



**Safety Data Sheet  
according to WHS Regulations**

Printing date 01.08.2018

Version number 3

Revision: 01.08.2018

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  
11 – 21 Underwood Rd  
HOMEBUSH NSW 2140  
Australia

Tel: +61 (0) 2 9764 5222

· **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.

(Contd. on page 2)



**Safety Data Sheet  
according to WHS Regulations**

Printing date 01.08.2018

Version number 3

Revision: 01.08.2018

**Trade name: iBOND Total Etch**

(Contd. of page 1)

*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: -**

**Dangerous components:**

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: 112926-00-8 EINECS: 231-545-4	amorphous silica	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%

- **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.

AUS

(Contd. on page 3)



**Safety Data Sheet  
according to WHS Regulations**

Printing date 01.08.2018

Version number 3

Revision: 01.08.2018

**Trade name: iBOND Total Etch**

(Contd. of page 2)

### 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.

(Contd. on page 4)

AUS



**Safety Data Sheet  
according to WHS Regulations**

Printing date 01.08.2018

Version number 3

Revision: 01.08.2018

**Trade name: iBOND Total Etch**

(Contd. of page 3)

**· 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.

(Contd. on page 5)



**Safety Data Sheet  
according to WHS Regulations**

Printing date 01.08.2018

Version number 3

Revision: 01.08.2018

**Trade name: iBOND Total Etch**

(Contd. of page 4)

**· 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:** Tightly sealed safety glasses.

**· 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.

(Contd. on page 6)



**Safety Data Sheet  
according to WHS Regulations**

Printing date 01.08.2018

Version number 3

Revision: 01.08.2018

**Trade name: iBOND Total Etch**

(Contd. of page 5)

· <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.

(Contd. on page 7)



**Safety Data Sheet  
according to WHS Regulations**

Printing date 01.08.2018

Version number 3

Revision: 01.08.2018

**Trade name: iBOND Total Etch**

· **Additional toxicological information:** Harmful

(Contd. of page 6)

### 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.

(Contd. on page 8)



**Safety Data Sheet**  
**according to WHS Regulations**


Printing date 01.08.2018

Version number 3

Revision: 01.08.2018

**Trade name: iBOND Total Etch**

(Contd. of page 7)

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

**15 Regulatory information**

· **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.

(Contd. on page 9)





**Safety Data Sheet  
according to WHS Regulations**

Printing date 01.08.2018

Version number 3

Revision: 01.08.2018

**Trade name: iBOND Total Etch**

(Contd. of page 8)

*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

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

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