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

1.1. Product identifier

Product form : Mixture
Product name : D/E Resin

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses
Use of the substance/mixture : For RX only

1.2.2. Uses advised against
No additional information available

1.3. Details of the supplier of the safety data sheet

Manufacturer: Bisco, Inc. 1100 W Irving Park Road, Schaumburg, IL 60193 USA
1-847-534-6000, during normal business hours
www.bisco.com

EC Representative: Bisco France, 208, allée de la Coudoulette, 13680 Lançon de Provence, France
Telephone: 33-4-90-42-02-02

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: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]
Skin corrosion/irritation, Category 2 H315
Serious eye damage/eye irritation, Category 2 H319
Skin sensitisation, Category 1 H317
Specific target organ toxicity — Single exposure, Category 3, Narcosis H336

Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects
May cause drowsiness or dizziness. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) : 

Signal word (CLP) : Warning
Hazardous ingredients : 2-Hydroxyethyl Methacrylate; Urethane Dimethacrylate ; BisGMA
Hazard statements (CLP) : H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H319 - Causes serious eye irritation
H336 - May cause drowsiness or dizziness
Precautionary statements (CLP) : P261 - Avoid breathing vapours
P264 - Wash hands thoroughly after handling
P271 - Use only outdoors or in a well-ventilated area
P272 - Contaminated work clothing should not be allowed out of the workplace
P280 - Wear protective gloves, face protection, eye protection
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
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
P333+P313 - If skin irritation or rash occurs: 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
P403+P233 - Store in a well-ventilated place. Keep container tightly closed
P405 - Store locked up
P501 - Dispose of container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation, an approved waste disposal plant, a hazardous or special waste collection point, a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste.

2.3. Other hazards
No additional information available

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>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
</tr>
</thead>
<tbody>
<tr>
<td>BisGMA</td>
<td>(CAS-No.) 1565-94-2</td>
<td>30 - 50</td>
<td>Skin Irrit. 2, H315, Eye Irrit. 2, H319, Skin Sens. 1, H317</td>
</tr>
<tr>
<td>2-Hydroxyethyl Methacrylate</td>
<td>(CAS-No.) 998-77-9</td>
<td>30 - 50</td>
<td>Eye Irrit. 2, H319, Skin Sens. 1, H317</td>
</tr>
<tr>
<td>Urethane Dimethacrylate</td>
<td>(CAS-No.) Proprietary</td>
<td>30 - 50</td>
<td>Eye Irrit. 2, H319, STOT SE 3, H336</td>
</tr>
</tbody>
</table>

Full text of 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 or a doctor 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 or a doctor if you feel unwell.

4.2. Most important symptoms and effects, both 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. Indication of any immediate medical attention and special treatment needed
Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

5.2. Special hazards arising from the substance or mixture
Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters
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 breathing mist, vapours. Avoid contact with skin and eyes.

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: Use only outdoors or in a well-ventilated area. Avoid breathing mist, vapours. Avoid contact with skin and eyes. Wear personal protective equipment.
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.

7.3. Specific end use(s)
No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
No additional information available

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

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

Environmental exposure controls:
Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties
Physical state: Liquid
Appearance: Viscous liquid.
Colour: Straw.
Odour: Acrylic.
Odour threshold: No data available
pH: No data available
D/E Resin
Safety Data Sheet
according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relative evaporation rate (butylacetate=1)</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>150 °C</td>
</tr>
<tr>
<td>Flash point</td>
<td>75 °C</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapour density at 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>&gt; 1</td>
</tr>
<tr>
<td>Solubility</td>
<td>No data available</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapour density at 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>&gt; 1</td>
</tr>
<tr>
<td>Solubility</td>
<td>No data available</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>No data available</td>
</tr>
</tbody>
</table>

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 (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

2-Hydroxyethyl Methacrylate (868-77-9)
LD50 oral rat : 5564 mg/kg bodyweight (Rat; Experimental value)
LD50 dermal rabbit : > 5000 mg/kg bodyweight (Rabbit; Experimental value)

Urethane Dimethacrylate (Proprietary)
LD50 oral rat : N/A
LD50 dermal rat : N/A
LD50 dermal rabbit : N/A
LC50 inhalation rat (ppm) : N/A
LC50 inhalation rat (Dust/Mist - mg/l/4h) : N/A mg/l/4h
LC50 inhalation rat (Vapours - mg/l/4h) : N/A mg/l/4h

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

STOT-single exposure: May cause drowsiness or dizziness.

<table>
<thead>
<tr>
<th>Urethane Dimethacrylate (Proprietary)</th>
<th>LOAEL (oral, rat)</th>
<th>N/A mg/kg bodyweight</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOAEL (dermal, rat/rabbit)</td>
<td>N/A mg/kg bodyweight</td>
<td></td>
</tr>
<tr>
<td>LOAEC (inhalation, rat, gas)</td>
<td>N/A ppmv/4h</td>
<td></td>
</tr>
<tr>
<td>LOAEC (inhalation, rat, vapour)</td>
<td>N/A mg/l/4h</td>
<td></td>
</tr>
<tr>
<td>LOAEC (inhalation, rat, dust/mist/fume)</td>
<td>N/A mg/l/4h</td>
<td></td>
</tr>
</tbody>
</table>

STOT-repeated exposure: Not classified

<table>
<thead>
<tr>
<th>Urethane Dimethacrylate (Proprietary)</th>
<th>LOAEL (oral, rat, 90 days)</th>
<th>N/A mg/kg bodyweight/day</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOAEL (dermal, rat/rabbit, 90 days)</td>
<td>N/A mg/kg bodyweight/day</td>
<td></td>
</tr>
<tr>
<td>LOAEC (inhalation, rat, gas, 90 days)</td>
<td>N/A ppmv/6h/day</td>
<td></td>
</tr>
<tr>
<td>LOAEC (inhalation, rat, vapour, 90 days)</td>
<td>N/A mg/l/6h/day</td>
<td></td>
</tr>
<tr>
<td>LOAEC (inhalation, rat, dust/mist/fume, 90 days)</td>
<td>N/A mg/l/6h/day</td>
<td></td>
</tr>
</tbody>
</table>

Aspiration hazard: Not classified

SECTION 12: Ecological information

12.1. Toxicty

Ecology - general: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Acute aquatic toxicity: Not classified

Chronic aquatic toxicity: Not classified

<table>
<thead>
<tr>
<th>2-Hydroxyethyl Methacrylate (868-77-9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fish 1</td>
</tr>
<tr>
<td>EC50 Daphnia 1</td>
</tr>
<tr>
<td>EC50 Daphnia 2</td>
</tr>
<tr>
<td>Threshold limit algae 1</td>
</tr>
<tr>
<td>Threshold limit algae 2</td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability

2-Hydroxyethyl Methacrylate (868-77-9)


12.3. Bioaccumulative potential

2-Hydroxyethyl Methacrylate (868-77-9)

BCF fish 1: 1.3 - 1.5 (BCF)

Log Pow: -0.55 - -0.49 (0.42; Experimental value; OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method; 25 °C)

Bioaccumulative potential: Low potential for bioaccumulation (BCF < 500).

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

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

In accordance with ADR / RID / IMDG / IATA / ADN

### 14.1. UN number

| UN-No. (ADR) | Not applicable |
| UN-No. (IMDG) | Not applicable |
| UN-No. (IATA) | Not applicable |
| UN-No. (ADN) | Not applicable |
| UN-No. (RID) | Not applicable |

### 14.2. UN proper shipping name

| Proper Shipping Name (ADR) | Not applicable |
| Proper Shipping Name (IMDG) | Not applicable |
| Proper Shipping Name (IATA) | Not applicable |
| Proper Shipping Name (ADN) | Not applicable |
| Proper Shipping Name (RID) | Not applicable |

### 14.3. Transport hazard class(es)

| ADR | Transport hazard class(es) (ADR) | Not applicable |
| IMDG | Transport hazard class(es) (IMDG) | Not applicable |
| IATA | Transport hazard class(es) (IATA) | Not applicable |
| ADN | Transport hazard class(es) (ADN) | Not applicable |
| RID | Transport hazard class(es) (RID) | Not applicable |

### 14.4. Packing group

| Packing group (ADR) | Not applicable |
| Packing group (IMDG) | Not applicable |
| Packing group (IATA) | Not applicable |
| Packing group (ADN) | Not applicable |
| Packing group (RID) | Not applicable |

### 14.5. Environmental hazards

| Dangerous for the environment | No |
| Marine pollutant | No |
| Other information | No supplementary information available |

### 14.6. Special precautions for user

- **Overland transport**
  No data available

- **Transport by sea**
  No data available

- **Air transport**
  No data available

- **Inland waterway transport**
  No data available

- **Rail transport**
  No data available

### 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable
**SECTION 15: Regulatory information**

**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

**15.1.1. EU-Regulations**
Contains no REACH substances with Annex XVII restrictions
Contains no substance on the REACH candidate list
Contains no REACH Annex XIV substances

**15.1.2. National regulations**

**Germany**
VwVwS Annex reference : Water hazard class (WGK) 3, severe hazard to waters (Classification according to VwVwS, Annex 4)
12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BlmSchV (Hazardous Incident Ordinance)

**Netherlands**
SZW-lijst van kankerverwekkende stoffen : None of the components are listed
SZW-lijst van mutagene stoffen : None of the components are listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : None of the components are listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : None of the components are listed

**Denmark**
Class for fire hazard : Class III-1
Store unit : 50 liter
Classification remarks : Flammable according to the Danish Ministry of Justice; Emergency management guidelines for the storage of flammable liquids must be followed
Recommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product

**15.2. Chemical safety assessment**
No chemical safety assessment has been carried out

**SECTION 16: Other information**

Revision date : 07/13/2018

Full text of H- and EUH-statements:

<table>
<thead>
<tr>
<th>H</th>
<th>EUH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye Irrit. 2</td>
<td>Serious eye damage/eye irritation, Category 2</td>
</tr>
<tr>
<td>Skin Irrit. 2</td>
<td>Skin corrosion/irritation, Category 2</td>
</tr>
<tr>
<td>Skin Sens. 1</td>
<td>Skin sensitisation, Category 1</td>
</tr>
<tr>
<td>STOT SE 3</td>
<td>Specific target organ toxicity — Single exposure, Category 3, Narcosis</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>H336</td>
<td>May cause drowsiness or dizziness</td>
</tr>
</tbody>
</table>

SDS EU (REACH Annex II)

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