

Light Cure Enhance

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Date of issue: 3/14/2018 Version: 2

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

1.1. Product identifier

Product form : Mixture
Product name : Enhance LC

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

Manufacturer

Reliance Orthodontic Products, Inc. 1540 West Thorndale Ave. Itasca, IL 60143 USA

630-773-4009, during normal business hours

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]

Flammable liquids, Category 2 H225
Skin corrosion/irritation, Category 2 H315
Serious eye damage/eye irritation, Category H319
2
Skin sensitisation, Category 1 H317

Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

Highly flammable liquid and vapour. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation.

2.2. Label elements

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

Hazard pictograms (CLP)





GHS02 GHS07

Signal word (CLP) : Danger

Hazardous ingredients : 2-Hydroxyethyl Methacrylate

Hazard statements (CLP) : H225 - Highly flammable liquid and vapour.

H315 - Causes skin irritation.

H317 - May cause an allergic skin reaction. H319 - Causes serious eye irritation.

Precautionary statements (CLP) : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No

smoking.

P233 - Keep container tightly closed.

P240 - Ground and bond container and receiving equipment.

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P241 - Use explosion-proof equipment.

P261 - Avoid breathing mist, vapours.

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 water.

P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing.

Rinse skin with 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 First aid measures on this label).

P332+P313 - If skin irritation occurs: Get medical advice/attention.

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.

P370+P378 - In case of fire: Use carbon dioxide (CO2), dry chemical powder, foam to extinguish.

P403+P235 - Store in a well-ventilated place. Keep cool.

P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

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]
Ethanol/Denatured 190 PROOF	(CAS-No.) 64-17-5	50 - 75	Flam. Liq. 2, H225 Eye Irrit. 2, H319
2-Hydroxyethyl Methacrylate	(CAS-No.) 868-77-9 (EC-No.) 212-782-2 (EC Index-No.) 607-124-00-X	30 - 50	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317
Epiclon B4400	(CAS-No.) 73003-90-4	5 - 10	Skin Irrit. 2, H315 Eye Irrit. 2, H319
Proprietary	(CAS-No.) Proprietary (EC-No.) Proprietary (EC Index-No.) Proprietary	<1	Flam. Liq. 2, H225 Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 Acute Tox. 4 (Inhalation:vapour), H332 Skin Corr. 1A, H314 Eye Dam. 1, H318 STOT SE 3, H335

Specific concentration limits:

Name	Product identifier	Specific concentration limits
Proprietary	(CAS-No.) Proprietary (EC-No.) Proprietary (EC Index-No.) Proprietary	(C >= 1) STOT SE 3, H335

Full text of H-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 : Rinse skin with water/shower. Take off immediately all contaminated clothing. If skin irritation or

rash occurs: Get medical advice/attention.

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.

First-aid measures after ingestion : Call a poison center or a doctor 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.

Symptoms/effects after eye contact : Eye irritation.

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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. Carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Highly flammable liquid and vapour. Hazardous decomposition products in case of : Toxic fumes may be released.

fire

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. No open flames, no sparks, and no smoking. Avoid contact with skin

and eves. Avoid breathing mist, 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".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public

waters

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. Keep away from heat, hot surfaces, sparks, open

flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapours may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Avoid contact with skin and eyes. Avoid

breathing mist, 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

Technical measures : Ground/bond container and receiving equipment.

Storage conditions : Store in a well-ventilated place. Keep cool. Keep container tightly closed.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Proprietary (Proprietary)		
EU	IOELV TWA (mg/m³)	8.4 mg/m³
EU	IOELV TWA (ppm)	2 ppm
EU	IOELV STEL (mg/m³)	12.6 mg/m³
EU	IOELV STEL (ppm)	3 ppm
Belgium	Limit value (mg/m³)	4.2 mg/m³ (Proprietary; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Limit value (ppm)	1 ppm (Proprietary; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Short time value (mg/m³)	12.6 mg/m³ (Proprietary; Belgium; Short time value)

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Proprietary (Proprietary)		
Belgium Short time value (ppm)		3 ppm (Proprietary; Belgium; Short time value)
France	VME (mg/m³)	4.2 mg/m³ (Proprietary; France; Time-weighted average exposure limit 8 h)
France	VME (ppm)	1 ppm (Proprietary; France; Time-weighted average exposure limit 8 h;)
France	VLE (mg/m³)	12.6 mg/m³ (Proprietarye; France; Short time value;)
France	VLE (ppm)	3 ppm (Proprietary; France; Short time value;)
Netherlands	Grenswaarde TGG 8H (mg/m³)	4.2 mg/m³
Netherlands	Grenswaarde TGG 8H (ppm)	1 ppm
Netherlands	Grenswaarde TGG 15MIN (mg/m³)	12.6 mg/m³
Netherlands	Grenswaarde TGG 15MIN (ppm)	3 ppm
United Kingdom	WEL TWA (mg/m³)	8 mg/m³
United Kingdom	WEL TWA (ppm)	2 ppm
United Kingdom	WEL STEL (mg/m³)	17 mg/m³
United Kingdom	WEL STEL (ppm)	4 ppm
USA - ACGIH	Local name	Proprietary
USA - ACGIH	ACGIH TWA (ppm)	0.5 ppm
USA - ACGIH	ACGIH STEL (ppm)	1 ppm
USA - ACGIH	Remark (ACGIH)	URT irr; visual impair; Skin; A4
USA - OSHA	Local name	Proprietary
USA - OSHA	OSHA PEL (TWA) (mg/m³)	100 mg/m³
USA - OSHA	OSHA PEL (TWA) (ppm)	25 ppm

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

Information on basic physical and chemical properties

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

Physical state	: Liquid
Appearance	: Clear liquid.
Colour	: Slightly yellow.
Odour	: Alcohol odour.
Odour threshold	: No data available
рН	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable

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: No data available Vapour pressure Relative vapour density at 20 °C : No data available Relative density No data available Solubility : No data available Log Pow : No data available Viscosity, kinematic : No data available Viscosity, dynamic : No data available Explosive properties : No data available : No data available Oxidising properties : No data available **Explosive limits**

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Highly flammable liquid and vapour.

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

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

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

2-Hydroxyethyl Methacrylate (868-77-9)	
LD50 oral rat	5564 mg/kg bodyweight (Rat; Experimental value)
LD50 dermal rabbit	> 5000 mg/kg bodyweight (Rabbit; Experimental value)
Ethanol/Denatured 190 PROOF (64-17-5)	
LD50 oral rat	7060 mg/kg
LD50 dermal rat	N/A
LD50 dermal rabbit	N/A
LC50 inhalation rat (ppm)	20000 ppm
LC50 inhalation rat (Dust/Mist - mg/l/4h)	N/A mg/l/4h
Proprietary (Proprietary)	
LD50 oral rat	730 mg/kg bodyweight (Equivalent or similar to OECD 401, Rat, Male/female, Experimental value)
LD50 dermal rabbit	580 mg/kg bodyweight (Equivalent or similar to OECD 402, 24 h, Rabbit, Male, Experimental value)
LC50 inhalation rat (mg/l)	3.6 mg/l air (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male/female, Experimental value)
Skin corrosion/irritation	: Causes skin irritation.
Serious eve damage/irritation	· Causes serious eve irritation

Serious eye damage/irritation : Causes serious eye irritation.

Respiratory or skin sensitisation : May cause an allergic skin reaction.

Germ cell mutagenicity : Not classified

Germ cell mutagenicity : Not classified Carcinogenicity : Not classified Reproductive toxicity : Not classified

STOT-single exposure : Not classified

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Ethanol/Denatured 190 PROOF (64-17-5)	
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

Ethanol/Denatured 190 PROOF (64-17-5)	
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

SECTION 12: Ecological information

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Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse

effects in the environment.

Acute aquatic toxicity : Not classified Chronic aquatic toxicity : Not classified

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)
Ethanol/Denatured 190 PROOF (64-17-5)	

Emanding character (c) in c)				
	LC50 fish 1	14000 mg/l		
Proprietary (Proprietary) LC50 fish 1 EC50 96h algae (1)				
		36 mg/l (EPA OTS 797.1400, 96 h, Oncorhynchus mykiss, Flow-through system, Fresh water, Experimental value)		
		1.167 mg/l (ECOSAR v1.00, Algae, Fresh water, QSAR)		

12.2. Persistence and degradability

2-Hydroxyethyl Methacrylate (868-77-9)	
Persistence and degradability	Readily biodegradable in water. Biodegradability in soil: no data available. Adsorbs into the soil.
Proprietary (Proprietary)	
Persistence and degradability	Readily biodegradable in water.
Biochemical oxygen demand (BOD)	< 0.001 g O₂/g substance
Chemical oxygen demand (COD)	1.02 g O₂/g substance

12.3. Bioaccumulative potential

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).	
Proprietary (Proprietary)		
BCF fish 1	< 0.5 (OECD 305: Bioconcentration: Flow-Through Fish Test, 42 day(s), Cyprinus carpio, Fresh water, Experimental value)	
Log Pow	1.45 (Experimental value, Other)	

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Pr	Proprietary (Proprietary)	
Bi	ioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

12.4. Mobility in soil

Proprietary (Proprietary)	
Surface tension	0.021 N/m (20 °C)
Log Koc	2.56 (log Koc, Other, Calculated value)
Ecology - soil	Low potential for adsorption in soil.

12.5. Results of PBT and vPvB assessment

No additional information available

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.

Additional information : Flammable vapours may accumulate in the container.

SECTION 14: Transport information

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

14.1. UN number

UN-No. (ADR) : 1170

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) : ETHANOL (ETHYL ALCOHOL)

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

Transport document description (ADR) : UN 1170 ETHANOL (ETHYL ALCOHOL), 3, II, (D/E)

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : 3
Danger labels (ADR) : 3



IMDG

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

IATA

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

ADN

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

RID

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

14.4. Packing group

Packing group (ADR) : I

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Packing group (IMDG) : Not applicable Packing group (IATA) : Not applicable Packing group (ADN) : Not applicable : Not applicable Packing group (RID)

Environmental hazards

Dangerous for the environment : No Marine pollutant : No

Other information : No supplementary information available

14.6. Special precautions for user

- Overland transport

Classification code (ADR) : F1 Special provisions (ADR) : 144, 601 Limited quantities (ADR) : 11 Excepted quantities (ADR) : E2

: P001, IBC02, R001 Packing instructions (ADR)

: MP19 Mixed packing provisions (ADR) Portable tank and bulk container instructions : T4

(ADR) Portable tank and bulk container special

: TP1

provisions (ADR)

Tank code (ADR) : LGBF Vehicle for tank carriage : FL Transport category (ADR) : 2 : S2, S20

Special provisions for carriage - Operation

(ADR)

: 33 Hazard identification number (Kemler No.)

Orange plates

Tunnel restriction code (ADR) : D/E EAC code : •2YE

- Transport by sea

No data available

- Air transport

No data available

- Inland waterway transport

No data available

- Rail transport

No data available

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

Not applicable

SECTION 15: Regulatory information

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

EU-Regulations 15.1.1.

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

15.1.2. National regulations

Germany

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Reference to AwSV : Water hazard class (WGK) 3, severe hazard to waters (Classification according to AwSV,

Annex 1)

12th Ordinance Implementing the Federal : Is not subject of the 12. BlmSchV (Hazardous Incident Ordinance) Immission Control Act - 12.BImSchV

Netherlands

SZW-lijst van kankerverwekkende stoffen : Ethanol/Denatured 190 PROOF is listed SZW-lijst van mutagene stoffen : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting : Ethanol/Denatured 190 PROOF is listed giftige stoffen - Borstvoeding

NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Vruchtbaarheid

NIET-limitatieve lijst van voor de voortplanting

giftige stoffen - Ontwikkeling

: Ethanol/Denatured 190 PROOF is listed

: Ethanol/Denatured 190 PROOF is listed

Danish National Regulations : Young people below the age of 18 years are not allowed to use the product

Pregnant/breastfeeding women working with the product must not be in direct contact with the

product

Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Full text of H- and EUH-statements:

Acute Tox. 3 (Dermal)	Acute toxicity (dermal), Category 3
Acute Tox. 3 (Inhalation)	Acute toxicity (inhal.), Category 3
Acute Tox. 4 (Inhalation:vapour)	Acute toxicity (inhalation:vapour) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	Flammable liquids, Category 2
Skin Corr. 1A	Skin corrosion/irritation, Category 1A
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.

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

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