

Light Bond Filled Sealant with Fluoride

Safety Data Sheet

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

Date of issue: 01/27/2017

Version: 6

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, 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 2	H319	Causes serious 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
 H319 - Causes serious 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
 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

Light Bond Filled Sealant with Fluoride

Safety Data Sheet

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

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
Glass filler	(CAS No) N/A	20 - 40	Not classified
Triethylene Glycol Dimethacrylate	(CAS No) 109-16-0	10 - 30	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317
Urethane Dimethacrylate	(CAS No) 72869-86-4	5 - 25	Skin Irrit. 2, H315 Resp. Sens. 1, H334
Ethoxylated Bis A Dimethacrylate	(CAS No) 41637-38-1	5 - 15	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317
Tetrahydrofurfuryl Methacrylate	(CAS No) 2455-24-5	1 - 10	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Skin Sens. 1, H317 STOT SE 3, H335
Bisphenol A Diglycidylmethacrylate	(CAS No) 1565-94-2	5 - 15	Skin Irrit. 2, H315 Eye Irrit. 2A, H319
Amorphous Silica	(CAS No) 112945-52-5	1 - 10	Eye Irrit. 2A, H319 Resp. Sens. 1, H334
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 after inhalation : 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).

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

- Symptoms/injuries after inhalation : 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.

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

No additional information available

5.2. Specific hazards arising from the chemical

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

5.3. Special protective equipment and precautions for fire-fighters

No additional information available

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.

Light Bond Filled Sealant with Fluoride

Safety Data Sheet

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

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

No additional information available

6.3. Methods and material for containment and cleaning up

No additional information available

6.4. Reference to other sections

No additional information available

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 : 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 materials : Heat sources.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Amorphous Silica (112945-52-5)
Not applicable
Triethylene Glycol Dimethacrylate (109-16-0)
Not applicable
Tetrahydrofurfuryl Methacrylate (2455-24-5)
Not applicable
Ethoxylated Bis A Dimethacrylate (41637-38-1)
Not applicable
Urethane Dimethacrylate (72869-86-4)
Not applicable
Fluoride (Proprietary)
Not applicable
Glass filler (N/A)
Not applicable
Bisphenol A Diglycidylmethacrylate (1565-94-2)
Not applicable

8.2. Appropriate engineering controls

No additional information available

8.3. Individual protection measures/Personal protective equipment

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

Light Bond Filled Sealant with Fluoride

Safety Data Sheet

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

In case of inadequate ventilation wear
respiratory protection

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Viscous resin
Color	: Light 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

10.2. Chemical stability

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

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Open flame. Overheating. Direct sunlight. Heat. Sparks.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

May release flammable gases.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Light Bond Filled Sealant with Fluoride

Safety Data Sheet

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

Amorphous Silica (112945-52-5)	
LD50 oral rat	3160 mg/kg (Rat)
LD50 dermal rabbit	> 5000 mg/kg (Rabbit)
ATE US (oral)	3160.000 mg/kg body weight
Triethylene Glycol Dimethacrylate (109-16-0)	
LD50 oral rat	10837 mg/kg (Rat)
ATE US (oral)	10837.000 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
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
Fluoride (Proprietary)	
LD50 oral rat	N/A
LD50 dermal rat	N/A
LD50 dermal rabbit	N/A
LC50 inhalation rat (ppm)	N/A
Glass filler (N/A)	
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 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

Amorphous Silica (112945-52-5)	
IARC group	3 - Not Classifiable
Ethoxylated Bis A Dimethacrylate (41637-38-1)	
IARC group	4 - Probably Not Carcinogenic
Urethane Dimethacrylate (72869-86-4)	
IARC group	4 - Probably Not Carcinogenic
Fluoride (Proprietary)	
IARC group	4 - Probably Not Carcinogenic
Glass filler (N/A)	
IARC group	4 - Probably Not Carcinogenic

Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified

Ethoxylated Bis A Dimethacrylate (41637-38-1)	
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

Light Bond Filled Sealant with Fluoride

Safety Data Sheet

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

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
LOAEL (inhalation, rat, dust/mist/fume)	N/A mg/l/4h
Fluoride (Proprietary)	
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
Glass filler (N/A)	
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

Ethoxylated Bis A Dimethacrylate (41637-38-1)	
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

Urethane Dimethacrylate (72869-86-4)	
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

Fluoride (Proprietary)	
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

Glass filler (N/A)	
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

Symptoms/injuries after inhalation : 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.

SECTION 12: Ecological information

12.1. Toxicity

Light Bond Filled Sealant with Fluoride

Safety Data Sheet

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

Tetrahydrofurfuryl Methacrylate (2455-24-5)	
LC50 fish 1	34.7 mg/l (LC50; 96 h; Pimephales promelas)

12.2. Persistence and degradability

Amorphous Silica (112945-52-5)	
Persistence and degradability	Biodegradability: not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable

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

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

Bisphenol A Diglycidylmethacrylate (1565-94-2)	
Persistence and degradability	Biodegradability in water: no data available.

12.3. Bioaccumulative potential

Amorphous Silica (112945-52-5)	
Bioaccumulative potential	Not bioaccumulative.

Triethylene Glycol Dimethacrylate (109-16-0)	
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

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

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

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

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.
Additional information : Handle empty containers with care because residual vapors are flammable.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT
Not applicable

TDG

Not applicable

Transport by sea

Not applicable

Light Bond Filled Sealant with Fluoride

Safety Data Sheet

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

Air transport

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

Triethylene Glycol Dimethacrylate (109-16-0)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Tetrahydrofurfuryl Methacrylate (2455-24-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Bisphenol A Diglycidylmethacrylate (1565-94-2)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

No additional information available

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

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