-------------------------------------------------|------------|-----------|
| Polyurethane acrylate                           | /          | 20-50     |
| Tris(2-hydroxyethyl) isocyanurate triacrylate   | 40220-08-4 | 5-20      |
| Cyclic trimethylolpropane formal acrylate       | 66492-51-1 | 5-20      |
| Trimethylolpropane triacrylate                  | 15625-89-5 | 5-20      |
| (2,4,6-Trimethylbenzoyl)diphenylphosphine oxide | 75980-60-8 | <3        |

### SECTION 4: First aid measures

#### Inhalation:

Move victim to fresh air immediately.

Seek medical attention if breathing difficulties or discomfort occur.

#### Skin Contact:

Remove contaminated clothing and shoes promptly.

Wash skin thoroughly with soap and water.

Consult a doctor if irritation persists.

#### Eye Contact:

Rinse immediately with plenty of water for at least 15 minutes, lifting eyelids occasionally.

Remove contact lenses if present and easy to do.

Get medical help if irritation develops.

#### Ingestion:

Rinse mouth thoroughly with water (only if the person is conscious).

Do NOT induce vomiting.

If spontaneous vomiting occurs, keep head lowered to prevent aspiration (risk of choking).

Seek immediate medical attention.

**Acute/Late Symptoms & Effects:**

Unknown.

**Notes for Immediate/Special Treatment:**

Unknown.

**Hazard-Specific Advice:**

No specific recommendations available.

**SECTION 5: Firefighting measures****Suitable Extinguishing Media:**

Foam, carbon dioxide (CO<sub>2</sub>), or dry chemical powder.

Avoid using direct water jets, as this may cause splashing of burning material.

**Special Precautions:**

Apply water spray to cool exposed containers and prevent re-ignition.

In case of fire, firefighters must wear:

Self-contained breathing apparatus (SCBA)

Full protective firefighting gear

Isolate the hazard area and restrict unauthorized access.

Use water spray to suppress fumes/vapors/gases.

Collect contaminated firefighting water separately.

**Do NOT** allow runoff to enter drains or surface waters.

**Specific Hazards Arising from the Substance/Mixture (EU Requirement):**

None.

**SECTION 6: Accidental release measures****Personal Protective Measures, Equipment, and Emergency Procedures for Workers:**

- Ensure adequate ventilation.
- **Do NOT** breathe gases/fumes/vapors/mist.
- Avoid contact with skin, eyes, and clothing.
- Wear **anti-static flame-retardant protective clothing**.

**Environmental Protection Measures:**

- Contain spills to prevent environmental contamination.
- Prevent entry into sewers, surface water, and groundwater.

**Methods and Materials for Containment and Cleanup:**

- Absorb with sand or other inert absorbent material.
- Collected spill material must be placed in **labeled containers** with:
  - Correct contents identification
  - Hazard symbols
- Keep containers tightly sealed.
- Clean contaminated surfaces and objects with appropriate solvent.
- Rinse area thoroughly with water.

- Dispose of waste in a **licensed incineration facility**.

## SECTION 7: Handling and storage

### Handling Instructions:

Operators must receive **specialized training** and strictly follow operating procedures.

Avoid contact with eyes and skin.

Handle with care during transport to prevent **damage to packaging/containers**.

### Storage Conditions:

Store in a **cool, well-ventilated** area. **Temperature must not exceed 30°C (86°F)**.

Keep containers **tightly sealed**.

Keep away from **ignition sources, heat, and open flames**.

Store **separately from oxidizers and food-grade chemicals – NO mixed storage**.

**Prohibited:** Use of spark-generating tools or equipment.

## SECTION 8: Exposure controls/personal protection

### Occupational Exposure Limits (OELs)

- **(Meth)acrylates:** When incorporated into polymers and processed under normal conditions, no significant health hazards are expected.

### Engineering Controls

- Emergency **safety showers** and **eye wash stations** must be accessible.
- Ensure proper **ventilation systems** are in place.

### Personal Protective Equipment (PPE)

- **Eye/Face Protection:** Wear **safety goggles with side shields** (or equivalent protection).
- **Hand Protection:** Use **nitrile gloves** (minimum thickness  $\geq 0.4$  mm).
- **Skin/Body Protection:** Wear **anti-static, flame-retardant protective clothing**.
- **Respiratory Protection:** Under normal conditions, **not required**. If exposure limits are exceeded or irritation occurs, use **local exhaust ventilation** or evacuate.

### Hygiene Practices

- **Do NOT eat, drink, or smoke** while handling this product.
- **Wash hands thoroughly** before breaks and immediately after handling.

## SECTION 9: Physical and chemical properties

### Appearance & Characteristics

- **Physical State:** Opaque, flowable liquid
- **Odor:** Acrylate-like odor

### General Properties

| Parameter     | Value / Description  |
|---------------|----------------------|
| pH            | Not applicable (N/A) |
| Melting Point | N/A                  |

| Parameter                               | Value / Description                                                                                                                                                                                                                                                                                                                                            |
|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Boiling Point                           | N/A                                                                                                                                                                                                                                                                                                                                                            |
| Flash Point                             | N/A                                                                                                                                                                                                                                                                                                                                                            |
| Evaporation Rate                        | N/A                                                                                                                                                                                                                                                                                                                                                            |
| Flammability (Solid/Gas)                | N/A                                                                                                                                                                                                                                                                                                                                                            |
| Flammability Limits                     | N/A                                                                                                                                                                                                                                                                                                                                                            |
| Upper Explosive Limit (UEL, %)          | N/A                                                                                                                                                                                                                                                                                                                                                            |
| Lower Explosive Limit (LEL, %)          | N/A                                                                                                                                                                                                                                                                                                                                                            |
| Vapor Pressure                          | N/A                                                                                                                                                                                                                                                                                                                                                            |
| Vapor Density (Air=1)                   | N/A                                                                                                                                                                                                                                                                                                                                                            |
| Relative Density                        | ~1.1-1.2 g/cm <sup>3</sup> (25°C)                                                                                                                                                                                                                                                                                                                              |
| Solubility                              | <ul style="list-style-type: none"><li>• <b>Water:</b> Practically insoluble</li><li>• <b>Other Solvents:</b> Miscible in all proportions with:<ul style="list-style-type: none"><li>○ Diethyl ether</li><li>○ Common organic solvents</li><li>○ Aromatic hydrocarbons</li><li>○ Aliphatic hydrocarbons</li><li>○ Acetone</li><li>○ Ethanol</li></ul></li></ul> |
| Other Properties                        |                                                                                                                                                                                                                                                                                                                                                                |
| Parameter                               | Value / Description                                                                                                                                                                                                                                                                                                                                            |
| Partition Coefficient (n-Octanol/Water) | N/A                                                                                                                                                                                                                                                                                                                                                            |
| Auto-Ignition Temperature               | N/A                                                                                                                                                                                                                                                                                                                                                            |
| Decomposition Temperature               | N/A                                                                                                                                                                                                                                                                                                                                                            |
| Viscosity                               | N/A                                                                                                                                                                                                                                                                                                                                                            |
| Explosive Properties                    | N/A                                                                                                                                                                                                                                                                                                                                                            |
| Oxidizing Properties                    | No oxidizing components detected                                                                                                                                                                                                                                                                                                                               |

**SECTION 10: Stability and reactivity****Chemical Stability**

- **Stable** under normal storage and handling conditions.

**Hazardous Reactions**

- **No data available** (no known hazardous reactions under standard conditions).

**Conditions to Avoid**

- **High temperatures** (may accelerate decomposition)
- **Moisture/humidity** (potential hydrolysis risk)
- **Direct light exposure** (UV/heat may affect stability)

**Incompatible Materials**

- **Strong oxidizers** (e.g., peroxides, chlorates, nitrates – risk of violent reaction)

**Hazardous Decomposition Products**

- When heated or burned, may release:
  - **Carbon oxides (CO/CO<sub>2</sub>)**
  - **Other toxic gases/vapors** (e.g., acrylic acid fumes)

**SECTION 11: Toxicological information****Main Components of the Product:**

Polyurethane acrylate, acrylate, methacrylate, photoinitiator.

**Acute Toxicity:**

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

**Skin Corrosion/Irritation & Serious Eye Damage/Eye Irritation:**

- Causes **skin irritation**.
- Causes **serious eye irritation**.

**Sensitization:**

May cause an **allergic skin reaction** (involving the following components):

- (2,4,6-Trimethylbenzoyl)diphenylphosphine oxide
- Cyclic trimethylolpropane formal acrylate
- Trimethylolpropane triacrylate

**Carcinogenicity / Mutagenicity / Reproductive Toxicity:**

- **Reproductive toxicity:** Suspected of **damaging fertility or the unborn child** (involving: (2,4,6-Trimethylbenzoyl)diphenylphosphine oxide).
- **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.
- **Carcinogenicity:** Based on available data, the classification criteria are not met.

**Specific Target Organ Toxicity – Single Exposure (STOT-SE):**

- May cause **respiratory irritation**.
- Based on available data, other classification criteria are **not met**.

**Specific Target Organ Toxicity – Repeated Exposure (STOT-RE):**

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

**Aspiration Hazard:**

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

#### Additional Information:

- The mixture is classified as **hazardous** according to **Regulation (EC) No 1272/2008 [CLP]**.
- **Special hazards:** Special hazards arising from the substance or mixture must be noted!
- **Additional test information:** No detailed data provided.

### SECTION 12: Ecological information

**Ecotoxicity:** Harmful to aquatic life with long-lasting effects.

**Persistence and degradability:** The product has not been tested.

**Bioaccumulation potential:** The product has not been tested.

**Additional information:** It is not yet known whether these substances may cause or inhibit hormonal effects.

### SECTION 13: Disposal considerations

#### Waste Chemicals:

Do not allow entry into **surface waters or drains**.

Do not allow entry into **soil/subsoil**.

Dispose of waste using **appropriate treatment methods and facilities**, in compliance with **applicable laws and regulations** and taking into account the properties of the product being disposed of.

#### Contaminated Packaging:

Dispose of contaminated packaging using **appropriate methods and equipment**, in accordance with **applicable laws and regulations** and considering the properties of the product.

#### Disposal Precautions:

For safety measures during disposal operations, refer to **Section 8 (Exposure Controls/Personal Protection)**.

### SECTION 14: Transport information

**Packaging Group:** Not applicable

**Packaging Symbols/Labels:** Not applicable

**Packaging Method:** Not applicable

**Marine Pollutant:** No

#### Transport Precautions:

##### During transport:

Protect from direct sunlight, rain, and high temperatures.

Avoid mixing with oxidizing agents.

#### During temporary stops:

Keep away from sources of ignition, heat, and high-temperature zones.

### SECTION 15: Regulatory information

#### National regulatory information

Chemical safety assessment: No data available

## **SECTION 16: Other information**

No further technical information

The present data sheet contains technical-scientific information processed at best of our knowledge.

We recommend verifying national and regional regulations applicable to the specific utilize field as well as regulations relative hygienic and safety on work and environment worship.

All information contained in the present data sheet is correct and processed in good faith. However they do not involve any obligation, guarantee and patent concession.

The characteristics mentioned in the following document do not constitute contractual specifications.