



# Porcelain Bonding Resin

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 02/15/2018

Version: 1.0

### SECTION 1: Identification

#### 1.1. Identification

Product form : Mixture  
Product name : Porcelain Bonding Resin

#### 1.2. Recommended use and restrictions on use

Use of the substance/mixture : For RX only

#### 1.3. Supplier

##### Manufacturer

Bisco, Inc.  
1100 W. Irving Park Rd.  
Schaumburg, IL 60193  
T 1.847.534.6000 - F 1.847.891.5049  
[sales@bisco.com](mailto:sales@bisco.com) - [www.bisco.com](http://www.bisco.com)

#### 1.4. Emergency telephone number

Emergency number : CHEMTREC - 24-Hour Hazmat Emergency Communications Center  
Domestic: 1-800-424-9300 Outside the U.S.: 1-703-527-3887, collect calls accepted

### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

##### GHS-US classification

Flammable liquids Category 4	H227	Combustible liquid
Skin corrosion/irritation Category 2	H315	Causes skin irritation
Serious eye damage/eye irritation Category 2	H319	Causes serious eye irritation
Skin sensitization, Category 1	H317	May cause an allergic skin reaction
Specific target organ toxicity (single exposure) Category 3	H336	May cause drowsiness or dizziness

Full text of H statements : see section 16

#### 2.2. GHS Label elements, including precautionary statements

##### GHS-US labeling

Hazard pictograms (GHS-US) :



Hazard statements (GHS-US) :

H227 - Combustible liquid  
H315 - Causes skin irritation  
H317 - May cause an allergic skin reaction  
H319 - Causes serious eye irritation  
H336 - May cause drowsiness or dizziness

Precautionary statements (GHS-US) :

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking  
P261 - Avoid breathing vapors  
P264 - Wash hands thoroughly after handling  
P271 - Use only outdoors or in a well-ventilated area  
P272 - Contaminated work clothing must not be allowed out of the workplace  
P280 - Wear eye protection, face protection, protective gloves  
P302+P352 - If on skin: Wash with plenty of soap and water  
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing  
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P312 - Call a doctor, a POISON CENTER if you feel unwell  
P321 - Specific treatment (see First aid measures on this label)  
P332+P313 - If skin irritation occurs: Get medical advice/attention  
P337+P313 - If eye irritation persists: Get medical advice/attention

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P362+P364 - Take off contaminated clothing and wash it before reuse  
P363 - Wash contaminated clothing before reuse  
P370+P378 - In case of fire: Use nitrogen, dry extinguishing powder, carbon dioxide (CO2), dry sand to extinguish  
P403+P233 - Store in a well-ventilated place. Keep container tightly closed  
P403+P235 - Store in a well-ventilated place. Keep cool  
P405 - Store locked up  
P501 - Dispose in a safe manner in accordance with local/national regulations

### 2.3. Other hazards which do not result in classification

No additional information available

### 2.4. Unknown acute toxicity (GHS US)

Not applicable

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Name	Product identifier	%	GHS-US classification
Urethane Dimethacrylate	(CAS-No.) Proprietary	10 - 30	Skin Irrit. 2, H315 Eye Irrit. 2B, H320 STOT SE 3, H336
BisGMA	(CAS-No.) 1565-94-2	10 - 30	Skin Irrit. 2, H315 Eye Irrit. 2B, H320 Skin Sens. 1, H317
Tetrahydrofurfuryl Methacrylate	(CAS-No.) 2455-24-5	10 - 30	Flam. Liq. 4, H227 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Acute 3, H402
Trimethylolpropane Trimethacrylate	(CAS-No.) 3290-92-4	1 - 5	Skin Irrit. 2, H315 Eye Irrit. 2, H319

Full text of hazard classes and H-statements : see section 16

## SECTION 4: First-aid measures

### 4.1. Description of first aid measures

First-aid measures general : Call a poison center/doctor/physician if you feel unwell.  
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.  
First-aid measures after skin contact : Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.  
First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.  
First-aid measures after ingestion : Call a poison center/doctor/physician if you feel unwell.

### 4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects : May cause drowsiness or dizziness.  
Symptoms/effects after skin contact : Irritation. May cause an allergic skin reaction.  
Symptoms/effects after eye contact : Eye irritation.

### 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

### 5.2. Specific hazards arising from the chemical

Fire hazard : Combustible liquid.  
Reactivity : The product is non-reactive under normal conditions of use, storage and transport.

### 5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

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### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

##### 6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Avoid breathing mist, vapors. Avoid contact with skin and eyes. No open flames, no sparks, and no smoking.

##### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

#### 6.2. Environmental precautions

Avoid release to the environment.

#### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.

Other information : Dispose of materials or solid residues at an authorized site.

#### 6.4. Reference to other sections

For further information refer to section 13.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Precautions for safe handling : Use only outdoors or in a well-ventilated area. Avoid breathing mist, vapors. Avoid contact with skin and eyes. Wear personal protective equipment. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Hygiene measures : Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

#### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

Urethane Dimethacrylate (Proprietary)
Not applicable
Trimethylolpropane Trimethacrylate (3290-92-4)
Not applicable
Tetrahydrofurfuryl Methacrylate (2455-24-5)
Not applicable
BisGMA (1565-94-2)
Not applicable

#### 8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Environmental exposure controls : Avoid release to the environment.

#### 8.3. Individual protection measures/Personal protective equipment

##### Hand protection:

Protective gloves

##### Eye protection:

Protective goggles

##### Skin and body protection:

Wear suitable protective clothing

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### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Clear liquid.
Color	: Light yellow
Odor	: Acrylic
Odor threshold	: No data available
pH	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Not applicable.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Solubility	: No data available
Log Pow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7). Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

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<b>Urethane Dimethacrylate (Proprietary)</b>	
LD50 oral rat	N/A
LD50 dermal rat	N/A
LD50 dermal rabbit	N/A
LC50 inhalation rat (ppm)	N/A

<b>Trimethylolpropane Trimethacrylate (3290-92-4)</b>	
LD50 oral rat	5660 mg/kg (Rat)
LD50 dermal rabbit	17120 mg/kg (Rabbit)
ATE US (oral)	5660 mg/kg body weight
ATE US (dermal)	17120 mg/kg body weight

Skin corrosion/irritation : Causes skin irritation.  
 Serious eye damage/irritation : Causes serious eye irritation.  
 Respiratory or skin sensitization : May cause an allergic skin reaction.  
 Germ cell mutagenicity : Not classified  
 Carcinogenicity : Not classified

<b>Urethane Dimethacrylate (Proprietary)</b>	
IARC group	4 - Probably not carcinogenic to humans

Reproductive toxicity : Not classified  
 Specific target organ toxicity – single exposure : May cause drowsiness or dizziness.

<b>Urethane Dimethacrylate (Proprietary)</b>	
LOAEL (oral,rat)	N/A mg/kg body weight
LOAEL (dermal,rat/rabbit)	N/A mg/kg body weight
LOAEC (inhalation,rat,gas)	N/A ppmV/4h
LOAEC (inhalation,rat,vapour )	N/A mg/l/4h
LOAEC (inhalation,rat,dust/mist/fume)	N/A mg/l/4h

Specific target organ toxicity – repeated exposure : Not classified

<b>Urethane Dimethacrylate (Proprietary)</b>	
LOAEL (oral,rat,90 days)	N/A mg/kg bodyweight/day
LOAEL (dermal,rat/rabbit,90 days)	N/A mg/kg bodyweight/day
LOAEC (inhalation,rat,gas,90 days)	N/A ppmV/6h/day
LOAEC (inhalation,rat,vapour,90 days)	N/A mg/l/6h/day
LOAEC (inhalation,rat,dust/mist/fume,90 days)	N/A mg/l/6h/day

Aspiration hazard : Not classified  
 Symptoms/effects : May cause drowsiness or dizziness.  
 Symptoms/effects after skin contact : Irritation. May cause an allergic skin reaction.  
 Symptoms/effects after eye contact : Eye irritation.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

<b>Tetrahydrofurfuryl Methacrylate (2455-24-5)</b>	
LC50 fish 1	34.7 mg/l (LC50; 96 h; Pimephales promelas)

### 12.2. Persistence and degradability

<b>Trimethylolpropane Trimethacrylate (3290-92-4)</b>	
Persistence and degradability	Not readily biodegradable in water.

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### Tetrahydrofurfuryl Methacrylate (2455-24-5)

Persistence and degradability	Biodegradability in water: no data available. No (test)data on mobility of the substance available.
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### 12.3. Bioaccumulative potential

#### Trimethylolpropane Trimethacrylate (3290-92-4)

Log Pow	4.39
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#### Tetrahydrofurfuryl Methacrylate (2455-24-5)

Log Pow	1.3
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

Effect on the global warming	: No known effects from this product.
GWPMix comment	: No known effects from this product.

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
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## SECTION 14: Transport information

### Department of Transportation (DOT)

In accordance with DOT

Not applicable

### TDG

Not applicable

### Transport by sea

Not applicable

### Air transport

Not applicable

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### Tetrahydrofurfuryl Methacrylate (2455-24-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

### 15.2. International regulations

#### CANADA

No additional information available

#### EU-Regulations

No additional information available

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### National regulations

No additional information available

### 15.3. US State regulations

No additional information available

## SECTION 16: Other information

Revision date : 02/12/2018

Full text of H-phrases:

H227	Combustible liquid
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H320	Causes eye irritation
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H402	Harmful to aquatic life

SDS US (GHS HazCom 2012)

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*