



**Safety Data Sheet  
according to WHS Regulations**

Printing date 01.02.2021

Version number 4

Revision: 01.02.2021

Hazardous according to criteria of Australian Safety and Compensation Council.

## 1 Identification

· **Product identifier**

· **Trade name: iBOND Total Etch**

· **Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.

· **Application of the substance / the mixture** Dental bonding material

· **Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

Kulzer Australia Pty Ltd  
Unit 20, 53 Lorraine Street  
Peakhurst, NSW 2210  
Australia

Tel: +61 (0) 2 9153 0311

· **Informing department:** see above

· **Emergency telephone number:**

Poison Information Number: Australia 13 11 26 & New Zealand 0800 764 766

## 2 Hazard(s) Identification

· **Classification of the substance or mixture**

Flam. Liq. 3 H226 Flammable liquid and vapour.

Skin Irrit. 2 H315 Causes skin irritation.

Eye Dam. 1 H318 Causes serious eye damage.

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Skin Sens. 1 H317 May cause an allergic skin reaction.

· **Label elements**

· **GHS label elements**

The product is classified and labelled according to the Globally Harmonised System (GHS).

· **Hazard pictograms**



GHS02 GHS05 GHS08

· **Signal word** Danger

· **Hazard-determining components of labelling:**

2-hydroxyethyl methacrylate  
glutaral

4-methacryloxyethyltrimellitic acid anhydride

· **Hazard statements**

Flammable liquid and vapour.

Causes skin irritation.

Causes serious eye damage.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

· **Precautionary statements**

Keep away from heat/sparks/open flames/hot surfaces. No smoking.

Use explosion-proof electrical/ventilating/lighting equipment.

In case of inadequate ventilation wear respiratory protection.

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*IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.*  
*IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*  
*Immediately call a POISON CENTER/doctor.*

- **Other hazards -**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### 3 Composition and Information on Ingredients

- **Chemical characterisation: Mixtures**
- **Description: -**

· <b>Dangerous components:</b>		
CAS: 64-17-5 EINECS: 200-578-6	ethanol Flam. Liq. 2, H225	25-50%
CAS: 868-77-9 EINECS: 212-782-2	2-hydroxyethyl methacrylate Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317	10-25%
	Poly(methacrylic-oligo-acrylic acid) Eye Irrit. 2A, H319	0-5%
CAS: 70293-55-9	4-methacryloxyethyltrimellitic acid anhydride Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317	0-5%
CAS: 111-30-8 EINECS: 203-856-5	glutaral Acute Tox. 3, H301; Acute Tox. 3, H331; Resp. Sens. 1, H334; Skin Corr. 1B, H314; Skin Sens. 1, H317; Flam. Liq. 4, H227	0-5%
CAS: 112926-00-8 EINECS: 231-545-4	amorphous silica	0-5%

- **Additional information** For the wording of the listed hazard phrases refer to section 16.

### 4 First Aid Measures

- **Description of first aid measures**
- **After inhalation** Supply fresh air; consult doctor in case of symptoms.
- **After skin contact** Instantly wash with water and soap and rinse thoroughly.
- **After eye contact**  
Rinse opened eye for several minutes under running water. Then consult doctor.
- **After swallowing**  
Rinse out mouth and then drink plenty of water.  
Instantly call for doctor.  
In case of persistent symptoms consult doctor.
- **Information for doctor**
- **Most important symptoms and effects, both acute and delayed**  
No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

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### 5 Fire Fighting Measures

- **Extinguishing media**
  - **Suitable extinguishing agents**  
CO<sub>2</sub>, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.
  - **For safety reasons unsuitable extinguishing agents** Water with a full water jet.
- **Special hazards arising from the substance or mixture**  
Can form explosive gas-air mixtures.  
Formation of toxic gases is possible during heating or in case of fire.
- **Advice for firefighters**
  - **Protective equipment:** Put on breathing apparatus.
- **Additional information** -

### 6 Accidental Release Measures

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**  
Do not allow to enter the ground/soil.  
No special measures required.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (diatomite, universal binders, for small amounts tissues).  
Send for recovery or disposal in suitable containers.
- **Reference to other sections**  
See Section 13 for information on disposal.  
See Section 8 for information on personal protection equipment.
- 

### 7 Handling and Storage

- **Handling**
  - **Precautions for safe handling**  
Keep containers tightly sealed.  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.
  - **Information about protection against explosions and fires:**  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
  - **Storage**
    - **Requirements to be met by storerooms and containers:** No special requirements.
    - **Information about storage in one common storage facility:** Not required.
    - **Further information about storage conditions:** Store cool (not above 25 °C).
- **Specific end use(s)** No further relevant information available.

### 8 Exposure controls and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

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**· Control parameters**

**· Components with critical values that require monitoring at the workplace:**

**64-17-5 ethanol**

NES (Australia)	1880 mg/m <sup>3</sup> , 1000 ppm
PEL (USA)	1900 mg/m <sup>3</sup> , 1000 ppm
REL (USA)	1900 mg/m <sup>3</sup> , 1000 ppm
TLV (USA)	Short-term value: 1880 mg/m <sup>3</sup> , 1000 ppm

**111-30-8 glutaral**

NES (Australia)	0.41* mg/m <sup>3</sup> , 0.1 ppm Sen;*Peak limitation
REL (USA)	Short-term value: C 0.8 mg/m <sup>3</sup> , C 0.2 ppm See Pocket Guide App. C
TLV (USA)	Short-term value: C 0.2 mg/m <sup>3</sup> , C 0.05 ppm SEN;activated or inactivated

**112926-00-8 amorphous silica**

NES (Australia)	10 mg/m <sup>3</sup>
PEL (USA)	20mppcf or 80mg/m <sup>3</sup> /%SiO <sub>2</sub> mg/m <sup>3</sup>
REL (USA)	6 mg/m <sup>3</sup>
TLV (USA)	TLV withdrawn

**· DNELs**

**64-17-5 ethanol**

Oral	ge.pop., l.te, syst.	87 mg/Kg (nd)
Dermal	worker profess., l.te., syst.	343 mg/Kg/d (nd)
	ge.pop., acu., local	950 mg/Kg/d (nd)
	ge.pop., l.te, syst.	206 mg/Kg/d (nd)
Inhalative	worker profess., acute, local	1900 mg/m <sup>3</sup> (nd)
	worker profess., l.te., syst.	1900 mg/m <sup>3</sup> (nd)
	ge.pop., acu., local	950 mg/m <sup>3</sup> (nd)
	ge.pop., l.te, syst.	114 mg/m <sup>3</sup> (nd)

**· PNECs**

**64-17-5 ethanol**

freshwater	0.96 mg/l (nd)
marine water	0.79 mg/l (nd)
STP	580 mg/l (nd)
sedim., dw, fre.wat.	3.6 mg/Kg (nd)
soil,dw	0.63 mg/Kg (nd)

**· Additional information:** The lists that were valid during the compilation were used as basis.

**· Exposure controls**

**· Personal protective equipment**

**· General protective and hygienic measures**

- Keep away from foodstuffs, beverages and food.
- Instantly remove any soiled and impregnated garments.
- Wash hands during breaks and at the end of the work.
- Do not inhale gases / fumes / aerosols.
- Avoid contact with the eyes and skin.

**· Breathing equipment:** Breathing protection recommended.

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· **Protection of hands:**

If skin contact cannot be avoided, protective gloves are recommended to avoid possible sensitization.

Solvent resistant gloves

Check protective gloves prior to each use for their proper condition.  
recommended

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**

Butyl rubber, BR

Nitrile rubber, NBR

· **Eye protection:** not absolutely necessary

· **Body protection:** Light weight protective clothing

## 9 Physical and Chemical Properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

· **Form:**

Fluid

· **Colour:**

Yellowish

· **Smell:**

Characteristic

· **Odour threshold:**

Not determined.

· **pH-value:**

Not determined.

· **Change in condition**

· **Melting point/freezing point:**

Not determined

· **Initial boiling point and boiling range:** Not determined

· **Flash point:**

24 °C

· **Inflammability (solid, gaseous)**

Not applicable.

· **Ignition temperature:**

425 °C

· **Decomposition temperature:**

Not determined.

· **Self-inflammability:**

Product is not selfigniting.

· **Explosive properties:**

Product is not explosive. However, formation of explosive air/vapour mixtures is possible.

· **Critical values for explosion:**

· **Lower:**

3,5 Vol %

· **Upper:**

15,0 Vol %

· **Steam pressure at 20 °C:**

57 hPa

· **Density at 20 °C**

1 g/cm<sup>3</sup>

· **Relative density**

Not determined.

· **Vapour density**

Not determined.

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· <b>Evaporation rate</b>	Not determined.
· <b>Solubility in / Miscibility with</b> · <b>Water:</b>	Not miscible or difficult to mix
· <b>Partition coefficient: n-octanol/water:</b>	Not determined.
· <b>Viscosity:</b> · <b>dynamic:</b> · <b>kinematic:</b>	Not determined. Not determined.
· <b>Other information</b>	No further relevant information available.

### 10 Stability and Reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
  - **Conditions to be avoided:** No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** None
- **Additional information:** -

### 11 Toxicological Information

- **Information on toxicological effects**
  - **Acute toxicity**

· <b>LD/LC50 values that are relevant for classification:</b>		
<b>64-17-5 ethanol</b>		
Oral	LD50	6200 mg/kg (rat)
Inhalative	LC50/4 h	95.6 mg/l (rat)
<b>41137-60-4 diurethandimethacrylate</b>		
Oral	LD50	>5000 mg/kg (rat)
<b>868-77-9 2-hydroxyethyl methacrylate</b>		
Oral	LD50	5564 mg/kg (rat)
Dermal	LD50	>3000 mg/kg (can)
<b>Poly(methacrylic-oligo-acrylic acid)</b>		
Oral	LD50	>5000 mg/kg (rat)
<b>70293-55-9 4-methacryloxyethyltrimellitic acid anhydride</b>		
Oral	LD50	> 2000 mg/kg (mouse)
Dermal	LD50	> 2000 mg/kg (mouse)
<b>72869-86-4 diurethandimethacrylate</b>		
Oral	LD50	>5000 mg/kg (rat)

- **Primary irritant effect:**
  - **Skin corrosion/irritation** Irritant for skin and mucous membranes.
  - **Serious eye damage/irritation** Strong irritant with the danger of severe eye injury.
- **Respiratory or skin sensitisation**
  - Sensitization possible by inhalation.
  - Sensitization possible by skin contact.

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· **Additional toxicological information:** Harmful

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### 12 Ecological Information

· **Toxicity**

· **Aquatic toxicity:**

**868-77-9 2-hydroxyethyl methacrylate**

LC50/96h | 227 mg/l (fish)

**72869-86-4 diurethandimethacrylate**

LC50/96h | 10.1 mg/l (fish)

· **Persistence and degradability** No further relevant information available.

· **Behaviour in environmental systems:**

· **Bioaccumulative potential** No further relevant information available.

· **Mobility in soil** No further relevant information available.

· **Additional ecological information:**

· **General notes:** Avoid transfer into the environment.

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **Other adverse effects** No further relevant information available.

### 13 Disposal considerations

· **Waste treatment methods**

· **Recommendation**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**

· **Recommendation:** Disposal must be made according to official regulations.

### 14 Transport information

· **UN-Number**

· **ADG, IMDG, IATA**

UN1170

· **UN proper shipping name**

· **ADG**

1170 ETHANOL (ETHYL ALCOHOL)

· **IMDG**

ETHANOL (ETHYL ALCOHOL)

· **IATA**

Ethanol

· **Transport hazard class(es)**

· **ADG**



· **Class**

3 (F1) Flammable liquids.

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· <b>Label</b>	3
· <b>IMDG, IATA</b>	
	
· <b>Class</b>	3 Flammable liquids.
· <b>Label</b>	3
· <b>Packing group</b>	
· <b>ADG, IMDG, IATA</b>	III
· <b>Environmental hazards:</b>	
· <b>Marine pollutant:</b>	No
· <b>Special precautions for user</b>	Warning: Flammable liquids.
· <b>Kemler Number:</b>	30
· <b>EMS Number:</b>	F-E, S-D
· <b>Stowage Category</b>	A
· <b>Transport in bulk according to Annex II of Marpol and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	-
· <b>ADG</b>	
· <b>Limited quantities (LQ)</b>	5L
· <b>Excepted quantities (EQ)</b>	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· <b>Transport category</b>	3
· <b>Tunnel restriction code</b>	D/E
· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	5L
· <b>Excepted quantities (EQ)</b>	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· <b>UN "Model Regulation":</b>	UN1170, ETHANOL (ETHYL ALCOHOL), 3, III

**15 Regulatory information**

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **GHS label elements**

The product is classified and labelled according to the Globally Harmonised System (GHS).

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**Hazard pictograms**



GHS02 GHS05 GHS08

**Signal word** Danger

**Hazard-determining components of labelling:**

2-hydroxyethyl methacrylate  
glutaral  
4-methacryloxyethyltrimellitic acid anhydride

**Hazard statements**

Flammable liquid and vapour.  
Causes skin irritation.  
Causes serious eye damage.  
May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
May cause an allergic skin reaction.

**Precautionary statements**

Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
Use explosion-proof electrical/ventilating/lighting equipment.  
In case of inadequate ventilation wear respiratory protection.  
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
Immediately call a POISON CENTER/doctor.

**Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

**16 Other information**

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**Relevant phrases**

H225 Highly flammable liquid and vapour.  
H227 Combustible liquid.  
H301 Toxic if swallowed.  
H314 Causes severe skin burns and eye damage.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.  
H331 Toxic if inhaled.  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

**Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
DNEL: Derived No-Effect Level (REACH)  
PNEC: Predicted No-Effect Concentration (REACH)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
PBT: Persistent, Bioaccumulative and Toxic

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vPvB: very Persistent and very Bioaccumulative  
Flam. Liq. 2: Flammable liquids – Category 2  
Flam. Liq. 3: Flammable liquids – Category 3  
Flam. Liq. 4: Flammable liquids – Category 4  
Acute Tox. 3: Acute toxicity – Category 3  
Skin Corr. 1B: Skin corrosion/irritation – Category 1B  
Skin Irrit. 2: Skin corrosion/irritation – Category 2  
Eye Dam. 1: Serious eye damage/eye irritation – Category 1  
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A  
Resp. Sens. 1: Respiratory sensitisation – Category 1  
Skin Sens. 1: Skin sensitisation – Category 1

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**\* Data compared to the previous version altered.**

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