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

- **Product identifier**
  - **Trade name:** VENUS Pearl
  - **Relevant identified uses of the substance or mixture and uses advised against**
    - No further relevant information available.
  - **Application of the substance / the mixture** Dental filling 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)

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2 Hazards identification

- **Classification of the substance or mixture**
  - **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**
    - GHS07

- **Signal word** Warning

- **Hazard-determining components of labelling:**
  - 2-Propenoic acid, (octahydro-4,7-methano-1H-indene-5 -diyl)bis(methyleneiminocarbonyloxy-2,1-ethanediyl) ester
  - triethylen glycol dimethacrylate

- **Hazard statements**
  - May cause an allergic skin reaction.

- **Precautionary statements**
  - Avoid breathing dust/fume/gas/mist/vapours/spray.
  - Wear protective gloves/protective clothing/eye protection/face protection.
  - Contaminated work clothing should not be allowed out of the workplace.
  - Specific treatment (see on this label).
  - If skin irritation or rash occurs: Get medical advice/attention.
  - IF ON SKIN: Wash with plenty of water.

- **Other hazards**
3 Composition/information on ingredients

- Chemical characterisation: Mixtures
- Description: -
- Dangerous components:

<table>
<thead>
<tr>
<th>CAS</th>
<th>Description</th>
<th>Skin Sens.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>861437-11-8</td>
<td>2-Propenoic acid, (octahydro-4,7-methano-1H-indene-5-diyl) bis(methyleneiminocarbonyloxy-2,1-ethanediyl) ester</td>
<td>H317</td>
<td>10-25%</td>
</tr>
<tr>
<td>109-16-0</td>
<td>triethylen glycol dimethacrylate</td>
<td>1B, H317</td>
<td>0-5%</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; consult doctor in case of symptoms.
  - After skin contact Instantly wash with water and soap and rinse thoroughly. If skin irritation continues, consult a doctor.
  - 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 Use fire fighting measures that suit the environment.
    - CO2, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.
  - Special hazards arising from the substance or mixture Formation of toxic gases is possible during heating or in case of fire.
- Advice for firefighters
  - Protective equipment: No special measures required.
- Additional information -
Trade name: VENUS Pearl

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 drainage system, surface or ground water.
  Do not allow to enter the ground/soil.

- **Methods and material for containment and cleaning up:**
  Absorb with liquid-binding material (diatomite, universal binders, for small amounts tissues).
  Dispose of the material collected according to regulations.

- **Reference to other sections**
  See Section 7 for information on safe handling
  See Section 8 for information on personal protection equipment.
  See Section 13 for information on disposal.

7 Handling and storage

- **Handling**
  - **Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace.
  - **Information about protection against explosions and fires:** No special measures required.

- **Conditions for safe storage, including any incompatibilities**
  - **Storage**
    - **Requirements to be met by storerooms and containers:** No special requirements.
    - **Further information about storage conditions:** None.

- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Control parameters**
  - **Components with critical values that require monitoring at the workplace:**
    The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

**DNELs**

<table>
<thead>
<tr>
<th>Component</th>
<th>DNEL</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>109-16-0 triethylen glycol dimethacrylate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td>worker industr., l.te., syst.</td>
<td>13.9 mg/Kg/d (nd)</td>
</tr>
<tr>
<td>Inhalative</td>
<td>worker industr., l.te., syst.</td>
<td>48.5 mg/m3 (nd)</td>
</tr>
</tbody>
</table>

**PNECs**

<table>
<thead>
<tr>
<th>Component</th>
<th>PNEC</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>109-16-0 triethylen glycol dimethacrylate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>marine water</td>
<td>0.0164 mg/l (nd)</td>
<td></td>
</tr>
<tr>
<td>sedim., dw, fre.wat.</td>
<td>1.85 mg/Kg (nd)</td>
<td></td>
</tr>
<tr>
<td>sedim., dw, mar.wat.</td>
<td>0.185 mg/Kg (nd)</td>
<td></td>
</tr>
<tr>
<td>soil,dw</td>
<td>0.274 mg/Kg (nd)</td>
<td></td>
</tr>
</tbody>
</table>
Trade name: **VENUS Pearl**

- **Additional information:** The lists that were valid during the compilation were used as basis.
- **Exposure controls**
  - **Personal protective equipment**
    - **General protective and hygienic measures**
      Instantly remove any soiled and impregnated garments.
      Wash hands during breaks and at the end of the work.
    - **Breathing equipment:** Not required.
    - **Protection of hands:**
      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.
  - **Penetration time of glove material**
    The exact break trough 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:** Pasty
      - **Colour:** Different according to colour
    - **Smell:** Odourless
    - **Odour threshold:** Not determined.
  - **pH-value:** Not determined.
  - **Change in condition**
    - **Melting point/Melting range:** Not determined
    - **Boiling point/Boiling range:** > 250 °C
  - **Flash point:** > 165 °C
  - **Inflammability (solid, gaseous)** Not applicable.
  - **Ignition temperature:**
    - **Decomposition temperature:** Not determined.
### Safety data sheet
according to 1907/2006/EC, Article 31

**Printing date:** 03.06.2017  
**Revision:** 03.06.2017  
**Version number:** 3

#### Trade name: VENUS Pearl

- **Self-inflammability:** Product is not selfigniting.
- **Danger of explosion:** Product is not explosive.
  - **Critical values for explosion:**
    - Lower: Not determined.
    - Upper: Not determined.
- **Steam pressure:** Not determined.
- **Density at 20 °C:** 2.1 g/cm³
  - **Relative density:** Not determined.
  - **Vapour density:** Not determined.
  - **Evaporation rate:** Not determined.
- **Solubility in / Miscibility with Water:** Not miscible or difficult to mix
- **Partition coefficient (n-octanol/water):** Not determined.
- **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:** 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**
    - **LD/LC50 values that are relevant for classification:**
      - **861437-11-8 2-Propenoic acid, (octahydro-4,7-methano-1H-indene-5-diyl) bis(methyleneiminocarbonyloxy-2,1-ethanediyl) ester**
        - Oral LD50 >2000 mg/kg (rat)
      - **41137-60-4 diurethandimethacrylate**
        - Oral LD50 >5000 mg/kg (rat)
      - **109-16-0 triethylen glycol dimethacrylate**
        - Oral LD50 > 5000 mg/kg (rat)
        - Dermal LD50 > 2000 mg/kg (mouse)

(Contd. on page 6)
Trade name: VENUS Pearl

· Primary irritant effect:
  · Skin corrosion/irritation No irritant effect.
  · Serious eye damage/irritation No irritant effect.
· Respiratory or skin sensitisation No sensitizing effect known.
· Sensitisation May cause sensitisation by skin contact.

12 Ecological information

· Toxicity
  · Aquatic toxicity:
    861437-11-8 Propenoic acid, (octahydro-4,7-methano-1H-indene-5-diyl) bis(methyleneiminocarbonyloxy-2,1-ethanediyl) ester
    EC50/48h 24.9 mg/l (daphnia)
    109-16-0 triethylen glycol dimethacrylate
    EC50/72h > 100 mg/l (algae)
  · 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
    Small quantities can be polymerized by light and the cured solid material can be disposed of with the regular garbage. Larger quantities must be disposed of following the regulations of the local authorities.

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

14 Transport information

· UN-Number
  · ADG, ADN, IMDG, IATA Void

· UN proper shipping name
  · ADG Void
  · ADN, IMDG, IATA Void

(Contd. on page 7)
Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 03.06.2017
Revision: 03.06.2017

Trade name: VENUS Pearl

- Transport hazard class(es)
  - ADG, ADN, IMDG, IATA
  - Class: Void

- Packing group
  - ADG, IMDG, IATA
  - Void

- Environmental hazards:
  - Marine pollutant: No

- Special precautions for user: Not applicable.

- Transport in bulk according to Annex II of Marpol and the IBC Code: Not applicable.

- Transport/Additional information:
  - UN "Model Regulation": Void

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).
  - Hazard pictograms

  GHS07

- Signal word: Warning

- Hazard-determining components of labelling:
  - 2-Propenoic acid, (octahydro-4,7-methano-1H-indene-5-diyl)bis(methyleneiminocarbonyloxy-2,1-ethanediyl) ester
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- Hazard statements
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  - Avoid breathing dust/fume/gas/mist/vapours/spray.
  - Wear protective gloves/protective clothing/eye protection/face protection.
  - Contaminated work clothing should not be allowed out of the workplace.
  - Specific treatment (see on this label).
  - If skin irritation or rash occurs: Get medical advice/attention.
  - IF ON SKIN: Wash with plenty of water.

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

(Contd. on page 8)
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**
  - H317 May cause an allergic skin reaction.

- **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
  - Skin Sens. 1: Skin sensitisation – Category 1
  - Skin Sens. 1B: Skin sensitisation – Category 1B

- * Data compared to the previous version altered.