

Section 1. Identification**Product name** : OPTIBOND FL PRIMER**Other means of identification** : Not available.**Product type** : Liquid.**Relevant identified uses of the substance or mixture and uses advised against**

Uses advised against	Reason
For non-professional use: Finished product.	

Product use : Dental Products: Adhesive.**Manufacturer** : KERR AUSTRALIA PTY LIMITED
Unit 10, 112-118 Talavera Road
North Ryde, N.S.W. 2113,
Australia
Telephone no.: 1 800 643 603**Emergency telephone number (with hours of operation)** : 0401 690 670**e-mail address of person responsible for this SDS** : Edwin.Varela@kavokerrgroup.com**Section 2. Hazards identification**

HSNO Classification : 3.1 - FLAMMABLE LIQUIDS - Category B
6.3 - SKIN IRRITATION - Category A
8.3 - CORROSIVE TO OCULAR TISSUE - Category A
6.5 - SENSITIZATION - Category B (Skin)
Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 26%
Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 26%

This material is classified as hazardous according to criteria in the Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001 and has been classified according to the Hazardous Substances (Classifications) Regulations 2001.

This material is classified as a dangerous good according to criteria in New Zealand Standard 5433:2007 Transport of Dangerous Goods on Land.

GHS label elements**Signal word** : Danger**Hazard statements** : Highly flammable liquid and vapour.
Causes skin irritation.
Causes serious eye damage.
May cause an allergic skin reaction.**Precautionary statements****Prevention** : Wear protective gloves: > 8 hours (breakthrough time): Small Quantity / Short term exposure: Nitrile gloves. Vinyl. Long term exposure: polyvinyl alcohol (PVA). Rubber gloves.. Wear eye or face protection. Keep away from ignition sources such as heat/sparks/open flame. - No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Avoid breathing vapour. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.

Section 2. Hazards identification

- Response** : Immediately call a POISON CENTER or doctor/physician. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Take off contaminated clothing and wash before reuse. Rinse skin with water/shower. Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- Storage** : Store in a well-ventilated place. Keep cool.
- Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Symbol** :



Other hazards which do not result in classification : None known.

Section 3. Composition/information on ingredients

- Substance/mixture** : Mixture
- Other means of identification** : Not available.
- CAS number/other identifiers**
- CAS number** : Not applicable.
- EC number** : Mixture.
- Product code** : Not available.

Ingredient name	%	CAS number
2-hydroxyethyl methacrylate	>=10 - <40	868-77-9
ethanol	>=20 - <30	64-17-5
2-[2-(methacryloyloxy)ethoxycarbonyl]benzoic acid	>=10 - <20	27697-00-3
glycerol phosphate dimethacrylate	>=5 - <20	-

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First-aid measures

Description of necessary first aid measures

- Inhalation** : No special measures required. If inhaled, remove to fresh air. Get medical attention if symptoms occur.
- Ingestion** : Large quantity: Get medical attention immediately. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : No special measures required. In case of contact, immediately flush skin with plenty of water. Get medical attention if symptoms occur.
- Eye contact** : No special measures are required. In case of contact with eyes, rinse immediately with plenty of water. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Section 4. First-aid measures

- Inhalation** : May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system.
- Ingestion** : May cause burns to mouth, throat and stomach.
- Skin contact** : Causes skin irritation. May cause an allergic skin reaction.
- Eye contact** : Causes serious eye damage.

Over-exposure signs/symptoms

- Inhalation** : No specific data.
- Ingestion** : Adverse symptoms may include the following:
stomach pains
- Skin** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
- Eyes** : Adverse symptoms may include the following:
pain
watering
redness

Indication of immediate medical attention and special treatment needed, if necessary

- Specific treatments** : Not available.
- Notes to physician** : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable** : Use dry chemical, CO₂, water spray (fog) or foam.
- Not suitable** : Do not use water jet.
- Specific hazards arising from the chemical** : Highly flammable liquid and vapour. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
phosphorus oxides
- Hazchem code** : 2YE
- Special precautions for fire-fighters** : In case of major fire and large quantities: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

- Personal precautions, protective equipment and emergency procedures** : Low release. For professional use only. Handling of product in very small amounts or in situations where release is highly unlikely.
- Environmental precautions** : Low release. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

- Small spill** : Small Quantity. For professional use only. Absorb with an inert material and place in an appropriate waste disposal container.
- Large spill** : Small Quantity. For professional use only. Absorb with an inert material and place in an appropriate waste disposal container.

Section 7. Handling and storage

- Precautions for safe handling** : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes, on skin or on clothing. Do not ingest. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. Large scale processes: If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator.
- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
ethanol	NZ OSH (New Zealand, 12/2011). WES-TWA: 1000 ppm 8 hours. WES-TWA: 1880 mg/m ³ 8 hours.

- Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.
- Appropriate engineering controls** : No special measures are required for small quantities under normal and intended conditions of product use. Large scale processes: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
- Environmental exposure controls** : No special measures are required for small quantities under normal and intended conditions of product use. Large scale processes: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Section 8. Exposure controls/personal protection

- Hygiene measures** : No special measures are required for small quantities under normal and intended conditions of product use. Large scale processes: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Respiratory protection** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: high concentrations: Approved/certified respirator with organic vapour cartridge.
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. > 8 hours (breakthrough time): Small Quantity / Short term exposure: Nitrile gloves. Vinyl. Long term exposure: polyvinyl alcohol (PVA). Rubber gloves.
- Eye protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.
- Skin protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Section 9. Physical and chemical properties

Appearance

- Physical state** : Liquid.
- Colour** : Yellow. [Light]
- Odour** : Fruity.
- Odour threshold** : Not available.
- pH** : 2
- Melting point** : Not available.
- Boiling point** : Not available.
- Flash point** : Closed cup: 18°C (64.4°F) [Ethanol]
- Burning rate** : Not applicable.
- Burning time** : Not applicable.
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Not available.
- Lower and upper explosive (flammable) limits** : Not available.
- Vapour pressure** : Not available.
- Vapour density** : Not available.
- Relative density** : Not available.
- Density** : 1.02 g/cm³
- Solubility** : Soluble in the following materials: cold water and hot water.

Section 9. Physical and chemical properties

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

SADT : Not available.

Viscosity : Not available.

Aerosol product

Type of aerosol : Not applicable.

Heat of combustion : Not available.

Ignition distance : Not applicable.

Enclosed space ignition - Time equivalent : Not applicable.

Enclosed space ignition - Deflagration density : Not applicable.

Flame height : Not applicable.

Flame duration : Not applicable.

Section 10. Stability and reactivity

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

Incompatible materials : Reactive or incompatible with the following materials:
oxidizing materials

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Contains: Polymerisation inhibitors. Loss of inhibitor or heat may cause polymerization.
Under normal conditions of storage and use, hazardous polymerisation will not occur.

Section 11. Toxicological information

Information on the likely routes of exposure

Inhalation : May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system.

Ingestion : May cause burns to mouth, throat and stomach.

Skin contact : Causes skin irritation. May cause an allergic skin reaction.

Eye contact : Causes serious eye damage.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation : No specific data.

Ingestion : Adverse symptoms may include the following:
stomach pains

Skin contact : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur

Eye contact : Adverse symptoms may include the following:
pain
watering
redness

Delayed and immediate effects and also chronic effects from short and long term exposure

Acute toxicity

Version : 1

Date of issue/Date of revision : 24/01/2014.

Section 11. Toxicological information

Product/ingredient name	Result	Species	Dose	Exposure
2-hydroxyethyl methacrylate ethanol	LD50 Oral LC50 Inhalation Vapour LD50 Oral	Rat Rat Rat	4230 mg/kg 124700 mg/m ³ 7 g/kg	- 4 hours -

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
ethanol	Eyes - Moderate irritant	Rabbit	-	0.066666667 minutes 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	100 microliters	-
	Eyes - Severe irritant	Rabbit	-	500 milligrams	-
	Skin - Mild irritant	Rabbit	-	400 milligrams	-

Sensitisation

Not available.

Potential chronic health effects

- General** : No known significant effects or critical hazards.
- Inhalation** : No known significant effects or critical hazards.
- Ingestion** : No known significant effects or critical hazards.
- Skin contact** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
- Eye contact** : No known significant effects or critical hazards.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : No known significant effects or critical hazards.
- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : No known significant effects or critical hazards.

Chronic toxicity

Not available.

Carcinogenicity

Not available.

Mutagenicity

Not available.

Teratogenicity

Not available.

Reproductive toxicity

Not available.

Specific target organ toxicity

Not available.

Aspiration hazard

Not available.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	10434.1 mg/kg

Section 12. Ecological information

Ecotoxicity : No known significant effects or critical hazards.

Aquatic and terrestrial toxicity

Product/ingredient name	Result	Species	Exposure
2-hydroxyethyl methacrylate	Acute LC50 227000 µg/l Fresh water	Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
ethanol	Acute EC50 17.921 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute EC50 2000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 25500 µg/l Marine water	Crustaceans - Artemia franciscana - Larvae	48 hours
	Acute LC50 42000 µg/l Fresh water	Fish - Oncorhynchus mykiss	4 days
	Chronic NOEC 4.995 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Chronic NOEC 0.375 µl/L Fresh water	Fish - Gambusia holbrooki - Larvae	12 weeks

Persistence/degradability

Product/ingredient name	Test	Result	Dose	Inoculum
2-hydroxyethyl methacrylate	301C Ready Biodegradability - Modified MITI Test (I)	92 to 100 % - 14 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
2-hydroxyethyl methacrylate	-	-	Readily
ethanol	-	-	Readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
2-hydroxyethyl methacrylate	0.42	-	low
ethanol	-0.35	-	low

Mobility in soil







Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
New Zealand Class	UN1170	ETHANOL mixture	3	II		Hazchem code 2YE Special provisions 144, 330
ADG Class	UN1170	ETHANOL mixture	3	II		Hazchem code •2YE Special provisions 144
UN Class	UN1170	ETHANOL mixture	3	II		Special provisions 144
ADR/RID Class	UN1170	ETHANOL mixture	3	II		Hazard identification number 33 Limited quantity 1 L Special provisions 144, 601 Tunnel code (D/E)
IATA Class	UN1170	Ethanol mixture	3	II		Passenger and Cargo Aircraft Quantity limitation: 5 L Packaging instructions: 353 Cargo Aircraft Only Quantity limitation: 60 L Packaging instructions: 364 Limited Quantities - Passenger Aircraft Quantity limitation: 1 L Packaging instructions: Y341 Special provisions A3, A58, A180
IMDG Class	UN1170	ETHANOL mixture	3	II		Emergency schedules (EmS) F-E, S-D Special provisions 144

PG* : Packing group

Section 15. Regulatory information

New Zealand Inventory of Chemicals (NZIoC)	: Not determined.
HSNO Approval Number	: Not available.
HSNO Group Standard	: Not available.
HSNO Classification	: 3.1 - FLAMMABLE LIQUIDS - Category B 6.3 - SKIN IRRITATION - Category A 8.3 - CORROSIVE TO OCULAR TISSUE - Category A 6.5 - SENSITIZATION - Category B (Skin)
Australia inventory (AICS)	: Not determined.
Safety, health and environmental regulations specific for the product	: No known specific national and/or regional regulations applicable to this product (including its ingredients).

Section 16. Other information

History

Date of issue/Date of revision	: 24/01/2014.
Date of previous issue	: No previous validation.
Version	: 1
Prepared by	: IHS
Key to abbreviations	: ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail UN = United Nations
References	: GHS - Globally Harmonized System of Classification and Labeling of Chemicals International transport regulations

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.