1 Identification

- Product identifier
- Trade name: CLEARFIL PHOTO BOND ; CATALYST
- Article number: CA023-C
- 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).

- Hazard pictograms GHS07

- Signal word Warning

- Hazard-determining components of labeling:
  2-hydroxyethyl methacrylate
  benzoyl peroxide

- 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).
Trade name: CLEARFIL PHOTO BOND ; CATALYST

**3 Composition/information on ingredients**

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

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Hazard Class</th>
<th>Purity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1565-94-2 bisphenol A diglycidylmethacrylate</td>
<td>Skin Irritation - Category 2, H315; Eye Irritation - Category 2A, H319</td>
<td>25-50% w/w</td>
</tr>
<tr>
<td>868-77-9 2-hydroxyethyl methacrylate</td>
<td>Skin Irritation - Category 2, H315; Eye Irritation - Category 2A, H319; Skin Sensitizer - Category 1, H317</td>
<td>10-25% w/w</td>
</tr>
<tr>
<td>94-36-0 benzoyl peroxide</td>
<td>Organic Peroxides – Type E, H242; Eye Irritation - Category 2A, H319; Skin Sensitizer - Category 1, H317</td>
<td>≤2.5% w/w</td>
</tr>
</tbody>
</table>

**Other ingredients:**
- 10-Methacryloyloxydecyl dihydrogen phosphate
- Hydrophobic aliphatic dimethacrylate
- dl-Camphorquinone

**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.
  - **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:
  Store away from oxidizing agents.
  Store away from reducing agents.
- 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**

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**

9 Physical and chemical properties

- **Information on basic physical and chemical properties**

  - **General Information**
    - **Form:** Liquid
    - **Color:** Yellow
    - **Odor:** Odorless
    - **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

  - **Oxidizing properties:** Not determined

  - **Vapor pressure:** Not determined

  - **Density:** 1.1 g/cm³

  - **Relative density:** Not determined

  - **Vapor density:** Not determined

  - **Evaporation rate:** Not determined
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:
      868-77-9 2-hydroxyethyl methacrylate
      Oral LD50:
      - 4680 mg/kg (guinea pig)
      - 3275 mg/kg (mouse)
      - 5050 mg/kg (rat)
      94-36-0 benzoyl peroxide
      Oral LD50:
      - 5700 mg/kg (mouse)
      - 7710 mg/kg (rat)
      LD50:
      - 250 mg/kg (mouse - intraperitoneal)
  - 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)
    94-36-0 benzoyl peroxide
  - NTP (National Toxicology Program)
    None of the ingredients is listed.

12 Ecological information

- Toxicity
  - Aquatic toxicity: 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.

- 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

- UN proper shipping name
  DOT, ADN, IMDG, IATA: Void
  TDG: 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 use
  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):
  94-36-0 benzoyl peroxide
Safety Data Sheet
According to HPR

Printing date 05/25/2018
Version 3
Reviewed on 05/25/2018

Trade name: CLEARFIL PHOTO BOND ; CATALYST

(Contd. of page 6)

- 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 |
    | 94-36-0  | benzoyl peroxide             |

- * 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.