SECTION 1: Identification

1.1. Identification
Product form : Mixture
Product name : Pre-Bond

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 - 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
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

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) : H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H319 - Causes serious eye irritation

Precautionary statements (GHS-US) : P261 - Avoid breathing vapors
P264 - Wash hands thoroughly after handling
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
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P321 - Specific treatment (see First aid measures on this label)
P332+P313 - If skin irritation persists: Get medical advice/attention
P337+P313 - If eye irritation persists: Get medical advice/attention
P362+P364 - Take off contaminated clothing and wash it before reuse
P363 - Wash contaminated clothing before reuse
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
Pre-Bond
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 3: Composition/Information on ingredients

3.1. Substances
Not applicable

3.2. Mixtures

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>BisGMA</td>
<td>(CAS-No.) 1565-94-2</td>
<td>50 - 75</td>
<td>Skin Irrit. 2, H315</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Eye Irrit. 2B, H320</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Skin Sens. 1, H317</td>
</tr>
<tr>
<td>2-Hydroxyethyl Methacrylate</td>
<td>(CAS-No.) 868-77-9</td>
<td>5 - 10</td>
<td>Skin Irrit. 2, H315</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Eye Irrit. 2, H319</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Skin Sens. 1, H317</td>
</tr>
<tr>
<td>Dibenzoyl Peroxide, technically pure</td>
<td>(CAS-No.) 94-36-0</td>
<td>1 - 5</td>
<td>Org. Perox. B, H241</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Eye Irrit. 2, H319</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Skin Sens. 1, H317</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Aquatic Acute 2, H401</td>
</tr>
</tbody>
</table>

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 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 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

5.2. Specific hazards arising from the chemical
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.

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 contact with skin and eyes. Avoid breathing mist, vapors.

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.
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:
Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal protective equipment. Avoid breathing mist, vapors.

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 in a well-ventilated place. Keep cool.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>Compound</th>
<th>ACGIH</th>
<th>ACGIH TWA (mg/m³)</th>
<th>5 mg/m³ (Benzoyl peroxide; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dibenzoyl Peroxide, technically pure (94-36-0)</td>
<td>ACGIH</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-Hydroxyethyl Methacrylate (868-77-9)</td>
<td>Not applicable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BisGMA (1565-94-2)</td>
<td>Not applicable</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Viscous liquid.</td>
</tr>
<tr>
<td>Color</td>
<td>Clear pale yellow</td>
</tr>
<tr>
<td>Odor</td>
<td>Acrylic</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
</tbody>
</table>
### 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).

#### 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

<table>
<thead>
<tr>
<th>Substance</th>
<th>Route</th>
<th>LD50/EC50 (mg/kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dibenzoyl Peroxide, technically pure (94-36-0)</td>
<td>Oral rat</td>
<td>&gt; 5000 mg/kg (Rat)</td>
</tr>
<tr>
<td>2-Hydroxyethyl Methacrylate (868-77-9)</td>
<td>Oral rat</td>
<td>5564 mg/kg body weight (Rat; Experimental value)</td>
</tr>
<tr>
<td></td>
<td>Dermal rabbit</td>
<td>&gt; 5000 mg/kg body weight (Rabbit; Experimental value)</td>
</tr>
<tr>
<td></td>
<td>ATE US (oral)</td>
<td>5564 mg/kg body weight</td>
</tr>
</tbody>
</table>

**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

**Dibenzoyl Peroxide, technically pure (94-36-0)**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>IARC group</td>
<td>3 - Not classifiable</td>
</tr>
</tbody>
</table>

**Reproductive toxicity**: Not classified

**Specific target organ toxicity – single exposure**: Not classified

**Specific target organ toxicity – repeated exposure**: Not classified

**Aspiration hazard**: Not classified
Pre-Bond
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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.

<table>
<thead>
<tr>
<th>Dibenzoyl Peroxide, technically pure (94-36-0)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fish 1</td>
<td>2 mg/l (LC50: 96 h; Poecilia reticulata)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2-Hydroxyethyl Methacrylate (868-77-9)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fish 1</td>
<td>227 mg/l (LC50: 96 h)</td>
<td></td>
</tr>
<tr>
<td>EC50 Daphnia 1</td>
<td>171 mg/l (NOEC; OECD 202: Daphnia sp. Acute Immobilisation Test; 48 h; Daphnia magna; Static system; Fresh water; Experimental value)</td>
<td></td>
</tr>
<tr>
<td>EC50 Daphnia 2</td>
<td>380 mg/l (EC50; OECD 202: Daphnia sp. Acute Immobilisation Test; 48 h; Daphnia magna; Static system; Fresh water; Experimental value)</td>
<td></td>
</tr>
<tr>
<td>Threshold limit algae 1</td>
<td>836 mg/l (ErC50; OECD 201: Alga, Growth Inhibition Test; 72 h; Pseudokirchneriella subcapitata; Static system; Fresh water; Experimental value)</td>
<td></td>
</tr>
<tr>
<td>Threshold limit algae 2</td>
<td>346 mg/l (EbC50; OECD 201: Alga, Growth Inhibition Test; 72 h; Pseudokirchneriella subcapitata; Static system; Fresh water; Experimental value)</td>
<td></td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability

<table>
<thead>
<tr>
<th>Dibenzoyl Peroxide, technically pure (94-36-0)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Persistence and degradability</td>
<td>Readily biodegradable in water. No (test)data on mobility of the substance available.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2-Hydroxyethyl Methacrylate (868-77-9)</th>
<th></th>
<th></th>
</tr>
</thead>
</table>

12.3. Bioaccumulative potential

<table>
<thead>
<tr>
<th>Dibenzoyl Peroxide, technically pure (94-36-0)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Log Pow</td>
<td>3.71 (QSAR; 3.2; Experimental value; OECD 117: Partition Coefficient (n-octanol/water), HPLC method; 22 °C)</td>
<td></td>
</tr>
<tr>
<td>Bioaccumulative potential</td>
<td>Low potential for bioaccumulation (Log Kow &lt; 4).</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2-Hydroxyethyl Methacrylate (868-77-9)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>BCF fish 1</td>
<td>1.3 - 1.5 (BCF)</td>
<td></td>
</tr>
<tr>
<td>Log Pow</td>
<td>-0.55 - 0.49 (0.42; Experimental value; OECD 107: Partition Coefficient (n-octanol/water): Shake Flasks Method; 25 °C)</td>
<td></td>
</tr>
<tr>
<td>Bioaccumulative potential</td>
<td>Low potential for bioaccumulation (BCF &lt; 500).</td>
<td></td>
</tr>
</tbody>
</table>

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.

SECTION 14: Transport information

Department of Transportation (DOT)
In accordance with DOT
Other information: No supplementary information available.
SECTION 15: Regulatory information

15.1. US Federal regulations

- **Dibenzoyl Peroxide, technically pure (94-36-0)**
  - Listed on the United States TSCA (Toxic Substances Control Act) inventory
  - Subject to reporting requirements of United States SARA Section 313

- **2-Hydroxyethyl Methacrylate (868-77-9)**
  - 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

- **National regulations**
  - No additional information available

15.3. US State regulations

- **Dibenzoyl Peroxide, technically pure (94-36-0)**
  - U.S. - New Jersey - Right to Know Hazardous Substance List

SECTION 16: Other information

Revision date: 01/30/2018

Full text of H-phrases:

<table>
<thead>
<tr>
<th>H-Phrase</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>H241</td>
<td>Heating may cause a fire or explosion</td>
</tr>
<tr>
<td>H315</td>
<td>Causes skin irritation</td>
</tr>
<tr>
<td>H317</td>
<td>May cause an allergic skin reaction</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
</tr>
<tr>
<td>H320</td>
<td>Causes eye irritation</td>
</tr>
<tr>
<td>H401</td>
<td>Toxic to aquatic life</td>
</tr>
</tbody>
</table>

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.