



# Fortify Plus / Modeling Resin

## Safety Data Sheet

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

Date of issue: 07/25/2017

Version: 1.0

### SECTION 1: Identification

#### 1.1. Identification

Product form : Mixture  
Product name : Fortify Plus / Modeling 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 847.534.6000 - F 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 3	H226	Flammable liquid and vapor
Skin corrosion/irritation Category 2	H315	Causes skin irritation
Serious eye damage/eye irritation Category 2	H319	Causes serious eye irritation
Respiratory sensitization, Category 1	H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
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) :



Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

H226 - Flammable liquid and vapor  
H315 - Causes skin irritation  
H317 - May cause an allergic skin reaction  
H319 - Causes serious eye irritation  
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled

Precautionary statements (GHS-US) :

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking  
P233 - Keep container tightly closed  
P240 - Ground/Bond container and receiving equipment  
P241 - Use explosion-proof ventilating equipment  
P242 - Use only non-sparking tools  
P243 - Take precautionary measures against static discharge  
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  
P284 - Wear appropriate mask  
P302+P352 - If on skin: Wash with plenty of Wash skin with soap and water  
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower

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P304+P341 - If inhaled: If breathing is difficult, 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  
 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  
 P342+P311 - If experiencing respiratory symptoms: Call a POISON CENTER, Call a doctor  
 P362+P364 - Take off contaminated clothing and wash it before reuse  
 P363 - Wash contaminated clothing before reuse  
 P370+P378 - In case of fire: Use dry sand, extinguishing powder, foam, carbon dioxide (CO2) to extinguish  
 P403+P235 - Store in a well-ventilated place. Keep cool  
 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.) 72869-86-4	20 - 40	Skin Irrit. 2, H315 Resp. Sens. 1, H334
Amorphous Silica	(CAS-No.) 112945-52-5	30 - 50	Eye Irrit. 2A, H319 Resp. Sens. 1, H334
Ethoxylated Bis A Dimethacrylate	(CAS-No.) 41637-38-1	10 - 30	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317
Triethylene Glycol Dimethacrylate	(CAS-No.) 109-16-0	5 - 20	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317
Tetrahydrofurfuryl Methacrylate	(CAS-No.) 2455-24-5	1 - 5	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Skin Sens. 1, H317 STOT SE 3, H335
Bisphenol "A" Dimethacrylate	(CAS-No.) 3253-39-2	1 - 5	Skin Irrit. 2, H315 Eye Irrit. 2, H319 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 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. If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician. If experiencing respiratory symptoms: Call a poison center or a doctor.  
 First-aid measures after skin contact : Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention. Specific treatment (see First aid measures on this label). If skin irritation or rash occurs: Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.  
 First-aid measures after eye contact : If eye irritation persists: Get medical advice/attention. 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 inhalation : May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

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Symptoms/effects after skin contact : Causes skin irritation. Irritation. May cause an allergic skin reaction.  
Symptoms/effects after eye contact : Causes serious eye irritation. 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 : Flammable liquid and vapor.  
Reactivity : Flammable liquid and vapor.

### 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. No open flames, no sparks, and no smoking. 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. 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 : Ensure good ventilation of the work station. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapors may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Avoid contact with skin and eyes. Avoid breathing mist, vapors.  
Hygiene measures : Wash hands thoroughly after handling. 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

Technical measures : Ground/bond container and receiving equipment.  
Storage conditions : Store in a well-ventilated place. Keep cool. Keep container tightly closed.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Urethane Dimethacrylate (72869-86-4)

Not applicable

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

Not applicable

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### Ethoxylated Bis A Dimethacrylate (41637-38-1)

Not applicable

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

Not applicable

### Bisphenol "A" Dimethacrylate (3253-39-2)

Not applicable

### Amorphous Silica (112945-52-5)

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:

Safety glasses

### Skin and body protection:

Wear suitable protective clothing

### Respiratory protection:

In case of inadequate ventilation wear respiratory protection. Wear respiratory protection

## SECTION 9: Physical and chemical properties

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

Physical state	: Liquid
Appearance	: Flowable Paste.
Color	: Pale 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

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Oxidizing properties : No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Flammable liquid and vapor.

### 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

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

Urethane Dimethacrylate (72869-86-4)	
LD50 oral rat	N/A
LD50 dermal rat	N/A
LD50 dermal rabbit	N/A
LC50 inhalation rat (ppm)	N/A

Triethylene Glycol Dimethacrylate (109-16-0)	
LD50 oral rat	10837 mg/kg (Rat)
ATE US (oral)	10837 mg/kg body weight

Ethoxylated Bis A Dimethacrylate (41637-38-1)	
LD50 oral rat	N/A
LD50 dermal rat	N/A
LD50 dermal rabbit	N/A
LC50 inhalation rat (ppm)	N/A

Bisphenol "A" Dimethacrylate (3253-39-2)	
LD50 oral rat	> 5000 mg/kg (Rat)

Amorphous Silica (112945-52-5)	
LD50 oral rat	3160 mg/kg (Rat)
LD50 dermal rabbit	> 5000 mg/kg (Rabbit)
ATE US (oral)	3160 mg/kg body weight

Skin corrosion/irritation : Causes skin irritation.  
Serious eye damage/irritation : Causes serious eye irritation.  
Respiratory or skin sensitization : May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.  
Germ cell mutagenicity : Not classified  
Carcinogenicity : Not classified

Urethane Dimethacrylate (72869-86-4)	
IARC group	4 - Probably not carcinogenic to humans

Ethoxylated Bis A Dimethacrylate (41637-38-1)	
IARC group	4 - Probably not carcinogenic to humans

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<b>Amorphous Silica (112945-52-5)</b>	
IARC group	3 - Not classifiable

Reproductive toxicity : Not classified

Specific target organ toxicity – single exposure : Not classified

<b>Urethane Dimethacrylate (72869-86-4)</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

<b>Ethoxylated Bis A Dimethacrylate (41637-38-1)</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 (72869-86-4)</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

<b>Ethoxylated Bis A Dimethacrylate (41637-38-1)</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 after inhalation : May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Symptoms/effects after skin contact : Causes skin irritation. Irritation. May cause an allergic skin reaction.

Symptoms/effects after eye contact : Causes serious eye irritation. 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>Triethylene Glycol Dimethacrylate (109-16-0)</b>	
Persistence and degradability	Biodegradability in water: no data available. Forming sediments in water.

<b>Tetrahydrofurfuryl Methacrylate (2455-24-5)</b>	
Persistence and degradability	Biodegradability in water: no data available. No (test) data on mobility of the substance available.

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<b>Bisphenol "A" Dimethacrylate (3253-39-2)</b>	
Persistence and degradability	Biodegradability in soil: no data available.
<b>Amorphous Silica (112945-52-5)</b>	
Persistence and degradability	Biodegradability: not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable

### 12.3. Bioaccumulative potential

<b>Triethylene Glycol Dimethacrylate (109-16-0)</b>	
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
<b>Tetrahydrofurfuryl Methacrylate (2455-24-5)</b>	
Log Pow	1.3
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
<b>Bisphenol "A" Dimethacrylate (3253-39-2)</b>	
Log Pow	5.3 (QSAR)
Bioaccumulative potential	No bioaccumulation data available.
<b>Amorphous Silica (112945-52-5)</b>	
Bioaccumulative potential	Not bioaccumulative.

### 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.  
Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.  
Additional information : Flammable vapors may accumulate in the container.

## SECTION 14: Transport information

### Department of Transportation (DOT)

In accordance with DOT

Other information : No supplementary information available.

### TDG

### Transport by sea

### Air transport

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

<b>Triethylene Glycol Dimethacrylate (109-16-0)</b>
Listed on the United States TSCA (Toxic Substances Control Act) inventory

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### 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

#### National regulations

No additional information available

### 15.3. US State regulations

No additional information available

## SECTION 16: Other information

Revision date:02/05/2016

Full text of H-phrases:

H226	Flammable liquid and vapor
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H335	May cause respiratory irritation

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*