1 Identification

- **Product identifier**
  - **Trade name:** CLEARFIL LINER BOND 2V ; PRIMER A
  - **Article number:** US061-PA

- **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:** Kuraray Noritake Dental Inc.
    1621 Sakazu, Kurashiki, Okayama 710-0801, Japan
  - **Contact information:**
    - Kuraray America, Inc.
    33 Maiden Lane, 6th Floor, New York,
    NY 10038 U.S.A.
    - Tel: 800-879-1676
    - Fax: 888-700-5200
    - Website: www.kuraraydental.com
  - **Emergency telephone number:**
    - For chemical emergency spill, leak, fire, exposure or accident
    - Call CHEMTREC day and night
    - Within USA and Canada: 1-800-424-9300 CCN706984 or
      +1 703-527-3887 (collect calls accepted)

2 Hazard(s) identification

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

  Skin Irrit. 2  H315  Causes skin irritation.
  Eye Irrit. 2A H319  Causes serious eye irritation.
  Skin Sens. 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).
  - **Hazard pictograms** GHS07
  - **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/vapors/spray
  - P264 Wash thoroughly after handling.
  - P280 Wear protective gloves / 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.
  - P337+P313 If eye irritation persists: Get medical advice/attention.
  
  (Contd. on page 2)
Trade name: CLEARFIL LINER BOND 2V ; PRIMER A

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

* 3 Composition/information on ingredients

- Chemical characterization: Substances None
- 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>
</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.
  Do not allow to enter sewers/surface or ground water.
- Methods and material for containment and cleaning up:
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  Ensure adequate ventilation.
- 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 disposal information.

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:
  In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
- Protection of hands:
  Protective gloves
### 9 Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Information on basic physical and chemical properties</strong></td>
<td></td>
</tr>
<tr>
<td><strong>General Information</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Appearance:</strong></td>
<td></td>
</tr>
<tr>
<td>Form</td>
<td>Liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Orange</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td><strong>pH-value:</strong></td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Change in condition</strong></td>
<td></td>
</tr>
<tr>
<td>Melting point/Melting range</td>
<td>-12 °C (2-hydroxyethyl methacrylate)</td>
</tr>
<tr>
<td>Boiling point/Boiling range</td>
<td>205 °C (2-hydroxyethyl methacrylate)</td>
</tr>
<tr>
<td><strong>Flash point:</strong></td>
<td>97 °C (2-hydroxyethyl methacrylate)</td>
</tr>
<tr>
<td><strong>Ignition temperature:</strong></td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Decomposition temperature:</strong></td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Danger of explosion:</strong></td>
<td>Product does not present an explosion hazard.</td>
</tr>
<tr>
<td><strong>Explosion limits:</strong></td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>Not determined</td>
</tr>
<tr>
<td>Upper</td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Oxidizing properties</strong></td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Vapor pressure:</strong></td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Density:</strong></td>
<td>1.1 g/cm³</td>
</tr>
<tr>
<td><strong>Relative density</strong></td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Vapor density</strong></td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Evaporation rate</strong></td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Solubility in / Miscibility with Water:</strong></td>
<td>Partly miscible.</td>
</tr>
<tr>
<td><strong>Partition coefficient (n-octanol/water):</strong></td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Viscosity:</strong></td>
<td>Not determined</td>
</tr>
</tbody>
</table>

(Contd. on page 5)
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.
- Conditions to avoid: No further relevant information available.
- Incompatible materials: No further relevant information available.
- Hazardous decomposition products: Carbon monoxide and carbon dioxide

11 Toxicological information

- Information on toxicological effects:
  - Acute toxicity:
    - LD/LC50 values that are relevant for classification:

78-77-9 2-hydroxyethyl methacrylate

<table>
<thead>
<tr>
<th>Oral</th>
<th>LD50</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4680 mg/kg (guinea pig)</td>
</tr>
<tr>
<td></td>
<td>3275 mg/kg (mouse)</td>
</tr>
<tr>
<td></td>
<td>5050 mg/kg (rat)</td>
</tr>
</tbody>
</table>

- Primary irritant effect:
  - on the skin: Irritant to skin and mucous membranes.
  - 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.
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.
    - Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport information

- UN-Number
  - DOT, ADR, ADN, IMDG, IATA: Void
- UN proper shipping name
  - DOT, ADR, ADN, IMDG, IATA: Void
- Transport hazard class(es)
  - DOT, ADR, ADN, IMDG, IATA: Void
  - Class: Void
- Packing group
  - DOT, ADR, 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

- Safety, health and environmental regulations/legislation specific for the substance or mixture
  - Sara
    - Section 355 (extremely hazardous substances):
      - None of the ingredient is listed.
    - Section 313 (Specific toxic chemical listings):
      - None of the ingredients is listed.
    - TSCA (Toxic Substances Control Act):
      - All ingredients are listed.
  - Proposition 65
    - Chemicals known to cause cancer:
      - None of the ingredients is listed.
    - Chemicals known to cause reproductive toxicity for females:
      - None of the ingredients is listed.
45.1.3

· Chemicals known to cause reproductive toxicity for males:
None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:
None of the ingredients is listed.

· Cancerogenity categories

  · EPA (Environmental Protection Agency)
  None of the ingredients is listed.

  · TLV (Threshold Limit Value established by ACGIH)
  None of the ingredients is listed.

  · NIOSH-Ca (National Institute for Occupational Safety and Health)
  None of the ingredients is listed.

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

* 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.

· Relevant phrases
  H315 Causes skin irritation.
  H317 May cause an allergic skin reaction.
  H319 Causes serious eye irritation.

· NFPA ratings (scale 0 - 4)
  Health = 1
  Fire = 1
  Reactivity = 0

· HMIS-ratings (scale 0 - 4)
  Health = 1
  Fire = 1
  Reactivity = 0

· Abbreviations and acronyms:
  Skin Irrit. 2: Skin corrosion/irritation – Category 2
  Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
  Skin Sens. 1: Skin sensitisation – Category 1

· * Data compared to the previous version altered.