**Identification of the substance/mixture and of the company/undertaking**

- **Product identifier**
  - Trade name: iBond Self 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: Heraeus Kulzer Australia Pty Ltd
    - Unit 32
    - 11 – 21 Underwood Rd
    - HOMEBUSH NSW 2140
    - Australia
    - Tel: +61 (0) 2 9764 5222
  - Informing department: see above
  - Emergency telephone number: Emergency contact number: 13 11 26 (24 hours)

**Hazards identification**

- **Classification of the substance or mixture**
  - Flam. Liq. 2 H225 Highly flammable liquid and vapour.
  - Skin Irrit. 2 H315 Causes skin irritation.
  - Eye Irrit. 2 H319 Causes serious eye irritation.
  - Skin Sens. 1 H317 May cause an allergic skin reaction.
  - STOT SE 3 H336 May cause drowsiness or dizziness.

- **Label elements**
  - GHS label elements
    - The product is classified and labelled according to the Globally Harmonised System (GHS).
  - Hazard pictograms
    - GHS02
    - GHS07

- **Signal word** Danger

- **Hazard-determining components of labelling:**
  - 4-methacryloxyethyltrimellitic acid anhydride
  - 2-hydroxyethyl methacrylate

- **Hazard statements**
  - Highly flammable liquid and vapour.
  - Causes skin irritation.
  - Causes serious eye irritation.
  - May cause an allergic skin reaction.
  - May cause drowsiness or dizziness.

- **Precautionary statements**
  - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

(Contd. on page 2)
Trade name: iBond Self Etch

Use explosion-proof electrical/ventilating/lighting/equipment.
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.
Specific treatment (see on this label).
Store locked up.

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

3 Composition/information on ingredients
- Chemical characterisation: Mixtures
- Description: Product based on methacrylates

Dangerous components:

<table>
<thead>
<tr>
<th>CAS</th>
<th>EINECS</th>
<th>Description</th>
<th>Hazard Class</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>67-64-1</td>
<td>200-662-2</td>
<td>acetone</td>
<td></td>
<td>25-50%</td>
</tr>
<tr>
<td>70293-55-9</td>
<td>212-782-2</td>
<td>2-hydroxyethyl methacrylate</td>
<td></td>
<td>&lt; 1%</td>
</tr>
<tr>
<td>868-77-9</td>
<td></td>
<td>4-methacryloxyethyltrimellitic acid anhydride</td>
<td>Skin Irrit. 2; H315; Eye Irrit. 2; H319; Skin Sens. 1; H317</td>
<td>10-25%</td>
</tr>
</tbody>
</table>

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 and call for doctor for safety reasons.
  - 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.
  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.

5 Firefighting measures
- Extinguishing media
  - Suitable extinguishing agents
    - CO2, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.
  - Special hazards arising from the substance or mixture
    - Can form explosive gas-air mixtures.
6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures
  Wear protective equipment. Keep unprotected persons away.
- Environmental precautions: Prevent material from reaching sewage system, holes and cellars.
- Methods and material for containment and cleaning up:
  Absorb with liquid-binding material (diatomite, universal binders, for small amounts tissues).
  Ensure adequate ventilation.
  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.
  - 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: Store in cool location.
    - Information about storage in one common storage facility: Not required.
    - Further information about storage conditions:
      Keep receptacle tightly sealed.
      Protect from the effects of light.
- Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- Additional information about design of technical systems: No further data; see item 7.
- Control parameters
  - Components with critical values that require monitoring at the workplace:
    67-64-1 acetone
    NES (Australia) Short-term value: 2375 mg/m³, 1000 ppm
    Long-term value: 1185 mg/m³, 500 ppm

(Contd. of page 2)
**Trade name:** iBond Self Etch

### PEL (USA)
- 2400 mg/m³, 1000 ppm

### REL (USA)
- 590 mg/m³, 250 ppm

### TLV (USA)
- Short-term value: 1782 mg/m³, 750 ppm
- Long-term value: 1188 mg/m³, 500 ppm

### DNELs

<table>
<thead>
<tr>
<th>Substance</th>
<th>Oral</th>
<th>Dermal</th>
<th>Inhalative</th>
</tr>
</thead>
<tbody>
<tr>
<td>67-64-1 acetone</td>
<td><em>ge.pop., l.te, syst.</em> 62 mg/Kg (nd)</td>
<td><em>worker profess., acute, syst.</em> 2420 mg/Kg/d (nd)</td>
<td><em>worker profess., l.te., syst.</em> 1210 mg/m³ (nd)</td>
</tr>
<tr>
<td></td>
<td><em>worker profess., l.te., syst.</em> 186 mg/Kg/d (nd)</td>
<td><em>ge.pop., l.te, syst.</em> 62 mg/Kg/d (nd)</td>
<td><em>ge.pop., l.te., syst.</em> 200 mg/m³ (nd)</td>
</tr>
</tbody>
</table>

### PNECs

<table>
<thead>
<tr>
<th>Substance</th>
<th>Oral</th>
<th>Dermal</th>
<th>Inhalative</th>
</tr>
</thead>
<tbody>
<tr>
<td>67-64-1 acetone</td>
<td>freshwater 10.6 mg/l (nd)</td>
<td>marine water 1.06 mg/l (rabbit)</td>
<td>STP 19.5 mg/l (nd)</td>
</tr>
<tr>
<td></td>
<td>sedim., dw, fre.wat. 30.4 mg/Kg (nd)</td>
<td>sedim., dw, mar.wat. 3.04 mg/Kg (nd)</td>
<td>soil,dw 0.112 mg/Kg (nd)</td>
</tr>
</tbody>
</table>

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

### Exposure controls

#### Personal protective equipment

- **General protective and hygienic measures**
  - Avoid contact with the eyes.
  - 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.
  - Avoid contact with the eyes and skin.

- **Breathing equipment:** Not required.

- **Protection of hands:**
  - The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
  - Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.
  - If skin contact cannot be avoided, protective gloves are recommended to avoid possible sensitization.
  - Check protective gloves prior to each use for their proper condition.

### 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.
Trade name: iBond Self Etch

Penetration time of glove material
The exact breakthrough 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: 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/Melting range: Not determined
  - Boiling point/Boiling range: 55 °C

- Flash point: -19 °C
- Inflammability (solid, gaseous): Not applicable.
- Ignition temperature: 465 °C
- Decomposition temperature: Not determined.
- Self-inflammability: Product is not selfigniting.

- Danger of explosion: Product is not explosive. However, formation of explosive air/vapour mixtures is possible.

- Critical values for explosion:
  - Lower: 2.6 Vol %
  - Upper: 13.0 Vol %

- Steam pressure at 20 °C: 247 hPa
- Density at 20 °C: 1 g/cm³
  - Relative density: Not determined.
  - Vapour density: Not determined.
  - Evaporation rate: Not determined.

- Solubility in / Miscibility with
  - Water: Partly miscible
- Partition coefficient (n-octanol/water): Not determined.
Trade name: iBond Self Etch

43.0.7
· Viscosity:
  · dynamic: Not determined.
  · kinematic: Not determined.
· Other information
  No further relevant information available.

10 Stability and reactivity
· Reactivity
  No further relevant information available.
· Chemical stability
  · Conditions to be avoided: Protect from heat and direct sunlight.
· 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

11 Toxicological information
· Information on toxicological effects
  · Acute toxicity
    · LD/LC50 values that are relevant for classification:
      | Substance | Oral LD50 | Dermal LD50 |
      |-----------|-----------|-------------|
      | 67-64-1 acetone | 5800 mg/kg (rat) | 20000 mg/kg (rabbit) |
      | 41137-60-4 diurethandimethacrylate | >5000 mg/kg (rat) |
      | 70293-55-9 4-methacryloxyethyltrimellitic acid anhydride | >2000 mg/kg (mouse) |
      | 868-77-9 2-hydroxyethyl methacrylate | 5564 mg/kg (rat) |
· Primary irritant effect:
  · Skin corrosion/irritation
    No irritant effect.
  · Serious eye damage/irritation
    Irritant effect.
  · Respiratory or skin sensitisation
    Sensitization possible by skin contact.
· Additional toxicological information:
  Irritant
12 Ecological information

· Toxicity
  · Aquatic toxicity:
    67-64-1 acetone
    EC50/48h 6100 mg/l (daphnia)
    LC50/96h 5540 mg/l (fish)
    868-77-9 2-hydroxyethyl methacrylate
    LC50/96h 227 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: Do not allow product to reach ground water, water bodies or sewage system.
  · 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.
    Disposal must be made according to official regulations.

· Uncleaned packagings:
  · Recommendation: Disposal must be made according to official regulations.
  · Recommended cleaning agent: Water, if necessary with cleaning agent.

14 Transport information

· UN-Number
  · ADG, IMDG, IATA 1090

· UN proper shipping name
  · ADG 1090 ACETONE, solution
  · IMDG, IATA ACETONE, solution
Trade name: iBond Self Etch

<table>
<thead>
<tr>
<th>Transport hazard class(es)</th>
</tr>
</thead>
<tbody>
<tr>
<td>· ADG</td>
</tr>
<tr>
<td>· Class</td>
</tr>
<tr>
<td>· Label</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IMDG, IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>· Class</td>
</tr>
<tr>
<td>· Label</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Packing group</th>
</tr>
</thead>
<tbody>
<tr>
<td>· ADG, IMDG, IATA</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Environmental hazards:</th>
</tr>
</thead>
<tbody>
<tr>
<td>· Marine pollutant:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Special precautions for user</th>
</tr>
</thead>
<tbody>
<tr>
<td>· Kemler Number:</td>
</tr>
<tr>
<td>· EMS Number:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Transport in bulk according to Annex II of Marpol and the IBC Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not applicable.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Transport/Additional information:</th>
</tr>
</thead>
<tbody>
<tr>
<td>· ADG</td>
</tr>
<tr>
<td>· Limited quantities (LQ)</td>
</tr>
<tr>
<td>· Transport category</td>
</tr>
<tr>
<td>· Tunnel restriction code</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>UN &quot;Model Regulation&quot;:</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN1090, ACETONE, solution, 3, II</td>
</tr>
</tbody>
</table>

### 15 Regulatory information

<table>
<thead>
<tr>
<th>Safety, health and environmental regulations/legislation specific for the substance or mixture</th>
</tr>
</thead>
<tbody>
<tr>
<td>· GHS label elements</td>
</tr>
<tr>
<td>The product is classified and labelled according to the Globally Harmonised System (GHS).</td>
</tr>
</tbody>
</table>
Hazard pictograms

GHS02  GHS07

Signal word Danger

Hazard-determining components of labelling:
- 4-methacryloyloxyethyltrimellitic acid anhydride
- 2-hydroxyethyl methacrylate

Hazard statements
- Highly flammable liquid and vapour.
- Causes skin irritation.
- Causes serious eye irritation.
- 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.
- 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.
- Specific treatment (see on this label).
- Store locked up.

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.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H336 May cause drowsiness or dizziness.

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
- vPvB: very Persistent and very Bioaccumulative

(Contd. on page 10)
**Trade name:** iBond Self Etch

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flam. Liq. 2</td>
<td>Flammable liquids – Category 2</td>
</tr>
<tr>
<td>Skin Irrit. 2</td>
<td>Skin corrosion/irritation – Category 2</td>
</tr>
<tr>
<td>Eye Irrit. 2</td>
<td>Serious eye damage/eye irritation – Category 2</td>
</tr>
<tr>
<td>Skin Sens. 1</td>
<td>Skin sensitisation – Category 1</td>
</tr>
<tr>
<td>STOT SE 3</td>
<td>Specific target organ toxicity (single exposure) – Category 3</td>
</tr>
</tbody>
</table>

* Data compared to the previous version altered.