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

1.1 Product identifier

· Trade name: CLEARFIL SE BOND ; BOND

· Article number: 064-B

· Registration number Not applicable

1.2 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

1.3 Details of the supplier of the safety data sheet

· Manufacturer:
  Kuraray Europe GmbH
  Philipp-Reis-Str. 4,
  65795 Hattersheim am Main
  Germany
  Phone:+49 (0)69 305 35 840
  Fax:+49 (0)69 305 35 640
  E-mail: dental@kuraray.de

· Supplier:
  J & S Davis
  5 Whitworth Road, Stevenage,
  Hertfordshire, SG1 4QS
  Great Britain
  Tel: +44 - (0) 1438 747344
  Fax: +44 - (0)1438 758909
  E-mail: jsdsales@js-davis.co.uk

· Further information obtainable from: Manufacturer or Supplier

1.4 Emergency telephone number:

National Poisons information Service (London Centre)
Guy’s & St. Thomas’ Hospital Trust
Medical Toxicology Unit
Avonley Road
LONDON
SE14 5ER
Emergency telephone: (local) 0870 600 6266 or +44 20 7771 5394
Administrative telephone: +44 20 7 771 53 10
Facsimile number: +44 20 7 771 53 09

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

GHS07

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.

2.2 Label elements

· Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

· Hazard pictograms GHS07

· Signal word Warning

· Hazard-determining components of labelling:
  2-hydroxyethyl methacrylate

(Contd. on page 2)
Hazard statements
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H317 May cause an allergic skin reaction.

Precautionary statements
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P264 Wash thoroughly after handling.
- 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).
- P362 Take off contaminated clothing.
- P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
- P302+P352 IF ON SKIN: Wash with plenty of soap and water.

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

SECTION 3: Composition/information on ingredients
- 3.1 Chemical characterisation: Substances None
- 3.2 Chemical characterisation: Mixtures
  - Description: Mixture of substances listed below with nonhazardous additions.

<table>
<thead>
<tr>
<th>Dangerous components:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS: 1565-94-2</td>
<td>bisphenol A diglycidylmethacrylate</td>
</tr>
<tr>
<td>EINECS: 216-367-7</td>
<td>Skin Irrit. 2, H315; Eye Irrit. 2, H319</td>
</tr>
<tr>
<td>CAS: 868-77-9</td>
<td>2-hydroxyethyl methacrylate</td>
</tr>
<tr>
<td>EINECS: 212-782-2</td>
<td>Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other ingredients:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>10-Methacryloyloxydecyl dihydrogen phosphate</td>
<td></td>
</tr>
<tr>
<td>Hydrophobic aliphatic dimethacrylate</td>
<td></td>
</tr>
<tr>
<td>Colloidal silica</td>
<td></td>
</tr>
<tr>
<td>dl-Camphorquinone</td>
<td></td>
</tr>
<tr>
<td>Initiators</td>
<td></td>
</tr>
<tr>
<td>Accelerators</td>
<td></td>
</tr>
</tbody>
</table>

SECTION 4: First aid measures
- 4.1 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. Then consult a doctor.
  - After swallowing:
    Do not induce vomiting; call for medical help immediately.
    If symptoms persist consult doctor.
- 4.2 Most important symptoms and effects, both acute and delayed
  No further relevant information available.
- 4.3 Indication of any immediate medical attention and special treatment needed
  No further relevant information available.
SECTION 5: Firefighting measures

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

SECTION 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures Not required.
- 6.2 Environmental precautions: Do not allow to enter sewers/surface or ground water.
- 6.3 Methods and material for containment and cleaning up:
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  Ensure adequate ventilation.
- 6.4 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.

SECTION 7: Handling and storage

- 7.1 Precautions for safe handling
  Ensure good ventilation/exhaustion at the workplace.
  Prevent formation of aerosols.
- 7.2 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 container tightly sealed.
    Store in cool, dry conditions in well sealed receptacles.
    Protect from heat and direct sunlight.
- 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

- Additional information about design of technical facilities: No further data; see item 7.
- 8.1 Control parameters
  Ingredients 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 valid during the making were used as basis.
- 8.2 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.
Respiratory protection:
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

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 break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection:

Tightly sealed goggles

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

Appearance:
Form: Liquid
Colour: Yellow
Odour: Odourless

pH-value: Not determined

Change in condition
Melting point/Melting range: -12 °C (2-hydroxyethyl methacrylate)
Boiling point/Boiling range: 205 °C (2-hydroxyethyl methacrylate)

Flash point: 97 °C (2-hydroxyethyl methacrylate)

Ignition temperature: Not determined

Decomposition temperature: Not determined

Danger of explosion: Product does not present an explosion hazard.

Explosion limits:
Lower: Not determined
Upper: Not determined

Oxidising properties: Not determined

Vapour pressure: Not determined

Density: 1.1 g/cm³
Relative density: Not determined
Trade name: CLEARFIL SE BOND ; BOND

- 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 applicable
- Viscosity: Not determined
- 9.2 Other information: No further relevant information available.

**SECTION 10: Stability and reactivity**

- 10.1 Reactivity: No further relevant information available.
- 10.2 Chemical stability:
  - Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- 10.3 Possibility of hazardous reactions: No dangerous reactions known.
- 10.4 Conditions to avoid: No further relevant information available.
- 10.5 Incompatible materials: No further relevant information available.
- 10.6 Hazardous decomposition products: Carbon monoxide and carbon dioxide

**SECTION 11: Toxicological information**

- 11.1 Information on toxicological effects
- Acute toxicity: Based on available data, the classification criteria are not met.
- LD/LC50 values relevant for classification:
  868-77-9 2-hydroxyethyl methacrylate
  Oral LD50: 4680 mg/kg (guinea pig)  
  3275 mg/kg (mouse)  
  5050 mg/kg (rat)
- Primary irritant effect:
  - Skin corrosion/irritation: Causes skin irritation.
  - Serious eye damage/irritation: Causes serious eye irritation.
  - Respiratory or skin sensitisation: May cause an allergic skin reaction.
- CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)
  - Germ cell mutagenicity: Based on available data, the classification criteria are not met.
  - Carcinogenicity: Based on available data, the classification criteria are not met.
  - Reproductive toxicity: Based on available data, the classification criteria are not met.
- STOT-single exposure: Based on available data, the classification criteria are not met.
- STOT-repeated exposure: Based on available data, the classification criteria are not met.
- Aspiration hazard: Based on available data, the classification criteria are not met.

**SECTION 12: Ecological information**

- 12.1 Toxicity
  - Aquatic toxicity: No further relevant information available.
- 12.2 Persistence and degradability: No further relevant information available.
- 12.3 Bioaccumulative potential: No further relevant information available.
- 12.4 Mobility in soil: No further relevant information available.
· Additional ecological information:
  · General notes:
    Water hazard class 1 (German Regulation) (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.
  · 12.5 Results of PBT and vPvB assessment
    · PBT: Not applicable.
    · vPvB: Not applicable.
  · 12.6 Other adverse effects
    No further relevant information available.

SECTION 13: Disposal considerations

· 13.1 Waste treatment methods
  · Recommendation
    Must not be disposed together with household garbage. Do not allow product to reach sewage system.
  · Uncleaned packaging:
    · Recommendation: Disposal must be made according to official regulations.

SECTION 14: Transport information

· 14.1 UN-Number
  · ADR, ADN, IMDG, IATA: Void
· 14.2 UN proper shipping name
  · ADR, ADN, IMDG, IATA: Void
· 14.3 Transport hazard class(es)
  · ADR, ADN, IMDG, IATA: Void
· 14.4 Packing group
  · ADR, IMDG, IATA: Void
· 14.5 Environmental hazards:
  · Marine pollutant: No
· 14.6 Special precautions for user
  · Not applicable.
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code
  · Not applicable.
· UN "Model Regulation": Void

SECTION 15: Regulatory information

· 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
  · Labelling according to Regulation (EC) No 1272/2008 GHS label elements
  · REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3
· 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 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.

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

* Data compared to the previous version altered.