

### SECTION 1: Identification

#### 1.1. Identification

Product form : Mixture  
Product name : Light Bond Filled Sealant with Fluoride

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

Use of the substance/mixture : For Rx Only

#### 1.3. Supplier

##### Manufacturer

Reliance Orthodontic Products, Inc. 1540 West Thorndale Ave.  
Itasca, IL 60143 USA  
630-773-4009, (800) 323-4348, during normal business hours  
[www.relianceorthodontics.com](http://www.relianceorthodontics.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 sensitisation, Category 1	H317 May cause an allergic skin reaction.
Hazardous to the aquatic environment — Acute Hazard, Category 3	H402 Harmful to aquatic life

Full text of H statements : see section 16

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

##### GHS US labelling

Hazard pictograms (GHS US) :



Signal word (GHS US) :

Warning

Hazard statements (GHS US) :

H227 - Combustible liquid  
H315 - Causes skin irritation.  
H317 - May cause an allergic skin reaction.  
H319 - Causes serious eye irritation.  
H402 - Harmful to aquatic life

Precautionary statements (GHS US) :

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P261 - Avoid breathing vapours.  
P264 - Wash hands thoroughly after handling  
P272 - Contaminated work clothing must not be allowed out of the workplace  
P273 - Avoid release to the environment.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection  
P302+P352 - If on skin: Wash with plenty of water and soap  
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.  
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, carbon dioxide (CO<sub>2</sub>), dry sand to extinguish  
P403+P235 - Store in a well-ventilated place. Keep cool.  
P501 - Dispose in a safe manner in accordance with local/national regulations

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### 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
Triethylene Glycol Dimethacrylate	(CAS-No.) 109-16-0	10 - 30	Eye Irrit. 2, H319 Skin Sens. 1, H317
Urethane Dimethacrylate	(CAS-No.) Proprietary	10 - 30	Skin Irrit. 2, H315 Eye Irrit. 2B, H320 STOT SE 3, H336
Ethoxylated Bis A Dimethacrylate	(CAS-No.) 41637-38-1	5 - 10	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 STOT SE 3, H335
Tetrahydrofurfuryl Methacrylate	(CAS-No.) 2455-24-5	5 - 10	Flam. Liq. 4, H227 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Acute 3, H402
BisGMA	(CAS-No.) 1565-94-2	5 - 10	Skin Irrit. 2, H315 Eye Irrit. 2B, H320 Skin Sens. 1, H317

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 or a doctor if you feel unwell. Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Allow affected person to breathe fresh air. Allow the victim to rest.
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. Wash with plenty of water/.... Wash contaminated clothing before reuse. Specific treatment (see First aid measures on this label).
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. Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.
First-aid measures after ingestion	: Rinse mouth. Call a poison center or a doctor if you feel unwell. Do NOT induce vomiting. Obtain emergency medical attention.

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

Potential adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.
Symptoms/effects after inhalation	: May cause an allergic skin reaction.
Symptoms/effects after skin contact	: Irritation. May cause an allergic skin reaction. Causes skin irritation.
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. Sand.
Unsuitable extinguishing media	: Do not use a heavy water stream.

### 5.2. Specific hazards arising from the chemical

Fire hazard	: Combustible liquid.
Explosion hazard	: May form flammable/explosive vapour-air mixture.

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

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent firefighting water from entering the environment.
- Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing. Do not enter fire area without proper protective equipment, including respiratory protection.

## SECTION 6: Accidental release measures

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

- General measures : Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking.

#### 6.1.1. For non-emergency personnel

- Emergency procedures : Ventilate spillage area. Avoid contact with skin, eyes and clothing. Avoid breathing dust/fume/vapours. Evacuate unnecessary personnel.

#### 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". Equip cleanup crew with proper protection.
- Emergency procedures : Ventilate area.

### 6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

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

- Methods for cleaning up : Take up liquid spill into absorbent material. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.
- 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. See Heading 8. Exposure controls and personal protection.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Additional hazards when processed : Handle empty containers with care because residual vapours are flammable. Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- Precautions for safe handling : Ensure good ventilation of the work station. Do not get in eyes, on skin, or on clothing. Wear personal protective equipment. Avoid breathing dust/fume/vapours. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. No open flames. 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. Wash hands thoroughly after handling.

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

- Technical measures : Proper grounding procedures to avoid static electricity should be followed.
- Storage conditions : Store in a well-ventilated place. Keep cool. Keep container closed when not in use. Protect from sunlight.
- Incompatible products : Strong bases. Strong acids.
- Incompatible materials : Sources of ignition. Direct sunlight. Heat sources.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

<b>Light Bond Filled Sealant with Fluoride</b>
No additional information available
<b>Triethylene Glycol Dimethacrylate (109-16-0)</b>
No additional information available
<b>Urethane Dimethacrylate (Proprietary)</b>
No additional information available

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### BisGMA (1565-94-2)

No additional information available

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

No additional information available

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

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

### Personal protective equipment:

Avoid all unnecessary exposure.

#### Hand protection:

Protective gloves. Wear protective gloves/protective clothing/eye protection/face protection protective gloves

#### Eye protection:

Safety glasses. Chemical goggles or safety glasses

#### Skin and body protection:

Wear suitable protective clothing

#### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. Wear appropriate mask

### Other information:

Do not eat, drink or smoke during use.

## SECTION 9: Physical and chemical properties

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

Physical state : Liquid  
Appearance : Viscous Liquid.  
Colour : Pale Yellow  
Odour : Acrylic  
Odour 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 (butylacetate=1) : No data available  
Flammability (solid, gas) : Not applicable.  
Vapour pressure : No data available  
Relative vapour 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  
Explosive limits : No data available

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Explosive properties : No data available  
Oxidising 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. Combustible liquid. May form flammable/explosive vapour-air mixture.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use. Not established.

### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7). Direct sunlight. Extremely high or low temperatures. Open flame. Overheating. Heat. Sparks.

### 10.5. Incompatible materials

Strong acids. Strong bases.

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. fume. Carbon monoxide. Carbon dioxide. May release flammable gases.

## 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

Triethylene Glycol Dimethacrylate (109-16-0)	
LD50 oral rat	10837 mg/kg
LD50 dermal rat	N/A
LD50 dermal rabbit	N/A
LC50 inhalation rat (ppm)	N/A
ATE US (oral)	10837 mg/kg bodyweight

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

Ethoxylated Bis A Dimethacrylate (41637-38-1)	
LD50 oral rat	> 2000 mg/kg bodyweight (OECD 423: Acute Oral Toxicity – Acute Toxic Class Method, Rat, Female, Read-across, Oral, 14 day(s))
LD50 dermal rat	> 2000 mg/kg bodyweight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Read-across, Dermal)
LD50 dermal rabbit	N/A
LC50 inhalation rat (ppm)	N/A

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 : Not classified

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<b>Triethylene Glycol Dimethacrylate (109-16-0)</b>	
LOAEL (oral, rat)	N/A mg/kg bodyweight
LOAEL (dermal, rat/rabbit)	N/A mg/kg bodyweight
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>Urethane Dimethacrylate (Proprietary)</b>	
LOAEL (oral, rat)	N/A mg/kg bodyweight
LOAEL (dermal, rat/rabbit)	N/A mg/kg bodyweight
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
STOT-single exposure	May cause drowsiness or dizziness.

<b>Tetrahydrofurfuryl Methacrylate (2455-24-5)</b>	
STOT-single exposure	May cause respiratory irritation.

<b>Ethoxylated Bis A Dimethacrylate (41637-38-1)</b>	
LOAEL (oral, rat)	N/A mg/kg bodyweight
LOAEL (dermal, rat/rabbit)	N/A mg/kg bodyweight
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
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure : Not classified

<b>Triethylene Glycol Dimethacrylate (109-16-0)</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>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

<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

Viscosity, kinematic : No data available

Potential adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

Symptoms/effects after inhalation : May cause an allergic skin reaction.

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

Symptoms/effects after eye contact : Eye irritation.

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### SECTION 12: Ecological information

#### 12.1. Toxicity

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

Tetrahydrofurfuryl Methacrylate (2455-24-5)	
LC50 fish 1	34.7 mg/l (96 h, Pimephales promelas, Flow-through system)

#### 12.2. Persistence and degradability

Light Bond Filled Sealant with Fluoride	
Persistence and degradability	Not established.
Triethylene Glycol Dimethacrylate (109-16-0)	
Persistence and degradability	Biodegradability in water: no data available.
BisGMA (1565-94-2)	
Persistence and degradability	Biodegradability in water: no data available.
Tetrahydrofurfuryl Methacrylate (2455-24-5)	
Persistence and degradability	Biodegradability in water: no data available.
Ethoxylated Bis A Dimethacrylate (41637-38-1)	
Persistence and degradability	Not readily biodegradable in water.

#### 12.3. Bioaccumulative potential

Light Bond Filled Sealant with Fluoride	
Bioaccumulative potential	Not established.
Triethylene Glycol Dimethacrylate (109-16-0)	
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
BisGMA (1565-94-2)	
Log Pow	4.94 (Estimated value)
Bioaccumulative potential	No bioaccumulation data available.
Tetrahydrofurfuryl Methacrylate (2455-24-5)	
Log Pow	1.3
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
Ethoxylated Bis A Dimethacrylate (41637-38-1)	
Log Pow	5.30 - 5.62 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method)
Bioaccumulative potential	High potential for bioaccumulation (Log Kow > 5).

#### 12.4. Mobility in soil

Tetrahydrofurfuryl Methacrylate (2455-24-5)	
Ecology - soil	No (test)data on mobility of the substance available.
Ethoxylated Bis A Dimethacrylate (41637-38-1)	
Log Koc	2.56 - 3.88 (log Koc, Calculated value)
Ecology - soil	Low potential for mobility in soil.

#### 12.5. Other adverse effects

Other information : Avoid release to the environment.

### 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. Dispose in a safe manner in accordance with local/national regulations.  
Additional information : Handle empty containers with care because residual vapours are flammable.  
Ecology - waste materials : Avoid release to the environment.

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### SECTION 14: Transport information

#### Department of Transportation (DOT)

In accordance with DOT

Other information : No supplementary information available.

#### Transportation of Dangerous Goods

#### Transport by sea

#### Air transport

### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory except for:

Urethane Dimethacrylate	CAS-No. Proprietary	10 - 30%
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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.

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

EPA TSCA Regulatory Flag	XU - XU - indicates a substance exempt from reporting under the Chemical Data Reporting Rule, (40 CFR 711).
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#### 15.2. International regulations

##### CANADA

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

Listed on the Canadian DSL (Domestic Substances List)

#### Urethane Dimethacrylate (Proprietary)

Not listed on the Canadian DSL (Domestic Substances List)/NDSL (Non-Domestic Substances List)

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

Listed on the Canadian DSL (Domestic Substances List)

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

Listed on the Canadian DSL (Domestic Substances List)

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

Listed on the Canadian DSL (Domestic Substances List)

#### EU-Regulations

##### National regulations

No additional information available

#### 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



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### SECTION 16: Other information

Other information : None.

Full text of H-statements:

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.*