

This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006 (REACH) and with its amendment Regulation (EU) 2015/830

SAFETY DATA SHEET

Section 1. Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product Identifier

Product Name: **OptiBond eXTRa Universal Primer**

1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Product Use: Dental Adhesive

1.3 Details of the Supplier of the Safety Data Sheet

Manufacturer:	Kerr Corporation 1717 W. Collins Ave. Orange, CA 92867-5422 U.S.A. 1-800-KERR-123 E-mail: safety@kerrhawe.com	Supplier:	KERRHAWE S.A. Via Strecce n°4 6934 Bioggio Switzerland 00-800-41-050-505 E-mail: safety@kerrhawe.com
---------------	--	-----------	---

1.4 Emergency Telephone Number

Transportation Emergencies CHEMTREC 1-800-424-9300 (in the US) 1-703-527-3887 (Outside the US)

Medical Emergencies:

Gibraltar	+350 200 79700 +350 200 72266
Ireland	+353 1 809 2566 (Healthcare professionals-24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)
Malta	+356 2545 6504
United Kingdom	+44 191 2606182/+44 1912606180 24H

Information Phone Number: 1-800-KERR-123

SDS Date of Preparation/Revision: December 10, 2018

Section 2. Hazards Identification

2.1 Classification of the Substance or Mixture

Flammable Liquid Category 2 H225

Skin Irritation Category 2 H315

Skin Sensitization Category 1 H317

Eye Irritation Category 2 H319

Specific Target Organ Toxicity Single Exposure Category 3 H335/H336

2.2 Label Elements:

Danger!



Hazard Phrases

H225 Highly flammable liquid and vapor.

This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006 (REACH) and with its amendment Regulation (EU) 2015/830

- 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.
- EUH066 Repeated exposure may cause skin dryness or cracking.

Precautionary Phrases:

- 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
- P241 Use explosion-proof electrical, ventilating and lighting equipment.
- P242 Use non-sparking tools.
- P243 Take action to prevent static discharge.
- P261 Avoid breathing vapors or mists.
- P264 Wash 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.
- P280 Wear protective gloves and eye protection.
- P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
- P333 + P313 If skin irritation or rash occurs: Get medical attention.
- P363 Wash contaminated clothing before reuse.
- P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P312 Call a POISON CENTER or doctor if you feel unwell.
- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337 + P313 If eye irritation persists: Get medical attention.
- P370 + P378 In case of fire: Use water fog, alcohol foam carbon dioxide or dry chemical to extinguish.
- P403 + P235 Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.
- P501 Dispose of contents and container in accordance with local and national regulations.

2.3 Other Hazards: None identified

Section 3. Composition/Information on Ingredients

3.2 Mixtures

Component	CAS No./ EC No.	Amount	GHS Classification
Glycerol Phosphate Dimethacrylate	Proprietary	20-40%	Skin Irrit 2 H315 Eye Irrit 2 H319 STOT SE 3 H335
Acetone	67-64-1 / 200-662-2	20-40%	Flam Liq 2 H225 Eye Irrit 2 H319 STOT SE 3 H336 EUH066
2-Hydroxyethyl methacrylate	868-77-9 / 212-782-2	10-20%	Skin Irrit 2 H315 Eye Irrit 2 H319

This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006 (REACH) and with its amendment Regulation (EU) 2015/830

Component	CAS No./ EC No.	Amount	GHS Classification
			Skin Sens 1 H317
Ethanol	64-17-5 / 200-578-6	1-20%	Flam Liq 2 H225

Section 4. First Aid Measures

4.1 Description of First Aid Measures

Inhalation: Move to fresh air. If irritation develops or breathing is difficult get medical attention.

Skin Contact: Immediately flush skin with water for several minutes while removing contaminated clothing. Wash with soap and water. Get medical attention if irritation or rash develops. Launder contaminated clothing before reuse.

Eye Contact: Flush eyes with water for 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. Get medical attention if irritation persists.

Ingestion: If conscious, rinse mouth with water. Do not induce vomiting unless directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.

4.2 Most Important symptoms and effects, both acute and delayed: Causes eye and skin irritation. Prolonged skin contact may cause irritation, drying and cracking of the skin. May cause allergic skin reaction. Inhalation of mists may cause upper respiratory tract irritation and central nervous system effects such as dizziness and drowsiness. Ingestion may cause gastrointestinal irritation, nausea and vomiting.

4.3 Indication of any immediate medical attention and special treatment needed: Immediate medical attention is not required.

Section 5. Firefighting Measures

5.1 Extinguishing Media: Use water fog, alcohol foam, carbon dioxide or dry chemical to extinguish. Cool fire exposed containers with water.

5.2 Special Hazards arising from the Substance or Mixture: This product is highly flammable and forms explosive mixtures with air. Vapors are heavier than air and will travel along surfaces to remote ignition sources and flash back. Closed containers may explode if exposed to extreme heat. Combustion may produce carbon and phosphorous oxides

5.3 Advice for Firefighters: Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for fires in areas where chemicals are used or stored.

This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006 (REACH) and with its amendment Regulation (EU) 2015/830

Section 6: Accidental Release Measures

6.1 Personal Precautions, Protective Equipment and Emergency Procedures: Wear appropriate protective clothing and equipment. Remove all sources of ignition. Avoid breathing vapors or mists. Ventilate area with explosion proof equipment. Avoid contact with the eyes, skin and clothing.

6.2 Environmental Precautions: Avoid release to the environment. Report spill as required by local and federal regulations.

6.3 Methods and Material for Containment and Cleaning Up: Contain and collect using inert absorbent materials and place in appropriate containers for disposal. Use non-sparking tools and equipment. If spill has not ignited, use water spray to disperse the vapors and protect personnel attempting to stop leak. Do not flush to sewer!

6.4 Reference to Other Sections:

Refer to Section 8 for personal protective equipment and Section 13 for disposal information.

Section 7. Handling and Storage

7.1 Precautions for Safe Handling: Avoid contact with eyes, skin and clothing. Wear appropriate eye protection and gloves when handling (see Section 8). Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse. Keep product away from heat, sparks, flames and all other sources of ignition. Do not permit smoking in use or storage areas. Use with non-sparking tools and explosion proof equipment. Electrically bond and ground containers for transfer.

Empty containers retain product residues which can be hazardous. Follow all SDS precautions when handling empty containers.

7.2 Conditions for Safe Storage, Including any Incompatibilities: Store in accordance with regulations for the storage of flammable liquids. Store in a cool, dry, well-ventilated area away from heat, direct sunlight and all sources of ignition. Store away from oxidizers and other incompatible materials.

7.3 Specific end use(s): Dental Adhesive

Section 8. Exposure Controls/Personal Protection

8.1 Control Parameters:

Chemical	Exposure Limit
Glycerol Phosphate Dimethacrylate	None Established
Acetone	250 ppm TWA, 500 ppm STEL ACGIH TLV 500 ppm TWA EU IOEL 500 ppm TWA, 1000 ppm STEL France OEL 500 ppm TWA, 1000 ppm STEL Germany OEL 500 ppm TWA Italy OEL 600 mg/m ³ TWA, 1800 mg/m ³ STEL Poland OEL 500 ppm TWA Spain OEL

This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006 (REACH) and with its amendment Regulation (EU) 2015/830

	500 ppm TWA, 1500 ppm STEL UK OEL
2-Hydroxyethyl methacrylate	None Established
Ethanol	1000 ppm STEL ACGIH TLV 1000 ppm TWA, 5000 ppm STEL France OEL 500 ppm TWA, 1000 ppm STEL Germany OEL 1900 mg/m3 TWA Poland OEL 1000 ppm STEL Spain OEL 1000 ppm TWA UK OEL

8.2 Exposure Controls:

Recommended Monitoring Procedures: None identified.

Appropriate Engineering Controls: Use with adequate general or local exhaust ventilation to maintain exposures below the occupational exposure limits. Use explosion proof equipment where required.

Personal Protective Measurers

Respiratory Protection: None needed under normal use conditions. In operations where exposure levels are exceeded, an approved respirator with organic vapor cartridges or supplied air respirator should be used. Equipment selection depends on contaminant type and concentration. Select in accordance with applicable regulations and good industrial hygiene practice. For firefighting, use self-contained breathing apparatus. Follow EN 374.

Eye Protection: Chemical safety goggles are recommended if contact is possible. Follow EN 166.

Skin Protection: Impervious gloves such as butyl rubber are recommended if contact is possible. Follow EN 374.

Other protection: Wear protective clothing as needed to avoid skin contact and contamination of personal clothing. Suitable eye and skin washing facilities should be available in the work area.

Section 9. Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties:

Appearance:	Pale yellow liquid	Vapor Pressure:	Not available
Odor:	Fruity ester	Vapor Density:	Not available
Odor Threshold:	4.58 ppm (acetone)	Relative Density /Specific Gravity:	1.0
pH:	2.2	Solubility in Water:	Partially soluble in water
Melting/Freezing Point:	Not determined	Partition Coefficient: (n-octanol/water)	Not available
Initial Boiling Point/Range:	56.08°C (133°F) (acetone)	Auto-ignition Temperature:	363°C (685°F) (ethanol)
Flash Point:	55.4°F (13°C)	Decomposition Temperature:	Not available
Evaporation Rate:	Not available	Viscosity:	Not available

This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006 (REACH) and with its amendment Regulation (EU) 2015/830

Flammability: (solid/gas)	Not applicable	Explosive Properties:	None
Flammable/ Explosive Limits:	LEL: 2.5 (acetone) UEL: 19 (ethanol)	Oxidizing Properties:	None

9.2 Other Information: None

Section 10. Stability and Reactivity

10.1 Reactivity: Loss of inhibitor may allow the product to polymerize.

10.2 Chemical Stability: Stable

10.3 Possibility of Hazardous Reactions: Excessive heat and ultraviolet light may allow the product to polymerize.

10.4 Conditions To Avoid: Highly flammable liquid. Keep product away from heat, sparks, flames and all other sources of ignition.

10.5 Incompatible Materials: Strong oxidizing agents, reducing agents, alkalis, amines, sulfur compounds, peroxides.

10.6 Hazardous Decomposition Products: Thermal decomposition will produce carbon and phosphorus oxides.

Section 11. Toxicological Information

11.1 Information on Toxicological Effects:

Potential Health Effects:

Inhalation: Inhalation of vapors or mists may cause respiratory tract irritation and central nervous system effect such headache, dizziness and drowsiness.

Skin Contact: Causes skin irritation with redness. Repeated exposure may cause skin dryness or cracking of the skin. May cause an allergic skin reaction,

Eye Contact: Causes eye irritation with redness, tearing and pain.

Ingestion: Swallowing may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Acute Toxicity Values:

Acute Toxicity Estimate (ATE): Oral: >5000 mg/kg, Dermal: >2000 mg/kg

Glycerol Dimethacrylate Phosphate: No toxicity data available

Acetone: Oral rat LD50 5800 mg/kg, Inhalation rat LC50 >132 mg/L/3 hr, Dermal rabbit LD50 >7426 mg/L

2-Hydroxyethyl methacrylate: Oral rat LD50 5564 mg/kg, Dermal rabbit LD50 >5000 mg/kg

Ethanol: Oral rat LD50 10470 mg/kg, Inhalation rat LC50 116.9 mg/L/4 hr,

Skin corrosion/irritation: 2-Hydroxyethyl methacrylate, glycerol phosphate dimethacrylate and glycerol dimethacrylate are irritating to rabbit skin.

Eye damage/ irritation: Acetone, 2-hydroxyethyl methacrylate, glycerol phosphate dimethacrylate and glycerol dimethacrylate are irritating to rabbit eyes.

Skin Sensitization: 2-Hydroxyethyl methacrylate was positive in a guinea pig maximization test.

This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006 (REACH) and with its amendment Regulation (EU) 2015/830

Respiratory Sensitization: No data available. This product is not expected to cause respiratory sensitization.

Germ Cell Mutagenicity: None of the components are germ cell mutagens.

Carcinogenicity: None of the components is listed as a carcinogen or potential carcinogen by EU CLP.

Developmental / Reproductive Toxicity: None of the components have been shown to cause reproductive or developmental effects.

Specific Target Organ Toxicity (Single Exposure): Acetone has been shown to cause central nervous effects including headache, dizziness and drowsiness. Glycerol phosphate dimethacrylate and glycerol dimethacrylate have been shown to cause respiratory irritation.

Specific Target Organ Toxicity (Repeated Exposure): Acetone was found to be mildly toxic to rats when administered in the drinking water for 13 weeks. The minimal toxic dose (LOAEL) was 1,700 mg/kg for male rats with the testis, kidneys, and blood cell system as target organs.

Aspiration Toxicity: Not an aspiration hazard.

Section 12. Ecological Information

12.1 Toxicity: No toxicity data available for product

Glycerol Dimethacrylate Phosphate: No data available

Acetone: 96 hr LC50 Pimephales promelas 8120 mg/L, 48 hr LC50 Daphnia pulex 8800 mg/L

2-Hydroxyethyl Methacrylate: 96 hr LC50 Oryzias latipes >100 mg/kg, 48 hr EC50 daphnia magna 380 mg/L, 72 hr EC50 Pseudokirchneriella subcapitata 345 mg/L

Ethanol: 96 hr LC50 Pimephales promelas 13.8 mg/L, 48 hr EC50 daphnia magna 12340 mg/L, 72 hr EC50 Selenastrum capricornutum 12900 mg/L

12.2 Persistence and Degradability: 2-Hydroxyethyl methacrylate, acetone and ethanol are readily biodegradable.

12.3 Bioaccumulative Potential: 2-Hydroxyethyl methacrylate has a logKow of 0.42 and ethanol has a log Kow of 3. Acetone has a BCF of 3. This suggest the potential for bioaccumulation is low.

12.4 Mobility in Soil: Acetone and ethanol are highly mobile in soil.

12.5 Results of PBT and vPvB assessment: Components are not PBT or vPvB.

12.6 Other Adverse Effects: None known.

Section 13. Disposal Considerations

13.1 Waste Treatment Methods:

Disposal: For unused product, dispose of in accordance with Federal, State, and local regulations. For

This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006 (REACH) and with its amendment Regulation (EU) 2015/830

used Product, the waste solution must be characterized by the generator and disposed of in accordance with Federal, State, and local regulations.

Container Disposal: Rinse empty container thoroughly with water and offer for recycling, if available.

Section 14. Transport Information

	14.1 UN Number	14.2 UN Proper Shipping Name	14.3 Transport Hazard Class(es)	14.4 Packing Group	14.5 Environmental Hazards
US DOT	UN1993	Flammable liquids, n.o.s. (acetone, ethanol)	3	II	None
EU ADR/RID	UN1993	Flammable liquids, n.o.s. (acetone, ethanol)	3	II	None
IMDG	UN1993	Flammable liquids, n.o.s. (acetone, ethanol)	3	II	None
IATA/ICAO	UN1993	Flammable liquids, n.o.s. (acetone, ethanol)	3	II	None

14.6 Special Precautions for User: None identified

14.7 Transport in Bulk According to Annex III MARPOL 73/78 and the IBC Code:): Not applicable – product is transported only in packaged form.

Section 15. Regulatory Information

15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture

European Regulations:

Water Hazard Class: 1

Other EU Regulations: This product is classified and labeled in accordance with CLP Regulation. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006 (REACH) and its amendment regulation (EU) 2015/830.

International Inventories

US EPA TSCA Inventory: This product is regulated under the Federal Drug Administration (FDA) so it is exempt from the TSCA regulation.

15.2 Chemical Safety Assessment: None required

16. Other Information

GHS Classification for Reference (See Sections 2 and 3):

Flam Liq 2 Flammable Liquid Category 2

This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006 (REACH) and with its amendment Regulation (EU) 2015/830

Skin Irrit 2 Skin Irritation Category 2

Skin Sens 1 Skin Sensitization Category 1

Eye Irrit 2 Eye Irritation Category 2

STOT SE 3 Specific Target Organ Toxicity Single Exposure Category 3

H225 Highly flammable liquid and vapor.

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.

EUH066 Repeated exposure may cause skin dryness or cracking.

Effective Date: December 10, 2018

Supersedes Date: March 28, 2018

Revision Summary: New SDS – Rev 0

Updated Section 14 – Rev 1

The information and recommendations set forth herein are taken from sources believed to be accurate as of the date of preparation, however, KERR Corporation makes no warranty with respect to the accuracy or suitability of the recommendations, and assumes no liability to any use thereof.