



# Choice 2 / eCement

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations  
Revision date: 6/26/2023 Supersedes: 1/10/2018 Version: 3.0

### SECTION 1: Identification

#### 1.1. Identification

Product form : Mixture  
Product name : Choice 2 / eCement

#### 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  
U.S.A.  
T 1-800-247-3368 or 1-847-534-6000  
[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

|   |      |                                     |
|---|------|-------------------------------------|
| 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,<br>Respiratory tract irritation | H335 | May cause respiratory irritation    |

Full text of H statements : see section 16

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

##### GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) :

Warning

Hazard statements (GHS US) :

H315 - Causes skin irritation  
H317 - May cause an allergic skin reaction  
H319 - Causes serious eye irritation  
H335 - May cause respiratory irritation

Precautionary statements (GHS US) :

P261 - Avoid breathing dust, fume, vapors.  
P264 - Wash hands thoroughly after handling  
P272 - Contaminated work clothing must not be allowed out of the workplace.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection  
P302+P352 - If on skin: Wash with plenty of water and soap  
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing.

# Choice 2 / eCement

## Safety Data Sheet

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

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 poison center/a doctor 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.

P362+P364 - Take off contaminated clothing and wash it before reuse.

P403+P233 - Store in a well-ventilated place. Keep container tightly closed.

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  |
|-----------------------------------|----------------------|---------|--|
| Glass Filler                      | CAS-No.: N/A         | 50 - 75 | Eye Irrit. 2, H319<br>STOT SE 3, H335  |
| Urethane Dimethacrylate           | CAS-No.: Proprietary | 5 - 10  | Skin Irrit. 2, H315<br>Eye Irrit. 2, H319<br>Skin Sens. 1, H317<br>STOT SE 3, H335 |
| BisGMA                            | CAS-No.: 1565-94-2   | 5 - 10  | Skin Irrit. 2, H315<br>Eye Irrit. 2, H319<br>Skin Sens. 1, H317<br>STOT SE 3, H335 |
| Triethylene Glycol Dimethacrylate | CAS-No.: 109-16-0    | 5 - 10  | Skin Sens. 1B, H317  |
| Tetrahydrofurfuryl Methacrylate   | CAS-No.: 2455-24-5   | 1 - 5   | Skin Irrit. 2, H315<br>Eye Irrit. 2A, H319<br>STOT SE 3, H335                      |

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.  |

# Choice 2 / eCement

## Safety Data Sheet

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

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

Symptoms/effects after skin contact : 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.

### 5.2. Specific hazards arising from the chemical

Hazardous decomposition products in case of fire : Toxic fumes may be released.

### 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 dust, fume, 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 : Mechanically recover the product.  
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. Avoid breathing dust, fume, vapors. Wear personal protective equipment.  
Hygiene measures : Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

# Choice 2 / eCement

## Safety Data Sheet

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

### 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

No additional information available

### 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

|  |
|--|
| <b>Hand protection:</b>  |
| Protective gloves  |
| <b>Eye protection:</b>   |
| Safety glasses   |
| <b>Skin and body protection:</b>   |
| Wear suitable protective clothing  |
| <b>Respiratory protection:</b>   |
| In case of insufficient ventilation, wear suitable respiratory equipment |

Personal protective equipment symbol(s):



## SECTION 9: Physical and chemical properties

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

|   |                     |
|---|---------------------|
| Physical state                              | : Solid             |
| Appearance                                  | : Paste.            |
| Color                                       | : Tooth             |
| Odor  | : Acrylic           |
| Odor threshold                              | : No data available |
| pH  | : No data available |
| Melting point                               | : No data available |
| Freezing point                              | : Not applicable    |
| Boiling point                               | : No data available |
| Flash point                                 | : Not applicable    |
| Relative evaporation rate (butyl acetate=1) | : No data available |
| Flammability (solid, gas)                   | : Non flammable.    |
| Vapor pressure                              | : No data available |
| Relative vapor density at 20°C              | : No data available |
| Relative density                            | : Not applicable    |
| Solubility                                  | : No data available |

# Choice 2 / eCement

## Safety Data Sheet

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

|   |                     |
|---|---------------------|
| Partition coefficient n-octanol/water (Log Pow) | : No data available |
| Auto-ignition temperature                       | : Not applicable    |
| Decomposition temperature                       | : No data available |
| Viscosity, kinematic                            | : Not applicable    |
| Viscosity, dynamic                              | : No data available |
| Explosion limits                                | : Not applicable    |
| 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 (oral)       | : Not classified |
| Acute toxicity (dermal)     | : Not classified |
| Acute toxicity (inhalation) | : Not classified |

| Tetrahydrofurfuryl Methacrylate (2455-24-5)  |  |
|--|--|
| LD50 oral rat                                | ≈ 4000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)      |
| Triethylene Glycol Dimethacrylate (109-16-0) |  |
| LD50 oral rat                                | 10837 mg/kg Source: NLM, THOMSON   |
| LD50 dermal                                  | > 2000 mg/kg body weight (US EPA, 14 day(s), Mouse, Male, Experimental value, Skin, 14 day(s)) |
| ATE US (oral)                                | 10837 mg/kg body weight  |

Skin corrosion/irritation : Causes skin irritation.

# Choice 2 / eCement

## Safety Data Sheet

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

| Tetrahydrofurfuryl Methacrylate (2455-24-5)  |   |
|--|---|
| pH   | No data available in the literature   |
| Triethylene Glycol Dimethacrylate (109-16-0) |   |
| pH   | 6.8 - 7.2   |
| Serious eye damage/irritation                | : Causes serious eye irritation.  |
| Tetrahydrofurfuryl Methacrylate (2455-24-5)  |   |
| pH   | No data available in the literature   |
| Triethylene Glycol Dimethacrylate (109-16-0) |   |
| pH   | 6.8 - 7.2   |
| Respiratory or skin sensitization            | : May cause an allergic skin reaction.  |
| Germ cell mutagenicity                       | : Not classified  |
| Carcinogenicity                              | : Not classified  |
| Reproductive toxicity                        | : Not classified  |
| STOT-single exposure                         | : May cause respiratory irritation.   |
| Glass Filler (N/A)                           |   |
| STOT-single exposure                         | May cause respiratory irritation.   |
| Urethane Dimethacrylate (Proprietary)        |   |
| STOT-single exposure                         | May cause respiratory irritation.   |
| Tetrahydrofurfuryl Methacrylate (2455-24-5)  |   |
| STOT-single exposure                         | May cause respiratory irritation.   |
| BisGMA (1565-94-2)                           |   |
| STOT-single exposure                         | May cause respiratory irritation.   |
| STOT-repeated exposure                       | : Not classified  |
| Triethylene Glycol Dimethacrylate (109-16-0) |   |
| LOAEC (inhalation, rat, gas, 90 days)        | 350 ppm Animal: rat, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study), Remarks on results: other:   |
| NOAEL (oral, rat, 90 days)                   | 1000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test) |
| NOAEC (inhalation, rat, gas, 90 days)        | 100 ppm Animal: rat, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study), Remarks on results: other:   |
| Aspiration hazard                            | : Not classified  |
| Viscosity, kinematic                         | : Not applicable  |
| Tetrahydrofurfuryl Methacrylate (2455-24-5)  |   |
| Viscosity, kinematic                         | 2.74 mm <sup>2</sup> /s (20 °C, OECD 114: Viscosity of Liquids)   |
| Symptoms/effects after skin contact          | : 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.

# Choice 2 / eCement

## Safety Data Sheet

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

| <b>Tetrahydrofurfuryl Methacrylate (2455-24-5)</b>  |   |
|---|---|
| LC50 - Fish [1]                                     | 34.7 mg/l Test organisms (species): Pimephales promelas   |
| EC50 - Crustacea [1]                                | 97.3 mg/l (Invertebrata, Fresh water)   |
| LC50 - Fish [2]                                     | 60.9 mg/l Test organisms (species): Pimephales promelas   |
| EC50 72h - Algae [1]                                | > 100 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)   |
| ErC50 algae   | > 100 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Desmodesmus subspicatus, Static system, Fresh water, Experimental value, Nominal concentration)         |
| LOEC (chronic)                                      | 97.3 mg/l Test organisms (species): Daphnia magna Duration: '21 d'  |
| NOEC (chronic)                                      | 37.2 mg/l Test organisms (species): Daphnia magna Duration: '21 d'  |
| <b>BisGMA (1565-94-2)</b>                           |   |
| LC50 - Fish [1]                                     | 0.537 mg/l Source: ECOSAR   |
| <b>Triethylene Glycol Dimethacrylate (109-16-0)</b> |   |
| LC50 - Fish [1]                                     | 16.4 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)  |
| EC50 72h - Algae [1]                                | > 100 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)                        |
| EC50 72h - Algae [2]                                | 72.8 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)                         |
| ErC50 algae   | > 100 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Nominal concentration) |
| LOEC (chronic)                                      | 100 mg/l Test organisms (species): Daphnia magna Duration: '21 d'   |
| NOEC (chronic)                                      | 32 mg/l Test organisms (species): Daphnia magna Duration: '21 d'  |
| <b>12.2. Persistence and degradability</b>          |   |
| <b>Tetrahydrofurfuryl Methacrylate (2455-24-5)</b>  |   |
| Persistence and degradability                       | Readily biodegradable in water.   |
| <b>BisGMA (1565-94-2)</b>                           |   |
| Persistence and degradability                       | Biodegradability in water: no data available.   |
| <b>Triethylene Glycol Dimethacrylate (109-16-0)</b> |   |
| Persistence and degradability                       | Readily biodegradable in water.   |
| <b>12.3. Bioaccumulative potential</b>              |   |
| <b>Tetrahydrofurfuryl Methacrylate (2455-24-5)</b>  |   |
| Partition coefficient n-octanol/water (Log Pow)     | 1.76 (Experimental value, EU Method A.8: Partition Coefficient, 22.6 °C)  |
| Bioaccumulative potential                           | Low potential for bioaccumulation (Log Kow < 4).  |
| <b>BisGMA (1565-94-2)</b>                           |   |
| Partition coefficient n-octanol/water (Log Pow)     | 4.94 (Estimated value)  |
| Bioaccumulative potential                           | No bioaccumulation data available.  |

# Choice 2 / eCement

## Safety Data Sheet

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

| Triethylene Glycol Dimethacrylate (109-16-0)    |  |
|---|--|
| Partition coefficient n-octanol/water (Log Pow) | 2.3 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method) |
| Bioaccumulative potential                       | Low potential for bioaccumulation (Log Kow < 4).   |

### 12.4. Mobility in soil

| Tetrahydrofurfuryl Methacrylate (2455-24-5)                |  |
|--|--|
| Surface tension  | No data available in the literature                          |
| Organic Carbon Normalized Adsorption Coefficient (Log Koc) | 1.402 - 1.765 (log Koc, SRC PCKOCWIN v2.0, Calculated value) |
| Ecology - soil   | Highly mobile in soil.                                       |

  

| Triethylene Glycol Dimethacrylate (109-16-0)               |   |
|--|---|
| Organic Carbon Normalized Adsorption Coefficient (Log Koc) | 1.89 (log Koc, SRC PCKOCWIN v2.0, Calculated value) |
| Ecology - soil   | Highly mobile in soil.                              |

### 12.5. Other adverse effects

No additional information available

## 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

In accordance with DOT / TDG / IMDG / IATA

### 14.1. UN number

Not regulated for transport

### 14.2. UN proper shipping name

Proper Shipping Name (DOT) : Not applicable  
Proper Shipping Name (TDG) : Not applicable  
Proper Shipping Name (IMDG) : Not applicable  
Proper Shipping Name (IATA) : Not applicable

### 14.3. Transport hazard class(es)

#### DOT

Transport hazard class(es) (DOT) : Not applicable

#### TDG

Transport hazard class(es) (TDG) : Not applicable

#### IMDG

Transport hazard class(es) (IMDG) : Not applicable



# Choice 2 / eCement

## Safety Data Sheet

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

### IATA

Transport hazard class(es) (IATA) : Not applicable

### 14.4. Packing group

Packing group (DOT) : Not applicable  
Packing group (TDG) : Not applicable  
Packing group (IMDG) : Not applicable  
Packing group (IATA) : Not applicable

### 14.5. Environmental hazards

Other information : No supplementary information available.

### 14.6. Special precautions for user

#### DOT

No data available

#### TDG

No data available

#### IMDG

No data available

#### IATA

No data available

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory, except for:

|                         |                     |          |
|-------------------------|---------------------|----------|
| Glass Filler            | CAS-No. N/A         | 50 - 75% |
| Urethane Dimethacrylate | CAS-No. Proprietary | 5 - 10%  |

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

### 15.2. International regulations

#### CANADA

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

Listed on the Canadian DSL (Domestic Substances List)

##### BisGMA (1565-94-2)

Listed on the Canadian DSL (Domestic Substances List)

# Choice 2 / eCement

## Safety Data Sheet

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

### Triethylene Glycol Dimethacrylate (109-16-0)

Listed on the Canadian DSL (Domestic Substances List)

#### EU-Regulations

No additional information available

#### National regulations

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

Listed on INSQ (Mexican National Inventory of Chemical Substances)

### Triethylene Glycol Dimethacrylate (109-16-0)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

#### 15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

## SECTION 16: Other information

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

Revision date : 06/26/2023

#### Full text of H-phrases

|      |                                     |
|------|-------------------------------------|
| H315 | Causes skin irritation              |
| H317 | May cause an allergic skin reaction |
| H319 | Causes serious eye irritation       |
| H335 | May cause respiratory irritation    |

#### Indication of changes:

| Section | Changed item                           | Change   | Comments |
|---------|--|----------|----------|
|         | Revision date                          | Added    |          |
|         | Precautionary statements (GHS US)      | Modified |          |
|         | Hazard statements (GHS US)             | Modified |          |
|         | Supersedes                             | Added    |          |
|         | Issue date                             | Removed  |          |
|         | Signal word (GHS US)                   | Added    |          |
| 2.1     | GHS-US classification                  | Modified |          |
| 3       | Composition/Information on ingredients | Modified |          |
| 6       | Emergency procedures                   | Modified |          |
| 7.1     | Precautions for safe handling          | Modified |          |

Safety Data Sheet (SDS), USA

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.