SAFETY DATA SHEET

Section 1. Product And Company Identification

Product Name: OptiBond® All-In-One
Product Use: Dental product: Bonding agent

Manufacturer: Kerr Corporation
1717 W. Collins Ave.
Orange, CA 92867-5422
U.S.A.

Information Phone Number: 1-800-841-1428 (Customer Service)

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

SDS Date of Preparation/Revision: February 5, 2019

Section 2. Hazards Identification

GHS Classification:
Flammable Liquids Category 2
Skin Irritation Category 2
Eye Irritation Category 2A
Skin Sensitizer Category 1
Specific Target Organ Toxicity Single Exposure Category 3
Specific Target Organ Toxicity Repeated Exposure Category 2

Label Elements:
Danger!

Hazard Phrases
Highly flammable liquid and vapor.
Causes serious eye irritation.
Causes skin irritation.
May cause drowsiness and dizziness.
May cause damage to organs through prolonged or repeated exposure.

Precautionary Phrases:
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Keep container tightly closed.
Use explosion-proof electrical/ventilating/lighting/equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.

Do not breathe vapor.
Wash hands thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.
IF ON SKIN: Take off contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical attention.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER if you feel unwell.
IF IN EYES: 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.
Store in a well-ventilated place. Keep cool.
Store locked up.
Dispose of contents and container in accordance with local and national regulations.

Section 3. Composition/Information on Ingredients

Component	CAS No.	Amount
Acetone	67-64-1	30-60%
2-hydroxyethyl methacrylate	868-77-9	5-10%
Ethanol	64-17-5	5-10%
2-hydroxy-1,3-propanediyl bismethacrylate	1830-78-0	1-5%

Section 4. First Aid Measures

Inhalation: Immediately remove victim to fresh air. Get immediate medical attention.

Skin Contact: Flush thoroughly with water. Get medical attention if irritation or symptoms of exposure develop. Remove and launder contaminated clothing before re-use.

Eye Contact: Rinse thoroughly with water. Get medical attention if irritation occurs and persists.

Ingestion: Do NOT induce vomiting. Rinse mouth with water. Never give anything by mouth to an unconscious or convulsing person. Keep the victim calm and warm. Get immediate medical attention.

Most important symptoms and effects, acute and delayed: Causes serious eye irritation and skin irritation. Prolonged contact can cause defatting to the skin. If inhaled, can cause central nervous system depression and may cause drowsiness and dizziness. Ingestion can be irritating to mouth, throat and stomach.

Indication of immediate medical attention and special treatment, if needed: None required under normal conditions of use.

Section 5. Fire Fighting Measures

Suitable (and Unsuitable) Extinguishing Media: Use any media appropriate for the surrounding fire. Cool fire exposed containers with water.

Specific Hazards Arising from the Chemical: Combustion may produce carbon dioxide, carbon monoxide, phosphorus oxides, and metal oxides.

Special Protective Equipment and Precautions for Fire-fighters: Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for fires in areas where chemicals are used or stored. Cool fire-exposed containers with water. Contain water used in firefighting from entering sewers or natural waterways.

Section 6: Accidental Release Measures

Personal precautions, Protective equipment, and Emergency procedures: Evacuate spill area and keep unprotected personnel away. Avoid contact with eyes, skin and clothing. Wear appropriate protective clothing and equipment.

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

Methods and Materials for Containment and Cleaning up: Prompt cleanup and removal are necessary. Absorb spills with an inert material and place in an appropriate waste disposal container.

Section 7. Handling and Storage

Precautions for Safe Handling: Prevent contact with eyes, skin and clothing. Always wear impervious gloves, chemical safety goggles and protective clothing when handling this material. Wash thoroughly with soap and water after handling. Do not eat, drink or smoke in the work area. Do not breathe dust or vapors. Use with adequate ventilation. Remove and wash contaminated clothing before reuse.

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

Conditions for Safe Storage, Including any Incompatibilities: Store in a cool, dry, well-ventilated area away from direct sunlight. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers.

Section 8. Exposure Controls / Personal Protection

Exposure Limits

Chemical	Exposure Limit
Acetone	590 mg/m^3 TWA NIOSH REL
2-hydroxyethyl methacrylate	None Established.
Ethanol	1000 ppm TWA OSHA PEL
2-hydroxy-1,3-propanediyl bismethacrylate	None Established.

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

Respiratory Protection: None under normal use conditions with adequate ventilation. For operations where the occupational exposure limits are exceeded, an approved respirator with particulate cartridges is recommended. 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.

Hand protection: Impervious gloves are suggested to prevent skin contact. Contact your glove supplier for selection assistance.

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

Skin Protection: Wear protective clothing as needed to avoid skin contact and contamination of personal clothing.

Hygiene measures: Suitable eye and skin washing facilities should be available in the work area.

Section 9. Physical and Chemical Properties

Appearance:	Light yellow liquid	**Odor:**	Fruity/Ketone
Odor Threshold:	Not available	**pH:**	Not available
Melting/Freezing Point:	Not available	**Boiling Point/Range:**	Not available
Flash Point:	<12.78°C (<55°F)	**Evaporation Rate:**	Not available
Flammability: (Solid, Gas)	Not applicable	**Flammability Limits:**	LEL: Not applicable UEL: Not applicable
Vapor Pressure:	Not available	**Vapor Density:**	Not available
Relative Density:	Not available	**Solubilities:**	Partially soluble in water
Partition Coefficient: (N-Octanol/Water)	Not available	**Autoignition Temperature:**	Not available
Decomposition Temperature:	Not available	**Viscosity:**	Not available

Section 10. Stability and Reactivity

Reactivity: The product is not expected to be reactive.
Chemical Stability: Stable under normal storage and handling conditions.
Possibility of Hazardous Reactions: Hazardous polymerization will not occur.
Conditions to avoid: Avoid heat and all possible sources of ignition (spark or flame).
Incompatible Materials: Oxidizing materials.
Hazardous decomposition products: None if stored normally.

Section 11. Toxicological Information

Potential Health Effects:

Inhalation: Can cause central nervous system depression. May cause drowsiness and dizziness.
Skin Contact: Causes skin irritation. Defatting to the skin.
Eye Contact: Causes serious eye irritation.
Ingestion: Irritating to mouth, throat and stomach. Swallowing can cause central nervous system depression.
Chronic Hazards: May cause damage to organs through prolonged or repeated exposure. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and dermatitis.

Skin Sensitization: No adverse effects expected. Components are not sensitizers.

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

Germ Cell Mutagenicity: Mercury: Mutagenic effects have been observed with humans.

Carcinogen: None of the components are listed as a carcinogen or potential carcinogen by IARC, NTP, ACGIH, or OSHA.

Developmental / Reproductive Toxicity: Mercury: Reproductive effects have been observed on tests with laboratory animals.

Specific Target Organ Toxicity (Single Exposure): Single exposure to acetone and ethanol may cause narcotic effects. Single exposure to 2-hydroxyethyl methacrylate, ethanol, and 2-hydroxy-1,3-propanediyl bismethacrylate may cause respiratory tract irritation.

Specific Target Organ Toxicity (Repeated Exposure): Repeated exposure to ethanol may affect the liver.

Aspiration Toxicity: Not an aspiration hazard.

Acute Toxicity Values:
Product ATE: 21372.9 mg/kg (Oral)
Acetone: LC50 Inhalation rat: 76 mg/L/4hr; LD50 Dermal rabbit: 20000 mg/kg;
LD50 Oral rat: 5800 mg/kg
2-hydroxyethyl methacrylate: LD50 Oral rat: 4230 mg/kg; LD50 Dermal rabbit: >3000 mg/kg
Ethanol: LC50 Inhalation rat: 124.7 mg/L/4hr; LD50 Oral rat: 7060 mg/kg;
LD50 Dermal rabbit: >20000 mg/m^3

Section 12. Ecological Information

Toxicity:
Acetone: 96 hr LC50 Pimephales promelas 100 mg/L; 96 hr EC50 Algae 20.565 mg/L;
48 hr LC50 Crustaceans 6000 mg/L; 48 hr LC50 Daphnia magna 10 mg/L
2-hydroxyethyl methacrylate: 96 hr LC50 Pimephales promelas 227 mg/L
Ethanol: 96 hr LC50 Pimephales promelas 13500 mg/L; 48 hr EC50 Daphnia magna 2000 µg/L;
48 hr LC50 Crustacenas 25500 ug/L

Persistence and degradability: Product is readily biodegradable.

Bioaccumulative Potential:
Acetone has a BCF of 0.69, log P_{ow} -0.27, potential for bioaccumulative is low.
2-hydroxyethyl methacrylate has a BCF of 1.3 – 1.5, log P_{ow} 0.42, potential for bioaccumulative is low.
Ethanol: log P_{ow} -0.35, potential for bioaccumulative is low.

Mobility in Soil: No data available.

Other Adverse Effects: No data available.

Section 13. Disposal Considerations

Disposal: For unused product, dispose of in accordance with Federal and local regulations.
Container Disposal: Dispose of empty container in accordance with Federal and local regulations.

Section 14. Transport Information

	UN Number	UN Proper Shipping Name	Hazard Class(s)	Packing Group	Environmental Hazards
US DOT	UN1993	Flammable liquids, n.o.s. (acetone, ethanol) RQ (acetone)	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) RQ (acetone)	3	II	None

Special Precautions for User: Transport within user's premises: Always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

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

Section 15. Regulatory Information

U.S. Federal Regulations:

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

EPA SARA 313: This Product Contains the Following Chemicals Subject to Annual Release Reporting Requirements Under SARA Title III, Section 313 (40 CFR 372): None

Protection Of Stratospheric Ozone: This product is not known to contain or to have been manufactured with ozone depleting substances as defined in 40 CFR Part 82, Appendix A to Subpart A.

CERCLA SECTION 103: This product is not subject to CERCLA reporting requirements; however, many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

International Inventories

US EPA TSCA Inventory: All of the components of this product are listed on the Toxic Substances Control Act (TSCA) Chemical Substances Inventory or exempt.

Canada CEPA: All of the components of this material are listed on the DSL or exempt.

Section 16. Other Information

Effective Date: February 5, 2019
Supersedes Date: February 26, 2015
Revision Summary: All Sections – New SDS format

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