

1. Identification

Product name: Optibond™ Solo Plus

Recommended use: Dental Product: Adhesive

Restrictions on use: Restricted to professional users

Supplier: Kerr Corporation
1717 W. Collins Ave.
Orange, CA 92867-5422 - U.S.A.
T 1-800-841-1428 (Customer Service)

Emergency number: (Chemical Spills, Leaks, Fire, Exposure or Accident only):
CHEMTREC 1-800-424-9300 (in the US), 1-703-527-3887 (Outside the US)

Issue date: 11/30/2020

2. Hazard(s) identification

Classification:

Physical hazards	Health hazards
Flammable liquids Category 2	Skin corrosion/irritation Category 2 Eye irritation Category 2 Skin sensitization, Category 1

GHS US labeling:

Danger!



Hazard statements (GHS US)	Precautionary 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	P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P233 - Keep container tightly closed. P240 - Ground/Bond container and receiving equipment. P241 - Use explosion-proof electrical, ventilating, lighting equipment. P242 - Use only non-sparking tools. P243 - Take precautionary measures against static discharge. P261 - Avoid breathing vapors. P264 - Wash hands thoroughly after handling. P272 - Contaminated work clothing must not be allowed out of the workplace. P280 - Wear eye protection, protective gloves.

P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
 P363 - Wash contaminated clothing before reuse.
 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 advice/attention.
 P370+P378 - In case of fire: Use carbon dioxide (CO₂), powder, alcohol-resistant foam, water spray to extinguish.
 P403+P235 - Store in a well-ventilated place. Keep cool.
 P501 - Dispose of contents or container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

3: Composition/Information on ingredients

Component	CAS-No.	Amount (%)
Ethanol	64-17-5	10 – 30
2-hydroxyethyl methacrylate	868-77-9	10 – 30
Glyceryl dimethacrylate	1830-78-0	1 – 5
Pyrogenic (Fumed) Amorphous Silica	68909-20-6	1 – 5
Alkali fluorosilicates(Na)	16893-85-9	0.1 – 1

*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret

4. First-aid measures

Inhalation: Remove person to fresh air and keep comfortable for breathing. Get medical attention if symptoms occur.

Skin: Wash skin with plenty of water. Take off immediately all contaminated clothing and wash it before reuse. If skin irritation or rash occurs: Get medical advice/attention.

Eyes: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Ingestion: Call a poison center or a doctor if you feel unwell.

Symptoms/effects: May cause moderate irritation to the eyes. May cause irritation to skin. May cause an allergic skin reaction.

Immediate medical attention and special treatment, if necessary: Treat symptomatically.

5. Fire-fighting measures

Suitable extinguishing media: Use dry chemical, CO₂, water spray or alcohol-resistant foam.

Unsuitable extinguishing media: Do not use water jet.

Fire hazard: Highly flammable liquid and vapor. Vapors are heavier than air and may travel considerable distance to an ignition source and flash back to source of vapors. Prolonged exposure to fire may cause containers to rupture/explode. Thermal decomposition generates: Carbon oxides (CO, CO₂). Nitrogen oxides. Phosphorus oxides. Metallic oxides.

Special protective equipment and precautions for fire-fighters: In case of fire: Stop leak if safe to do so. Use water spray or fog for cooling exposed containers. Do not allow run-off from firefighting to enter drains or water courses. Fight fire with normal precautions from a reasonable distance. Do not attempt to take action without suitable protective equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Remove ignition sources. Avoid contact with eyes, skin and clothing. Wear suitable protective clothing. Always wash hands after handling the product. Do not breathe vapors. Ventilate area.

Methods and material for containment and cleaning up: Stop leak if safe to do so. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Use non-sparking tools. Notify authorities if product enters sewers or public waters. Place in a suitable container for disposal in accordance with the waste regulations (see Section 13).

7. Handling and storage

Precautions for safe handling: Avoid contact with eyes, skin and clothing. Wear personal protective equipment. Avoid breathing vapors. Ensure adequate ventilation. Wash hands with water and soap. 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 vapors may accumulate in the container. Use explosion-proof equipment.

Storage conditions: Store in dry, cool, well-ventilated area. Keep away from heat and direct sunlight. Keep container tightly closed.

8. Exposure controls/personal protection

Exposure guidelines:	
Ethanol	1900 mg/m ³ TWA OSHA PEL; 1000 ppm TWA OSHA PEL; 1000 ppm STEL ACGIH TLV;
2-hydroxyethyl methacrylate	None established.
Glyceryl dimethacrylate	None established.
Pyrogenic (Fumed) Amorphous Silica	20 mppcf TWA OSHA PEL;
Alkali fluorosilicates(Na)	2.5 mg/m ³ TWA OSHA PEL; 2.5 mg/m ³ TWA ACGIH TLV;

Appropriate engineering controls: Use with adequate general or local exhaust ventilation to maintain exposure levels below the occupational exposure limits.

Environmental exposure controls: Avoid release to the environment.

Personal protective equipment:

Materials for protective clothing: Impervious clothing

Hand protection: Wear impervious gloves.

Eye protection: Use suitable eye protection. Chemical goggles

Skin and body protection: Wear suitable protective clothing

Respiratory protection: In operations where exposure limits are exceeded or exposure levels are excessive, an approved respirator should be used. Respirator selection and use should be based on contaminant type, form and concentration. Follow applicable regulations and good Industrial Hygiene practice.

9. Physical and chemical properties

Appearance: Yellow liquid.

Physical state	: Liquid	Solubility	: In water, material is partially soluble.
Color	: Light yellow	Partition coefficient n-octanol/water (Log Pow)	: No data available
Odor	: Fruity	Auto-ignition temperature	: No data available
Odor threshold	: No data available	Decomposition temperature	: No data available
pH	: No data available	Viscosity, kinematic	: No data available
Melting point	: Not applicable	Viscosity, dynamic	: No data available
Freezing point	: No data available	Explosion limits	: No data available
Boiling point	: 78.24 °C (172.83 °F) (Ethanol)	Explosive properties	: No data available
Flash point	: 18 °C (64.4 °F) (Ethanol)	Oxidizing properties	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available		
Flammability (solid, gas)	: Not applicable.		
Vapor pressure	: No data available		
Relative vapor density at 20 °C	: No data available		
Relative density	: 1.25		

No additional information available

10. Stability and reactivity

Reactivity: The product is non-reactive under normal conditions of use, storage and transport.

Chemical stability: Stable under normal conditions.

Possibility of hazardous reactions: No dangerous reactions known under normal conditions of use.

Conditions to avoid: Keep away from open flames, hot surfaces and sources of ignition.

Incompatible materials: Strong oxidizing agents.

Hazardous decomposition products: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. Toxicological information

Inhalation: May cause minor irritation to the respiratory tract and to other mucous membranes.

Skin: May cause moderate irritation. May cause an allergic skin reaction.

Eyes: May cause moderate irritation, including burning sensation, tearing, redness or swelling.

Ingestion: May cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Chronic symptoms: Prolonged absorption of fluorides may result in fluorosis. Symptoms include joint pain, changes in bone density (osteosclerosis), ossification of ligaments, limited mobility, teeth abnormalities and mottling of the dental enamel.

Carcinogenicity:	Not classified
Ethanol:	This component is not listed as a carcinogen or suspected carcinogen by IARC, NTP, ACGIH, OSHA or the EU CLP.
2-hydroxyethyl methacrylate:	This component is not listed as a carcinogen or suspected carcinogen by IARC, NTP, ACGIH, OSHA or the EU CLP.
Glyceryl dimethacrylate:	This component is not listed as a carcinogen or suspected carcinogen by IARC, NTP, ACGIH, OSHA or the EU CLP.
Pyrogenic (Fumed) Amorphous Silica:	This component is not listed as a carcinogen or suspected carcinogen by IARC, NTP, ACGIH, OSHA or the EU CLP.
Alkali fluorosilicates(Na):	This component is not listed as a carcinogen or suspected carcinogen by IARC, NTP, ACGIH, OSHA or the EU CLP.
Germ cell mutagenicity:	Not classified
Reproductive toxicity:	Not classified
Numerical measures of toxicity:	
Acute Toxicity Estimate:	ATE US (oral): 3581.7 mg/kg ATE US (dermal): 14580 mg/kg ATE US (vapors): 145.8 mg/l

The following are the toxicity values for the components:

Ethanol:	Oral rat LD50- ≈ 10470 mg/kg;
2-hydroxyethyl methacrylate:	Oral rat LD50- 5564 mg/kg body weight; Dermal rabbit LD50- > 5000 mg/kg body weight;
Glyceryl dimethacrylate:	No data available
Pyrogenic (Fumed) Amorphous Silica:	Oral rat LD50- > 5000 mg/kg; Dermal rabbit LD50- > 2000 mg/kg;
Alkali fluorosilicates(Na):	Oral rat LD50- 25 – 2000 mg/kg body weight;
Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/irritation	Causes serious eye irritation.
Respiratory or skin sensitization	May cause an allergic skin reaction.
STOT-single exposure	Not classified
STOT-repeated exposure	Not classified

12. Ecological information

Ecology - general: The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

Ecotoxicity:

Ethanol	14.2 g/L Fish LC50; 100 mg/L Daphnia EC50
2-hydroxyethyl methacrylate	100 mg/L Fish LC50; 380 mg/L Daphnia EC50

Pyrogenic (Fumed) Amorphous Silica 10000 mg/L Fish LC50

Alkali fluorosilicates(Na) 35.4 mg/L Daphnia EC50

Persistence and degradability: No data available

Bioaccumulative potential: No data available

Mobility in soil: No data available

Other adverse effects:

No data available

13. Disposal considerations

Regional legislation (waste): Dispose of in accordance with applicable federal, state, and local regulations.

Additional information: Flammable vapors may accumulate in the container.

14. Transport information

Department of Transportation (DOT)

Proper Shipping Name (DOT) : Ethanol solutions

UN-No.(DOT) : UN1170

Class (DOT) : 3

Packing group (DOT) : II

Hazard labels (DOT) : Flammable liquid

Transport by sea

Proper Shipping Name (IMDG) : ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)

UN-No. (IMDG) : 1170

Class (IMDG) : 3

Packing group (IMDG) : II

Air transport

Proper Shipping Name (IATA) : Ethanol solution

UN-No. (IATA) : 1170

Class (IATA) : 3

Packing group (IATA) : II

15. Regulatory information

SARA Section 313 - Emission Reporting: Not subject to reporting requirements of the United States SARA Section 313

CERCLA Section 103:

This product is not subject to reporting under CERLCA. However, many states have more stringent reporting requirements. Report all spills in accordance with local, state, and federal regulations.

SARA 302:

Not applicable

SARA Section 311/312 Hazard Classes: Refer to Section 2 for OSHA Hazard Classification.

California Proposition 65:

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

TSCA: All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

INTERNATIONAL INVENTORIES

- Australia AICS:** One or more ingredient(s) are not listed
- Canada DSL:** All the components are listed.
- China IECSC:** One or more ingredient(s) are not listed
- EU EINECS:** One or more ingredient(s) are not listed
- Japan ENCS:** One or more ingredient(s) are not listed
- Korea KECL:** One or more ingredient(s) are not listed
- New Zealand:** One or more ingredient(s) are not listed
- Philippines PICCS:** One or more ingredient(s) are not listed
- Taiwan CSNN** One or more ingredient(s) are not listed

16. Other information

Revision date : 11/30/2020

NFPA	
NFPA health hazard:	2
NFPA fire hazard:	3
NFPA reactivity:	0

NOTICE

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.