

Assure Universal Bonding Resin

Safety Data Sheet

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

Date of issue: 4/4/2016

Version: 10

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

1.1. Product identifier

Product form : Mixture
Product name : Assure Sealant

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

Use of the substance/mixture : For professional use only.

1.3. Details of the supplier of the safety data sheet

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: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Flammable liquids Category 2	H225
Skin corrosion/irritation Category 2	H315
Serious eye damage/eye irritation Category 2A	H319
Respiratory sensitisation Category 1	H334
Skin sensitization Category 1	H317
Specific target organ toxicity (single exposure) Category 3	H336

Full text of H statements : see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :



GHS02

GHS07

GHS08

Signal word (GHS-US) :

Warning

Hazard statements (GHS-US) :

H225 - Highly 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
H336 - May cause drowsiness or dizziness

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
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

No additional information available

Assure Sealant

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
Acetone	(CAS No) 67-64-1	50 - 75	Flam. Liq. 2, H225 Eye Irrit. 2A, H319 STOT SE 3, H336
2-Hydroxyethyl Methacrylate	(CAS No) 868-77-9	10 - 30	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Skin Sens. 1, H317
Bisphenol A Diglycidylmethacrylate	(CAS No) 1565-94-2	10 - 30	Skin Irrit. 2, H315 Eye Irrit. 2A, H319
Monomer	Proprietary	10 - 30	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Resp. Sens. 1, H334

SECTION 4: First aid measures

4.1. Description of first aid measures

- 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 : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. 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 : 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.

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

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

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

No additional information available

5.2. Special hazards arising from the substance or mixture

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

5.3. Advice for firefighters

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.

6.1.1. For non-emergency personnel

No additional information available :

6.1.2. For emergency responders

Protective equipment : Avoid breathing mist, vapors.

Assure Sealant

Safety Data Sheet

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

Emergency procedures : Ventilate area.

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. Use only non-sparking tools. Avoid breathing mist, vapors. Use only outdoors or in a well-ventilated area.
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 in fireproof place. Keep container tightly closed.
Incompatible materials : Heat sources.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Acetone (67-64-1)		
ACGIH	ACGIH TWA (ppm)	250 ppm
ACGIH	ACGIH STEL (ppm)	500 ppm
ACGIH	Remark (ACGIH)	eye irr; CNS impair; BEI
OSHA	OSHA PEL (TWA) (mg/m ³)	2400 mg/m ³
OSHA	OSHA PEL (TWA) (ppm)	1000 ppm
2-Hydroxyethyl Methacrylate (868-77-9)		
Not applicable		
Bisphenol A Diglycidylmethacrylate (1565-94-2)		
Not applicable		
Monomer (PROPRIETARY)		
Not applicable		

8.2. Exposure controls

Skin and body protection : Wear suitable protective clothing.
Respiratory protection : Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. 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
Color : Straw
Odor : Slight Acetone
Odor threshold : No data available
pH : 4.3 - 4.5
Melting point : No data available
Freezing point : No data available
Boiling point : 56 °C
Flash point : -20 °C
Relative evaporation rate (butyl acetate=1) : No data available
Flammability (solid, gas) : Flammable

Assure Sealant

Safety Data Sheet

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

Explosion limits	: 2.6 - 2.8 vol %
Explosive properties	: No data available
Oxidizing properties	: No data available
Vapor pressure	: No data available
Relative density	: No data available
Relative vapor density at 20 °C	: No data available
Solubility	: No data available
Log Pow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: 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

Highly 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. Direct sunlight.

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

Acetone (67-64-1)	
LD50 oral rat	5800 mg/kg (Rat; Equivalent or similar to OECD 401; Experimental value)
LD50 dermal rabbit	20000 mg/kg (Rabbit; Experimental value; Equivalent or similar to OECD 402; >7426 mg/kg bodyweight; Rabbit; Weight of evidence)
LC50 inhalation rat (mg/l)	71 mg/l/4h (Rat; Experimental value; 76 mg/l/4h; Rat; Experimental value)
LC50 inhalation rat (ppm)	30000 ppm/4h (Rat; Experimental value)
ATE US (oral)	5800.000 mg/kg body weight
ATE US (dermal)	20000.000 mg/kg body weight
ATE US (gases)	30000.000 ppmV/4h
ATE US (vapors)	71.000 mg/l/4h
ATE US (dust, mist)	71.000 mg/l/4h
2-Hydroxyethyl Methacrylate (868-77-9)	
LD50 oral rat	5564 mg/kg body weight (Rat; Experimental value)
LD50 dermal rabbit	> 5000 mg/kg body weight (Rabbit; Experimental value)
ATE US (oral)	5564.000 mg/kg body weight
Monomer (PROPRIETARY)	
LD50 oral rat	N/A
LD50 dermal rat	N/A

Assure Sealant

Safety Data Sheet

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

Monomer (PROPRIETARY)	
LD50 dermal rabbit	N/A
LC50 inhalation rat (ppm)	N/A
Skin corrosion/irritation	: Causes skin irritation. pH: 4.3 - 4.5
Serious eye damage/irritation	: Causes serious eye irritation. pH: 4.3 - 4.5
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

Monomer (PROPRIETARY)	
IARC group	4 - Probably Not Carcinogenic
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: May cause drowsiness or dizziness.

Monomer (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
Specific target organ toxicity (repeated exposure)	: Not classified

Monomer (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
Aspiration hazard	: Not classified
Symptoms/injuries after inhalation	: May cause an allergic skin reaction. May cause drowsiness or dizziness. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Symptoms/injuries after skin contact	: Causes skin irritation.
Symptoms/injuries after eye contact	: Causes serious eye irritation.

SECTION 12: Ecological information

12.1. Toxicity

Acetone (67-64-1)	
LC50 fish 2	5540 mg/l (LC50; EU Method C.1; 96 h; Salmo gairdneri; Static system; Fresh water; Experimental value)
EC50 Daphnia 2	12600 mg/l (LC50; Other; 48 h; Daphnia magna; Static system; Fresh water; Experimental value)

2-Hydroxyethyl Methacrylate (868-77-9)	
LC50 fish 1	227 mg/l (LC50; 96 h)
EC50 Daphnia 1	171 mg/l (NOEC; OECD 202: Daphnia sp. Acute Immobilisation Test; 48 h; Daphnia magna; Static system; Fresh water; Experimental value)
EC50 Daphnia 2	380 mg/l (EC50; OECD 202: Daphnia sp. Acute Immobilisation Test; 48 h; Daphnia magna; Static system; Fresh water; Experimental value)
Threshold limit algae 1	836 mg/l (ErC50; OECD 201: Alga, Growth Inhibition Test; 72 h; Pseudokirchneriella subcapitata; Static system; Fresh water; Experimental value)
Threshold limit algae 2	345 mg/l (EbC50; OECD 201: Alga, Growth Inhibition Test; 72 h; Pseudokirchneriella subcapitata; Static system; Fresh water; Experimental value)

Assure Sealant

Safety Data Sheet

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

12.2. Persistence and degradability

Acetone (67-64-1)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Biodegradable in the soil under anaerobic conditions. No (test)data on mobility of the substance available.
Biochemical oxygen demand (BOD)	1.43 g O ₂ /g substance
Chemical oxygen demand (COD)	1.92 g O ₂ /g substance
ThOD	2.20 g O ₂ /g substance
BOD (% of ThOD)	0.872 (20 days; Literature study)
2-Hydroxyethyl Methacrylate (868-77-9)	
Persistence and degradability	Readily biodegradable in water. Biodegradability in soil: no data available. Adsorbs into the soil.
Bisphenol A Diglycidylmethacrylate (1565-94-2)	
Persistence and degradability	Biodegradability in water: no data available.

12.3. Bioaccumulative potential

Acetone (67-64-1)	
BCF fish 1	0.69 (BCF)
BCF other aquatic organisms 1	3 (BCF; BCFWIN)
Log Pow	-0.24 (Test data)
Bioaccumulative potential	Not bioaccumulative.
2-Hydroxyethyl Methacrylate (868-77-9)	
BCF fish 1	1.3 - 1.5 (BCF)
Log Pow	-0.55 - 0.49 (0.42; Experimental value; OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method; 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
Bisphenol A Diglycidylmethacrylate (1565-94-2)	
Log Pow	4.94 (Estimated value)
Bioaccumulative potential	No bioaccumulation data available.

12.4. Mobility in soil

Acetone (67-64-1)	
Surface tension	0.0237 N/m

12.5. Other adverse effects

Effect on the global warming : No known ecological damage caused by this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste 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

In accordance with DOT
Transport document description : UN1090 Acetone, 3, II
UN-No.(DOT) : 1090
DOT NA no. : UN1090
Proper Shipping Name (DOT) : Acetone
Department of Transportation (DOT) Hazard Classes : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120

Assure Sealant

Safety Data Sheet

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

Hazard labels (DOT) : 3 - Flammable liquid



Packing group (DOT) : II - Medium Danger
DOT Packaging Non Bulk (49 CFR 173.xxx) : 202
DOT Packaging Bulk (49 CFR 173.xxx) : 242
DOT Special Provisions (49 CFR 172.102) : IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized
T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3)
TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / 1 + a (tr - tf)$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling
DOT Packaging Exceptions (49 CFR 173.xxx) : 150
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 5 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 60 L
DOT Vessel Stowage Location : B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded
Emergency Response Guide (ERG) Number : 127
Other information : No supplementary information available.

TDG

No additional information available

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

Acetone (67-64-1)

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

Not listed on SARA Section 313 (Specific toxic chemical listings)

CERCLA RQ : 5000 lb

2-Hydroxyethyl Methacrylate (868-77-9)

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

EU-Regulations

No additional information available

15.2.2. National regulations

No additional information available

Assure Sealant

Safety Data Sheet

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

15.3. US State regulations

Acetone (67-64-1)

U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

Other information : None.

Full text of H-phrases: see section 16:

H225	Highly 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
H336	May cause drowsiness or dizziness

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