1 Identification

- **Product identifier**
  - **Trade name:** CLEARFIL SE BOND ; PRIMER
  - **Article number:** CA064-P
- **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

2 Hazard(s) identification

- **Classification of the substance or mixture**
  - GHS07
  - Skin Irritation - Category 2 H315 Causes skin irritation.
  - Eye Irritation - Category 2A H319 Causes serious eye irritation.
  - Skin Sensitizer - Category 1 H317 May cause an allergic skin reaction.

- **Label elements**
  - GHS label elements
  - The product is classified and labeled according to the Globally Harmonized System (GHS).
  - **Signal word** Warning

- **Hazard-determining components of labeling:**
  - 2-hydroxyethyl methacrylate

- **Hazard statements**
  - H315 Causes skin irritation.
  - H319 Causes serious eye irritation.
  - H317 May cause an allergic skin reaction.

- **Precautionary statements**
  - P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
  - P264 Wash thoroughly after handling.
  - P272 Contaminated work clothing should not be allowed out of the workplace.
  - P280 Wear protective gloves/protective clothing/eye protection/face protection.
  - P302+P352 If on skin: Wash with plenty of water.
  - P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  - P321 Specific treatment (see on this label).
  - P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

(Contd. on page 2)
Trade name: CLEARFIL SE BOND ; PRIMER

P337+P313 If eye irritation persists: Get medical advice/attention.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

3 Composition/information on ingredients

- Chemical characterization: Mixtures
- Description: Mixture of substances listed below with nonhazardous additions.

<table>
<thead>
<tr>
<th>Dangerous components:</th>
</tr>
</thead>
<tbody>
<tr>
<td>868-77-9 2-hydroxyethyl methacrylate</td>
</tr>
<tr>
<td>Skin Irritation - Category 2, H315; Eye Irritation - Category 2A, H319; Skin Sensitizer - Category 1, H317</td>
</tr>
<tr>
<td>20-40% w/w</td>
</tr>
</tbody>
</table>

- Other ingredients:
  - 10-Methacryloyloxydecyl dihydrogen phosphate
  - Hydrophilic aliphatic dimethacrylate
  - dl-Camphorquinone
  - Water
  - Accelerators
  - Dyes

4 First-aid measures

- Description of first aid measures
- After inhalation: Supply fresh air and to be sure call for a doctor.
  In case of unconsciousness place patient stably in side position for transportation.
- After skin contact: Immediately wash with water and soap and rinse thoroughly.
- After eye contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- After swallowing: Do not induce vomiting; immediately call for medical help.
  If symptoms persist 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 Fire-fighting measures

- Extinguishing media
- Suitable extinguishing agents: CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- Special hazards arising from the substance or mixture: No further relevant information available.
- Advice for firefighters
- Protective equipment: Wear self-contained respiratory protective device.
  Wear fully protective suit.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures: See Section 8.
- Environmental precautions:
  Dilute with plenty of water.

(Contd. of page 1)
7 Handling and storage

- **Handling:**
  - **Precautions for safe handling**
    Ensure good ventilation/exhaustion at the workplace.
    Prevent formation of aerosols.
  - **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 receptacles:** Store in a refrigerator (2-8°C).
      - **Information about storage in one common storage facility:** Not required.
      - **Further information about storage conditions:**
        Keep receptacle tightly sealed.
        Store in cool, dry conditions in well sealed receptacles.
        Protect from heat and direct sunlight.
    - **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 limit 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.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
  - **General protective and hygienic measures:**
    Immediately remove all soiled and contaminated clothing.
    Wash hands before breaks and at the end of work.
    Avoid contact with the eyes and skin.
  - **Breathing equipment:** Not required.
  - **Protection of hands:**
    Protective gloves
    The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
    Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
    Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **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 breakthrough time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**
  Tightly sealed goggles

### 9 Physical and chemical properties

<table>
<thead>
<tr>
<th>Information on basic physical and chemical properties</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Information</strong></td>
</tr>
<tr>
<td><strong>Appearance:</strong></td>
</tr>
<tr>
<td>Form: Liquid</td>
</tr>
<tr>
<td>Color: Yellow</td>
</tr>
<tr>
<td>Odor: Odorless</td>
</tr>
<tr>
<td><strong>pH-value at 20 °C:</strong></td>
</tr>
<tr>
<td>&lt;2.5</td>
</tr>
<tr>
<td><strong>Change in condition</strong></td>
</tr>
<tr>
<td>Melting point/Melting range: -12 °C (2-hydroxyethyl methacrylate)</td>
</tr>
<tr>
<td>Boiling point/Boiling range: 205 °C (2-hydroxyethyl methacrylate)</td>
</tr>
<tr>
<td><strong>Flash point:</strong></td>
</tr>
<tr>
<td>97 °C (2-hydroxyethyl methacrylate)</td>
</tr>
<tr>
<td><strong>Ignition temperature:</strong></td>
</tr>
<tr>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Decomposition temperature:</strong></td>
</tr>
<tr>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Danger of explosion:</strong></td>
</tr>
<tr>
<td>Product does not present an explosion hazard.</td>
</tr>
<tr>
<td><strong>Explosion limits:</strong></td>
</tr>
<tr>
<td>Lower: Not determined</td>
</tr>
<tr>
<td>Upper: Not determined</td>
</tr>
<tr>
<td><strong>Oxidizing properties</strong></td>
</tr>
<tr>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Vapor pressure:</strong></td>
</tr>
<tr>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Density at 20 °C:</strong></td>
</tr>
<tr>
<td>1 g/cm³</td>
</tr>
<tr>
<td><strong>Relative density</strong></td>
</tr>
<tr>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Vapor density</strong></td>
</tr>
<tr>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Evaporation rate</strong></td>
</tr>
<tr>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Solubility in / Miscibility with</strong></td>
</tr>
<tr>
<td>Water: Fully miscible</td>
</tr>
<tr>
<td><strong>Partition coefficient (n-octanol/water):</strong></td>
</tr>
<tr>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Viscosity:</strong></td>
</tr>
<tr>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Other information</strong></td>
</tr>
<tr>
<td>No further relevant information available.</td>
</tr>
</tbody>
</table>

### 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
  No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
11 Toxicological information

- Information on toxicological effects
  - Acute toxicity:
    - LD/LC50 values that are relevant for classification:
      **868-77-9 2-hydroxyethyl methacrylate**

      | Route   | LD50     |
      |---------|----------|
      | Oral    | 4680 mg/kg (guinea pig) |
      |         | 3275 mg/kg (mouse)     |
      |         | 5050 mg/kg (rat)       |

    - Primary irritant effect:
      - on the skin: Irritating effect
      - on the eye: Irritating effect.
      - Sensitization: Sensitization possible through skin contact.
      - Additional toxicological information:
        The product shows the following dangers according to internally approved calculation methods for preparations:
        Irritant

- Carcinogenic categories
  - IARC (International Agency for Research on Cancer)
    None of the ingredients is listed.
  - NTP (National Toxicology Program)
    None of the ingredients is listed.

12 Ecological information

- Toxicity
  - Aquatic toxicity: No further relevant information available.
  - Persistence and degradability: No further relevant information available.
  - Behavior in environmental systems:
    - Bioaccumulative potential: No further relevant information available.
    - Mobility in soil: No further relevant information available.

- Additional ecological information:
  - General notes:
    Water hazard class 1 (Self-assessment): slightly hazardous for water
    Do not allow undiluted product or large quantities of it to reach ground water, water course 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.
## 46.0.15

- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

### 14 Transport information

- **UN-Number**
  DOT, TDG, ADN, IMDG, IATA
  Void

- **DOT, TDG, ADN, IMDG, IATA**
  Void

- **Transport hazard class(es)**
  DOT, TDG, ADN, IMDG, IATA
  Void

- **Class**
  Void

- **Packing group**
  DOT, TDG, IMDG, IATA
  Void

- **Environmental hazards:**
  Marine pollutant:
  No

- **Special precautions for user**
  Not applicable.

- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**
  Not applicable.

- **UN "Model Regulation":**
  Void

### 15 Regulatory information

- **Sara**
  - **Section 355 (extremely hazardous substances):**
    None of the ingredient is listed.
  - **Section 313 (Specific toxic chemical listings):**
    None of the ingredients is listed.
  - **SARA 311/312:** See Section 2 for the information on physical and health hazards.
  - **TSCA (Toxic Substances Control Act):**
    All ingredients are listed.

- **Canadian substance listings:**
  - **Canadian Domestic Substances List (DSL):**
    All ingredients are listed.
  - **Canadian Ingredient Disclosure list (limit 0.1%):**
    None of the ingredients is listed.
  - **Canadian Ingredient Disclosure list (limit 1%):**
    868-77-9 2-hydroxyethyl methacrylate

### 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- * Data compared to the previous version altered.