1 Identification

- **Product identifier**
  - Trade name: CLEARFIL CERAMIC PRIMER PLUS
  - Article number: CA215

- **Relevant identified uses of the substance or mixture and uses advised against**
  - No further relevant information available.

- **Application of the substance / the mixture**
  - Adhesive, dental ceramic
  - Adhesive, dental metal

- **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**
  - GHS02 Flame
  - Flammable Liquids - Category 2
  - H225 Highly flammable liquid and vapour.

- **Label elements**
  - **GHS label elements**
    - The product is classified and labeled according to the Globally Harmonized System (GHS).
  - **Hazard pictograms**
    - GHS02
  - **Signal word**
    - Danger

- **Hazard-determining components of labeling:**
  - Ethanol
  - 3-trimethoxysilylpropyl methacrylate

- **Hazard statements**
  - H225 Highly flammable liquid and vapour.

- **Precautionary statements**
  - P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
  - P240 Ground and bond container and receiving equipment.
  - P241 Use explosion-proof [electrical/ventilating/lighting] equipment.
  - P280 Wear protective gloves/protective clothing/eye protection/face protection.
  - P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
  - P370+P378 In case of fire: Use for extinction: CO2, powder or water spray.
  - P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
Trade name: CLEARFIL CERAMIC PRIMER PLUS

(Contd. of page 1)

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>ethanol</td>
</tr>
<tr>
<td>Flammable Liquids - Category 2, H225;</td>
</tr>
<tr>
<td>Carcinogenicity - Category 1A, H350</td>
</tr>
<tr>
<td>3-trimethoxysilylpropyl methacrylate</td>
</tr>
<tr>
<td>Acute Toxicity (Dermal) – Category 3, H311;</td>
</tr>
<tr>
<td>Skin Irritation - Category 2, H315; Eye Irritation - Category 2A, H319; Specific Target Organ Toxicity - Single Exposure - Category 3, H335; Flammable Liquids - Category 4, H227</td>
</tr>
<tr>
<td>Other ingredients: 10-Methacryloyloxydecyl dihydrogen phosphate</td>
</tr>
</tbody>
</table>

4 First-aid measures

- Description of first aid measures
  - After inhalation: Supply fresh air; consult doctor in case of complaints.
  - After skin contact: Immediately rinse with water.
  - After eye contact: Rinse opened eye for several minutes under running water. Then 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.

(Contd. on page 3)
7 Handling and storage

- Handling:
  - Precautions for safe handling: Ensure good ventilation/exhaustion at the workplace.
  - Information about protection against explosions and fires:
    Keep ignition sources away - Do not smoke.
    Protect against electrostatic charges.
  - 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:
    | Component   | EL Short-term value | EV Long-term value |
    |-------------|---------------------|--------------------|
    | 64-17-5 ethanol | 1000 ppm          | 1,900 mg/m³, 1,000 ppm |
- Additional information: The lists that were valid during the creation were used as basis.
- Exposure controls
- Personal protective equipment:
  - General protective and hygienic measures: Wash hands before breaks and at the end of work.
  - Breathing equipment: Not required.
- Protection of hands:
  - 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.
**Trade name:** CLEARFIL CERAMIC PRIMER PLUS

- **Eye protection:**
  
  Tightly sealed goggles

### 9 Physical and chemical properties

<table>
<thead>
<tr>
<th>Information on basic physical and chemical properties</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>General Information</td>
<td></td>
</tr>
<tr>
<td>Appearance:</td>
<td></td>
</tr>
<tr>
<td>Form:</td>
<td>Liquid</td>
</tr>
<tr>
<td>Color:</td>
<td>Colorless</td>
</tr>
<tr>
<td>Odor:</td>
<td>Alcohol-like</td>
</tr>
<tr>
<td>· Change in condition</td>
<td></td>
</tr>
<tr>
<td>Melting point/Melting range:</td>
<td>-114.5 °C (ethanol)</td>
</tr>
<tr>
<td>Boiling point/Boiling range:</td>
<td>78 °C (ethanol)</td>
</tr>
<tr>
<td>· Flash point:</td>
<td>13°C (ethanol)</td>
</tr>
<tr>
<td>· Ignition temperature:</td>
<td>425.0 °C (ethanol)</td>
</tr>
<tr>
<td>· Decomposition temperature:</td>
<td>Not determined</td>
</tr>
<tr>
<td>· Danger of explosion:</td>
<td>Product is not explosive. However, formation of explosive air/vapor mixtures are possible.</td>
</tr>
<tr>
<td>· Explosion limits:</td>
<td></td>
</tr>
<tr>
<td>Lower:</td>
<td>3.5 Vol % (ethanol)</td>
</tr>
<tr>
<td>Upper:</td>
<td>15.0 Vol % (ethanol)</td>
</tr>
<tr>
<td>· Oxidizing properties</td>
<td>Not determined</td>
</tr>
<tr>
<td>· Vapor pressure:</td>
<td>59.0 hPa (20°C, ethanol)</td>
</tr>
<tr>
<td>· Density:</td>
<td>0.8 g/cm³</td>
</tr>
<tr>
<td>· Relative density</td>
<td>Not determined</td>
</tr>
<tr>
<td>· Vapor density</td>
<td>1.6 g/cm³ (ethanol, air=1)</td>
</tr>
<tr>
<td>· Evaporation rate</td>
<td>Not determined</td>
</tr>
<tr>
<td>· Solubility in / Miscibility with Water:</td>
<td>Partly miscible.</td>
</tr>
<tr>
<td>· Partition coefficient (n-octanol/water):</td>
<td>-0.32 (ethanol)</td>
</tr>
<tr>
<td>· Viscosity:</td>
<td>Not determined</td>
</tr>
<tr>
<td>· Other information</td>
<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.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials** No further relevant information available.
Trade name: CLEARFIL CERAMIC PRIMER PLUS

- **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:**

<table>
<thead>
<tr>
<th>64-17-5 ethanol</th>
<th>2530-85-0 3-trimethoxysilylpropyl methacrylate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral LD50</td>
<td>Oral LD50</td>
</tr>
<tr>
<td>3450 mg/kg (mouse)</td>
<td>22600 mg/kg (rat)</td>
</tr>
<tr>
<td>7060 mg/kg (rat)</td>
<td></td>
</tr>
<tr>
<td>Inhalative LC50/4 h</td>
<td></td>
</tr>
<tr>
<td>20000 mg/l (rat)</td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Dermal LD50</td>
</tr>
<tr>
<td>3600 mg/kg (rat - intraperitoneal)</td>
<td>500 mg/kg (rabbit)</td>
</tr>
</tbody>
</table>

#### Primary irritant effect:

- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.

#### Additional toxicological information:

- **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.
14 Transport information

- **UN-Number**
  - DOT: UN1170
  - TDG, IMDG, IATA: 1170

- **UN proper shipping name**
  - DOT: Ethanol mixture
  - TDG: 1170 Ethanol mixture
  - IMDG: ETHANOL (ETHYL ALCOHOL), mixture
  - IATA: ETHANOL, mixture

- **Transport hazard class(es)**
  - DOT
    - Class: 3 Flammable liquids
    - Label: 3
  - TDG, IMDG, IATA
    - Class: 3 Flammable liquids
    - Label: 3

- **Packing group**
  - DOT, TDG, IMDG, IATA: II

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

- **Special precautions for user**
  - Warning: Flammable liquids
  - Danger code (Kemler): 33
  - EMS Number: F-E,S-D

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

- **UN "Model Regulation"**: UN 1170 ETHANOL MIXTURE, 3, II

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.
Trade name: CLEARFIL CERAMIC PRIMER PLUS

- **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%)**
    64-17-5  ethanol
  - **Canadian Ingredient Disclosure list (limit 1%)**
    2530-85-0  3-trimethoxysilylpropyl 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.