1 Identification

- Product identifier
  - Trade name: CLEARFIL DC BOND ; Liquid A
  - Article number: US107-A

- 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
  benzoyl peroxide

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

- Precautionary statements
  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.
  P362+P364  Take off contaminated clothing and wash it before reuse.

(Contd. on page 2)
**3 Composition/information on ingredients**

- **Chemical characterization: Substances** None
- **Chemical characterization: Mixtures**
- **Description:** Mixture of substances listed below with nonhazardous additions.
- **Dangerous components:**
  - 868-77-9 2-hydroxyethyl methacrylate
    - Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317
    - 30-50%
  - 1565-94-2 bisphenol A diglycidylmethacrylate
    - Skin Irrit. 2, H315; Eye Irrit. 2A, H319
    - 30-50%
  - 94-36-0 benzoyl peroxide
    - Unst. Expl., H200; Org. Perox. E, H242; Eye Irrit. 2A, H319; Skin Sens. 1, H317
    - <2.0%

- **Other ingredients:**
  - 10-Methacryloyloxydecyl dihydrogen phosphate
  - Colloidal silica
  - dl-Camphorquinone
  - Initiators

**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.
6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **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).
- **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.
  - **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.
**9 Physical and chemical properties**

- **Information on basic physical and chemical properties**
  - **General Information**
    - **Appearance:**
      - 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:** 1.2 g/cm³
  - **Relative density:** Not determined
  - **Vapor density:** Not determined
  - **Evaporation rate:** Not determined
  - **Solubility in / Miscibility with**
    - Water: Partly miscible.
  - **Partition coefficient (n-octanol/water):** Not determined
  - **Viscosity:** 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
      3
    - 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.
· Uncleaned packagings:
  · Recommendation: Disposal must be made according to official regulations.

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 MARPOL 73/78 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):
      94-36-0 benzoyl peroxide
    · TSCA (Toxic Substances Control Act):
      All ingredients are listed.

(Contd. on page 7)
### 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.
- **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)**
  
  94-36-0 benzoyl peroxide

- **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.

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### 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**
  - H200 Unstable explosive.
  - H242 Heating may cause a fire.
  - 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:

- Unst. Expl.: Explosives – Unstable explosive
- Org. Perox. E: Organic peroxides – Type E/F
- 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.