

# Light Bond Sealant with and without Fluoride

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations  
Date of issue : 01/25/2017 Version: 8

### SECTION 1: Identification

#### 1.1. Identification

Product form : Mixture  
Product name : Light Bond Sealant with and without 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, during normal business hours

##### EC Representative:

Emergo Europe, Molenstraat 15, 2513 BH, The Hague, The Netherlands

**Australian Sponsor:** Emergo Australia, 201 Sussex St. Darling Park, Tower II, Level 20, Sydney, NSW 2000 Australia

#### 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 2B	H320	Causes eye irritation
Respiratory sensitisation 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) :



GHS02

GHS08

Hazard statements (GHS-US) :

H226 - Flammable liquid and vapor  
H315 - Causes skin irritation  
H317 - May cause an allergic skin reaction  
H320 - Causes eye irritation  
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled

Precautionary statements (GHS-US) :

P333+P313 - If skin irritation or rash occurs: Get medical advice/attention  
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking  
P233 - Keep container tightly closed  
P264 - Wash hands thoroughly after handling  
P304+P341 - If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing  
P332+P313 - If skin irritation occurs: Get medical advice/attention  
P337+P313 - If eye irritation persists: Get medical advice/attention  
P403+P235 - Store in a well-ventilated place. Keep cool

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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. Substance

Not applicable

### 3.2. Mixture

Name	Product identifier	%	GHS-US classification
Urethane Dimethacrylate	(CAS No) 72869-86-4	20 - 40	Skin Irrit. 2, H315 Resp. Sens. 1, H334
Triethylene Glycol Dimethacrylate	(CAS No) 109-16-0	20 - 40	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317
Bisphenol A Diglycidylmethacrylate	(CAS No) 1565-94-2	15 - 35	Skin Irrit. 2, H315 Eye Irrit. 2A, H319
Tetrahydrofurfuryl Methacrylate	(CAS No) 2455-24-5	5 - 15	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Skin Sens. 1, H317 STOT SE 3, H335
<b>With Fluoride</b>			
Fluoride	(CAS No) Proprietary	1 - 5	Skin Irrit. 2, H315 Eye Irrit. 2B, H320 Resp. Sens. 1, H334

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	: 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 victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell. 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.
First-aid measures after skin contact	: Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. 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).
First-aid measures after eye contact	: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. 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	: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

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

Symptoms/injuries after inhalation	: May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.
Symptoms/injuries after skin contact	: Causes skin irritation.
Symptoms/injuries after eye contact	: Causes serious eye irritation. Causes eye irritation.

### 4.3. Immediate medical attention and special treatment, if necessary

No additional information available

## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	: Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media	: Do not use a heavy water stream.

### 5.2. Specific hazards arising from the chemical

Fire hazard	: Flammable liquid and vapor.
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Explosion hazard : May form flammable/explosive vapor-air mixture.

### 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. Avoid (reject) fire-fighting water to enter environment.  
Protection during firefighting : 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 naked lights. No smoking.

#### 6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

#### 6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.  
Emergency procedures : Ventilate area.

### 6.2. Environmental precautions

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 : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

### 6.4. Reference to other sections

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 vapors are flammable.  
Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Use only outdoors or in a well-ventilated area. No naked lights. No smoking. Take precautionary measures against static discharge. Use only non-sparking tools. Avoid breathing mist, vapors.  
Hygiene measures : Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

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

Storage conditions : Keep container tightly closed.  
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

#### Bisphenol A Diglycidylmethacrylate (1565-94-2)

Not applicable

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

Not applicable

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

Not applicable

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

Not applicable

#### Fluoride ( Proprietary)

Not applicable

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### 8.2. Appropriate engineering controls

No additional information available

### 8.3. Individual protection measures/Personal protective equipment

#### Personal protective equipment:

Avoid all unnecessary exposure.

#### Hand protection:

Wear protective gloves

#### Eye protection:

Chemical goggles or safety glasses.

#### Skin and body protection:

Wear suitable protective clothing

#### Respiratory protection:

In case of inadequate ventilation wear respiratory protection

#### Other information:

When using, do not eat, drink or smoke.

## SECTION 9: Physical and chemical properties

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

Physical state	: Liquid
Appearance	: Viscous Liquid.
Color	: Clear pale yellow
Odor	: Acrylic
Odor threshold	: No data available
pH	: No data available
Melting point	: No data available
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)	: No data available.
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
Oxidizing properties	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

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### 10.2. Chemical stability

Flammable liquid and vapor. May form flammable/explosive vapor-air mixture.

### 10.3. Possibility of hazardous reactions

Not established.

### 10.4. Conditions to avoid

Extremely high or low temperatures. Open flame. Overheating. Direct sunlight. Heat. Sparks.

### 10.5. Incompatible materials

strong acids. Strong bases.

### 10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide. May release flammable gases.

## 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
LD50 dermal rat	N/A
LD50 dermal rabbit	N/A
LC50 inhalation rat (ppm)	N/A
ATE US (oral)	10837.000 mg/kg body weight

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

Skin corrosion/irritation : Causes skin irritation.  
Serious eye damage/irritation : Causes 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  
Based on available data, the classification criteria are not met  
Carcinogenicity : Not classified

Urethane Dimethacrylate (72869-86-4)	
IARC group	4 - Probably Not Carcinogenic

Fluoride ( Proprietary)	
IARC group	4 - Probably Not Carcinogenic

Reproductive toxicity : Not classified  
Based on available data, the classification criteria are not met  
Specific target organ toxicity (single exposure) : Not classified

Urethane Dimethacrylate (72869-86-4)	
LOAEL (oral,rat)	N/A mg/kg body weight
LOAEL (dermal,rat/rabbit)	N/A mg/kg body weight
LOAEL (inhalation,rat,gas)	N/A ppmV/4h
LOAEL (inhalation,rat,vapour )	N/A mg/l/4h

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<b>Urethane Dimethacrylate (72869-86-4)</b>	
LOAEL (inhalation, rat, dust/mist/fume)	N/A mg/l/4h
<b>Triethylene Glycol Dimethacrylate (109-16-0)</b>	
LOAEL (oral, rat)	N/A mg/kg body weight
LOAEL (dermal, rat/rabbit)	N/A mg/kg body weight
LOAEL (inhalation, rat, gas)	N/A ppmV/4h
LOAEL (inhalation, rat, vapour )	N/A mg/l/4h
LOAEL (inhalation, rat, dust/mist/fume)	N/A mg/l/4h
<b>Fluoride ( Proprietary)</b>	
LOAEL (oral, rat)	N/A mg/kg body weight
LOAEL (dermal, rat/rabbit)	N/A mg/kg body weight
LOAEL (inhalation, rat, gas)	N/A ppmV/4h
LOAEL (inhalation, rat, vapour )	N/A mg/l/4h
LOAEL (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
LOAEL (inhalation, rat, gas, 90 days)	N/A ppmV/6h/day
LOAEL (inhalation, rat, vapour, 90 days)	N/A mg/l/6h/day
LOAEL (inhalation, rat, dust/mist/fume, 90 days)	N/A mg/l/6h/day
<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
LOAEL (inhalation, rat, gas, 90 days)	N/A ppmV/6h/day
LOAEL (inhalation, rat, vapour, 90 days)	N/A mg/l/6h/day
LOAEL (inhalation, rat, dust/mist/fume, 90 days)	N/A mg/l/6h/day
<b>Fluoride ( 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
LOAEL (inhalation, rat, gas, 90 days)	N/A ppmV/6h/day
LOAEL (inhalation, rat, vapour, 90 days)	N/A mg/l/6h/day
LOAEL (inhalation, rat, dust/mist/fume, 90 days)	N/A mg/l/6h/day

Aspiration hazard : Not classified

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

Symptoms/injuries after inhalation : May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.

Symptoms/injuries after skin contact : Causes skin irritation.

Symptoms/injuries after eye contact : Causes serious eye irritation. Causes eye irritation.

## SECTION 12: Ecological information

### 12.1. Toxicity

<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>Light Bond Sealant with and without Fluoride</b>	
Persistence and degradability	Not established.
<b>Bisphenol A Diglycidylmethacrylate (1565-94-2)</b>	
Persistence and degradability	Biodegradability in water: no data available.

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<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.

### 12.3. Bioaccumulative potential

<b>Light Bond Sealant with and without Fluoride</b>	
Bioaccumulative potential	Not established.

<b>Bisphenol A Diglycidylmethacrylate (1565-94-2)</b>	
Log Pow	4.94 (Estimated value)
Bioaccumulative potential	No bioaccumulation data available.

<b>Tetrahydrofurfuryl Methacrylate (2455-24-5)</b>	
Log Pow	1.3
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

### 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.  
Other information : Avoid release to the environment.

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

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 vapors are flammable.  
Ecology - waste materials : Avoid release to the environment.

## 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>Bisphenol A Diglycidylmethacrylate (1565-94-2)</b>
Listed on the United States TSCA (Toxic Substances Control Act) inventory

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

<b>Tetrahydrofurfuryl Methacrylate (2455-24-5)</b>
Listed on the United States TSCA (Toxic Substances Control Act) inventory

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### 15.2. International regulations

#### CANADA

##### Bisphenol A Diglycidylmethacrylate (1565-94-2)

Listed on the Canadian DSL (Domestic Substances List) inventory.

#### 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

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : None.

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
H320	Causes 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*