

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form : Mixture  
Product name : Light Bond Adhesive Paste with and without Fluoride

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

##### 1.2.1. Relevant identified uses

Use of the substance/mixture : For Rx only

##### 1.2.2. Uses advised against

No additional information available

#### 1.3. Details of the supplier of the safety data sheet

Reliance Orthodontic Products, Inc. 1540 West Thorndale Ave.  
Itasca, IL 60143 USA  
630-773-4009, during normal business hours  
[www.relianceorthodontics.com](http://www.relianceorthodontics.com)

##### EC Representative:

Emergo Europe, Prinsessgracht 20  
2514 AP 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: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Serious eye damage/eye irritation, Category 2 H319  
Skin sensitization, Category 1 H317

Full text of H statements : see section 16

##### Adverse physicochemical, human health and environmental effects

Causes skin irritation. May cause an allergic skin reaction.

#### 2.2. Label elements

##### Labeling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS07

Signal word (CLP) : Warning  
Hazardous ingredients : BisGMA; Triethylene Glycol Dimethacrylate  
Hazard statements (CLP) : H317 - May cause an allergic skin reaction.  
H319 - Causes serious eye irritation.  
Precautionary statements (CLP) : P261 - Avoid breathing vapors.  
P264 - Wash hands thoroughly after handling.  
P272 - Contaminated work clothing should not be allowed out of the workplace.  
P280 - Wear protective gloves/eye protection.  
P302+P352 - IF ON SKIN: Wash with plenty of soap and water.  
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 supplemental first aid instruction on this label).  
P333+P313 - If skin irritation or rash 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.  
P501 - Dispose of contents and container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation, a licensed hazardous-

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waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste, a hazardous or special waste collection point.

### 2.3. Other hazards

No additional information available

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
BisGMA	(CAS-No.) 1565-94-2 (EC-No.) 216-367-7	5 – 10	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 STOT SE 3, H335
Triethylene Glycol Dimethacrylate	(CAS-No.) 109-16-0 (EC-No.) 203-652-6	5 – 10	Skin Sens. 1B, H317
Urethane Dimethacrylate	(CAS-No.) Proprietary	1 – 5	Eye Irrit. 2, H319 STOT SE 3, H336
Sodium Fluoride substance with a Community workplace exposure limit	(CAS-No.) 7681-49-4 (EC-No.) 231-667-8 (EC Index-No.) 009-004-00-7	< 1	Acute Tox. 3 (Oral), H301 Skin Irrit. 2, H315 Eye Irrit. 2, H319
2,4-Dihydroxybenzophenone	(CAS-No.) 131-56-6 (EC-No.) 205-029-4	< 1	Eye Irrit. 2, H319 Repr. 2, H361 Aquatic Chronic 2, H411

Full text of H- and EUH-statements: see section 16

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
- 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.
- First-aid measures after eye contact : Rinse eyes with water as a precaution.
- First-aid measures after ingestion : Call a poison center/doctor/physician if you feel unwell.

### 4.2. Most important symptoms and effects, both acute and delayed

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

### 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

- Suitable extinguishing media : Water spray. Dry powder. Foam.

### 5.2. Special hazards arising from the substance or mixture

- Hazardous decomposition products in case of fire : Toxic fumes may be released.

### 5.3. Advice for firefighters

- 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. Avoid contact with skin and eyes. Avoid breathing dust/fume/vapours.

#### 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".

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### 6.2. Environmental precautions

Avoid release to the environment.

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

- |                         |   |
|-------------------------|---|
| Methods for cleaning up | : Mechanically recover the product.                             |
| 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. Avoid contact with skin and eyes. Wear personal protective equipment. Avoid breathing dust/fume/vapours.   |
| 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. |

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

- |                    |  |
|--------------------|--|
| Storage conditions | : Store in a well-ventilated place. Keep cool. |
|--------------------|--|

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

No additional information available

### 8.2. Exposure controls

#### Appropriate engineering controls:

Ensure good ventilation of the work station.

#### Hand protection:

Protective gloves

#### Eye protection:

Safety glasses

#### Skin and body protection:

Wear suitable protective clothing

#### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment



#### Environmental exposure controls:

Avoid release to the environment.

## SECTION 9: Physical and chemical properties

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

- |   |                     |
|---|---------------------|
| Physical state                              | : Solid             |
| Appearance                                  | : Paste.            |
| Color                                       | : Yellow. Blue.     |
| Odor  | : Acrylic.          |
| Odor threshold                              | : No data available |
| pH  | : No data available |
| Relative evaporation rate (butyl acetate=1) | : No data available |
| Melting point                               | : No data available |
| Freezing point                              | : Not applicable    |

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Boiling point	: No data available
Flash point	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: No data available
Flammability (solid, gas)	: Non flammable.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: Not applicable
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Viscosity, kinematic	: Not applicable
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosion limits	: Not applicable

### 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.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

### 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 (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
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#### Sodium Fluoride (7681-49-4)

LD50 oral rat	223 mg/kg body weight (EPA OPPTS 870.1100: Acute Oral Toxicity, Rat, Male, Experimental value, Oral, 14 day(s))
LD50 dermal rat	> 2000 mg/kg body weight Animal: rat, Guideline: EPA OPPTS 870.1200 (Acute Dermal Toxicity)

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitization	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified

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<b>Triethylene Glycol Dimethacrylate (109-16-0)</b>	
NOAEL (oral,rat,90 days)	1000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
<b>Sodium Fluoride (7681-49-4)</b>	
LOAEL (oral,rat,90 days)	≈ 4 mg/kg body weight Animal: rat, Guideline: other:EPA OPP 83-5 (Combined Chronic Toxicity / Carcinogenicity)
NOAEL (oral,rat,90 days)	≈ 25 mg/kg body weight Animal: rat, Guideline: other:EPA OPP 83-5 (Combined Chronic Toxicity / Carcinogenicity)
Aspiration hazard	: Not classified
<b>Light Bond</b>	
Viscosity, kinematic	Not applicable

## 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.
Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Not classified

<b>2,4-Dihydroxybenzophenone (131-56-6)</b>	
LC50 - Fish [1]	3.7 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Oryzias latipes, Experimental value)
<b>Triethylene Glycol Dimethacrylate (109-16-0)</b>	
LC50 - Fish [1]	16.4 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
EC50 72h - Algae [1]	> 100 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	72.8 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
ErC50 algae	> 100 mg/l (Equivalent or similar to EU Method C.3, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value)
LOEC (chronic)	100 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (chronic)	32 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
<b>Sodium Fluoride (7681-49-4)</b>	
LC50 - Fish [1]	51 mg/l Test organisms (species): other:summary of findings in various species
LC50 - Fish [2]	165 mg/l Test organisms (species): other:summary of findings in various species
EC50 - Crustacea [1]	97 mg/l (48 h, Daphnia magna, Static system, Fresh water, Experimental value, Fluorine ion)
EC50 96h - Algae [1]	43 mg/l (Scenedesmus sp., Static system, Experimental value, Fluorine ion)
NOEC (chronic)	14.1 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC chronic fish	4 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri) Duration: '21 d'

### 12.2. Persistence and degradability

<b>2,4-Dihydroxybenzophenone (131-56-6)</b>	
Persistence and degradability	Inherently biodegradable.
<b>BisGMA (1565-94-2)</b>	
Persistence and degradability	Biodegradability in water: no data available.
<b>Triethylene Glycol Dimethacrylate (109-16-0)</b>	
Persistence and degradability	Readily biodegradable in water.
<b>Sodium Fluoride (7681-49-4)</b>	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

### 12.3. Bioaccumulative potential

<b>2,4-Dihydroxybenzophenone (131-56-6)</b>	
Partition coefficient n-octanol/water (Log Pow)	2.964 (Calculated, 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

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<b>BisGMA (1565-94-2)</b>	
Partition coefficient n-octanol/water (Log Pow)	4.94 (Estimated value)
Bioaccumulative potential	No bioaccumulation data available.
<b>Triethylene Glycol Dimethacrylate (109-16-0)</b>	
Partition coefficient n-octanol/water (Log Pow)	2.3 (Practical experience/observation, EU Method A.8: Partition Coefficient)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
<b>Sodium Fluoride (7681-49-4)</b>	
BCF - Fish [1]	53 – 58 (Pisces, Fresh water, Literature study, Fresh weight)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

### 12.4. Mobility in soil

<b>2,4-Dihydroxybenzophenone (131-56-6)</b>	
Ecology - soil	No (test)data on mobility of the substance available.
<b>Triethylene Glycol Dimethacrylate (109-16-0)</b>	
Partition coefficient n-octanol/water (Log Koc)	1.89 (log Koc, Calculated value)
Ecology - soil	Highly mobile in soil.
<b>Sodium Fluoride (7681-49-4)</b>	
Ecology - soil	Adsorbs into the soil. Toxic to flora.

### 12.5. Results of PBT and vPvB assessment

Component	
Triethylene Glycol Dimethacrylate (109-16-0)	This substance/mixture does not meet the PBT criteria of REACH, annex XIII This substance/mixture does not meet the vPvB criteria of REACH, annex XIII
Sodium Fluoride (7681-49-4)	This substance/mixture does not meet the PBT criteria of REACH, annex XIII This substance/mixture does not meet the vPvB criteria of REACH, annex XIII
2,4-Dihydroxybenzophenone (131-56-6)	This substance/mixture does not meet the PBT criteria of REACH, annex XIII This substance/mixture does not meet the vPvB criteria of REACH, annex XIII

### 12.6. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

## SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

### 14.1. UN number

UN-No. (ADR) : Not applicable  
 UN-No. (IMDG) : Not applicable  
 UN-No. (IATA) : Not applicable  
 UN-No. (ADN) : Not applicable  
 UN-No. (RID) : Not applicable

### 14.2. UN proper shipping name

Proper Shipping Name (ADR) : Not applicable  
 Proper Shipping Name (IMDG) : Not applicable  
 Proper Shipping Name (IATA) : Not applicable  
 Proper Shipping Name (ADN) : Not applicable  
 Proper Shipping Name (RID) : Not applicable

### 14.3. Transport hazard class(es)

**ADR**  
 Transport hazard class(es) (ADR) : Not applicable

**IMDG**  
 Transport hazard class(es) (IMDG) : Not applicable

**IATA**  
 Transport hazard class(es) (IATA) : Not applicable

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### ADN

Transport hazard class(es) (ADN) : Not applicable

### RID

Transport hazard class(es) (RID) : Not applicable

### 14.4. Packing group

Packing group (ADR) : Not applicable

Packing group (IMDG) : Not applicable

Packing group (IATA) : Not applicable

Packing group (ADN) : Not applicable

Packing group (RID) : Not applicable

### 14.5. Environmental hazards

Dangerous for the environment : No

Marine pollutant : No

Other information : No supplementary information available

### 14.6. Special precautions for user

#### - Overland transport

Not applicable

#### - Transport by sea

Not applicable

#### - Air transport

Not applicable

#### - Inland waterway transport

Not applicable

#### - Rail transport

Not applicable

### 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### 15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no REACH candidate substance

Contains no REACH Annex XIV substances.

#### 15.1.2. National regulations

No additional information available

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## SECTION 16: Other information

Full text of H- and EUH-phrases:

Acute Tox. 3 (Oral)	Acute toxicity (oral) Category 3
Aquatic Chronic 2	Hazardous to the aquatic environment - Chronic Hazard Category 2
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Repr. 2	Reproductive toxicity Category 2
Skin Irrit. 2	Skin corrosion/irritation Category 2
Skin Sens. 1	Skin sensitization, Category 1
Skin Sens. 1B	Skin sensitization, Category 1B
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Narcosis

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STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H301	Toxic if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H361	Suspected of damaging fertility or the unborn child.
H411	Toxic to aquatic life with long lasting effects.

SDS EU (REACH Annex II)

*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.*