1 Identification

- Product identifier
- Trade name: CLEARFIL CERAMIC PRIMER
- Article number: CA117

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

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.

  GHS08 Health hazard
  Carcinogenicity - Category 1A H350 May cause cancer.

- Label elements
  - GHS label elements
    The product is classified and labeled according to the Globally Harmonized System (GHS).
  - Hazard pictograms GHS02, GHS08
  - Signal word Danger

- Hazard-determining components of labeling:
  ethanol

- Hazard statements
  H225 Highly flammable liquid and vapour.
  H350 May cause cancer.

- Precautionary statements
  P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
  P233 Keep container tightly closed.
  P240 Ground and bond container and receiving equipment.
  P242 Use non-sparking tools.

(Contd. on page 2)
Trade name: CLEARFIL CERAMIC PRIMER

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].
P403+P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

3 Composition/information on ingredients

- **Chemical characterization: Substances** None
- **Chemical characterization: Mixtures** None
- **Description:** Mixture of substances listed below with nonhazardous additions.

<table>
<thead>
<tr>
<th>Dangerous components:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>64-17-5 ethanol</td>
<td>Flammable Liquids - Category 2, H225; Carcinogenicity - Category 1A, H350</td>
</tr>
<tr>
<td>50-100% w/w</td>
<td></td>
</tr>
<tr>
<td>2530-85-0 3-trimethoxysilylpropyl methacrylate</td>
<td>Acute Toxicity (Dermal) – Category 3, H311; 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>2.5-10% w/w</td>
<td></td>
</tr>
<tr>
<td>Other ingredients: 10-Methacryloyloxydecyl dihydrogen phosphate</td>
<td></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**
  - Wear protective equipment. Keep unprotected persons away.
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.
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:

<table>
<thead>
<tr>
<th>Component</th>
<th>EL Short-term value</th>
<th>EV Long-term value</th>
</tr>
</thead>
<tbody>
<tr>
<td>64-17-5 ethanol</td>
<td>1000 ppm</td>
<td>1,900 mg/m³, 1,000 ppm</td>
</tr>
</tbody>
</table>

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

(Contd. on page 4)
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 cannot be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**
  The exact breakthrough 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**
  - **Appearance:**
    - Form: Liquid
    - Color: Colorless
    - Odor: Alcohol-like
  - **pH-value:** Not determined
  - **Change in condition**
    - Melting point/Melting range: -114.5 °C (ethanol)
    - Boiling point/Boiling range: 78 °C (ethanol)
  - **Flash point:** 13°C (ethanol)
  - **Ignition temperature:** 425.0 °C (ethanol)
  - **Decomposition temperature:** Not determined
  - **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
  - **Explosion limits:**
    - Lower: 3.5 Vol % (ethanol)
    - Upper: 15.0 Vol % (ethanol)
  - **Oxidizing properties**
    Not determined
  - **Vapor pressure:** 59.0 hPa (20°C, ethanol)
  - **Density:** 1.1 g/cm³
  - **Relative density**
    Not determined
  - **Vapor density**
    1.6 g/cm (ethanol, air=1)
  - **Evaporation rate**
    Not determined
  - **Solubility in / Miscibility with Water:** Partly miscible.
  - **Partition coefficient (n-octanol/water):** -0.32 (ethanol)
  - **Viscosity:**
    Not determined
  - **Other information**
    No further relevant information available.

### 10 Stability and reactivity

- **Reactivity** No further relevant information available.
Safety Data Sheet
According to HPR

Printing date 04/13/2018 Reviewed on 04/13/2018 Version 3

Trade name: CLEARFIL CERAMIC PRIMER

- 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:

  64-17-5 ethanol
  Oral LD50 3450 mg/kg (mouse)
  7060 mg/kg (rat)
  Inhalative LC50/4 h 20000 mg/l (rat)
  LD50 3600 mg/kg (rat - intraperitoneal)

  2530-88-0 3-trimethoxysilylpropyl methacrylate
  Oral LD50 22600 mg/kg (rat)
  Dermal LD50 500 mg/kg (rabbit)

- 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.

- 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 UN1170
  - TDG, IMDG, IATA 1170

- UN proper shipping name
  - DOT Ethanol, mixture
  - TDG 1170 Ethanol (Ethyl alcohol), 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
  - Danger code (Kemler): Warning: Flammable liquids
  - 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":
  - UN1170, Ethanol (Ethyl alcohol), 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.
  - 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.