

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, (800) 323-4348, during normal business hours
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.
Specific target organ toxicity — Single exposure, Category 3, Narcosis	H336 May cause drowsiness or dizziness.
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.
H336 - May cause drowsiness or dizziness.
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
P271 - Use only outdoors or in a well-ventilated area.
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
P304+P340 - If inhaled: 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.
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.

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P363 - Wash contaminated clothing before reuse.
P370+P378 - In case of fire: Use carbon dioxide (CO₂), dry sand, extinguishing powder, nitrogen to extinguish
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
P403+P235 - Store in a well-ventilated place. Keep cool.
P405 - Store locked up.
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.) Proprietary	30 - 50	Skin Irrit. 2, H315 Eye Irrit. 2B, H320 STOT SE 3, H336
Triethylene Glycol Dimethacrylate	(CAS-No.) 109-16-0	10 - 30	Eye Irrit. 2, H319 Skin Sens. 1, H317
BisGMA	(CAS-No.) 1565-94-2	10 - 30	Skin Irrit. 2, H315 Eye Irrit. 2B, H320 Skin Sens. 1, H317
Tetrahydrofurfuryl Methacrylate	(CAS-No.) 2455-24-5	10-20	Flam. Liq. 4, H227 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Acute 3, H402
Fluoride	(CAS No) Proprietary (EC no) Proprietary	1 - 5	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 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 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. Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
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 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	: May cause drowsiness or dizziness.
Symptoms/effects after inhalation	: May cause an allergic skin reaction. May cause drowsiness or dizziness.
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.

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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.

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 breathing fume/vapours. Avoid contact with skin, eyes and clothing. 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. Avoid breathing fume/vapors.
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 : Use only outdoors or in a well-ventilated area. Avoid breathing fume/vapours. Do not get in eyes, on skin, or on clothing. Wear personal protective equipment. 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 : Keep container closed when not in use. Protect from sunlight. Store in a well-ventilated place. Keep cool.
Incompatible products : Strong bases. Strong acids.
Incompatible materials : Sources of ignition. Direct sunlight. Heat sources.

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Light Bond Sealant with Fluoride
No additional information available
Urethane Dimethacrylate (Proprietary)
No additional information available
BisGMA (1565-94-2)
No additional information available
Tetrahydrofurfuryl Methacrylate (2455-24-5)
No additional information available
Triethylene Glycol Dimethacrylate (109-16-0)
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. Where exposure through inhalation may occur from use, respiratory protection equipment is recommended

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

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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
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

Urethane Dimethacrylate (Proprietary)	
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 mg/kg bodyweight

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

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STOT-single exposure : May cause drowsiness or dizziness.

Urethane Dimethacrylate (Proprietary)	
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.

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

Triethylene Glycol Dimethacrylate (109-16-0)	
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-repeated exposure : Not classified

Urethane Dimethacrylate (Proprietary)	
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

Triethylene Glycol Dimethacrylate (109-16-0)	
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 : May cause drowsiness or dizziness.

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

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

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 nor to cause long-term adverse effects in the environment.

Ecology - water : Harmful to aquatic life.

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 Sealant with Fluoride	
Persistence and degradability	Not established.

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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.
Triethylene Glycol Dimethacrylate (109-16-0)	
Persistence and degradability	Biodegradability in water: no data available.

12.3. Bioaccumulative potential

Light Bond Sealant with Fluoride	
Bioaccumulative potential	Not established.
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).
Triethylene Glycol Dimethacrylate (109-16-0)	
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

12.4. Mobility in soil

Tetrahydrofurfuryl Methacrylate (2455-24-5)	
Ecology - soil	No (test)data on mobility of the substance available.

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.

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	30 - 50%
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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.

15.2. International regulations

CANADA

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)
Triethylene Glycol Dimethacrylate (109-16-0)
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

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.