1 Identification

- Product identifier
  - Trade name: K-ETCHANT Syringe
  
  - Article number: US197

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

- Application of the substance / the mixture
  - Dental etching composite

- 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
  - GHS05 Corrosion
  
  - Skin Corr. 1B H314 Causes severe skin burns and eye damage.

- Label elements
  - GHS label elements
    - The product is classified and labeled according to the Globally Harmonized System (GHS).

- Hazard pictograms
  - GHS05

- Signal word
  - Danger

- Hazard-determining components of labeling:
  - phosphoric acid

- Hazard statements
  - H314 Causes severe skin burns and eye damage.

- Precautionary statements
  - P260 Do not breathe dusts or mist.
  
  - 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/shower.

  - P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

  - P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

  - P310 Immediately call a POISON CENTER/doctor.

  - P321 Specific treatment (see on this label).

  - P363 Wash contaminated clothing before reuse.

  - P405 Store locked up.

  - P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

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

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

**Dangerous components:**

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Hazard Class</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>7664-38-2 phosphoric acid</td>
<td>Skin Corr. 1B, H314; Acute Tox. 4, H302</td>
<td>25-45%</td>
</tr>
</tbody>
</table>

- Other ingredients:
  - Polyethyleneglycol
  - Colloidal silica
  - Water
  - Pigment

4 First-aid measures

- Description of first aid measures
  - General information: Immediately remove any clothing soiled by the product.
  - After inhalation: 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: Drink copious amounts of water and provide fresh air. Immediately call a 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).
  - Use neutralizing agent.
  - Dispose contaminated material as waste according to item 13.
  - Ensure adequate ventilation.
Trade name: K-ETCHANT Syringe

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 cool location (2-25 °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:**
    - 7664-38-2 phosphoric acid
      - **PEL** 1 mg/m³
      - **REL** Short-term value: 3 mg/m³
        - Long-term value: 1 mg/m³
      - **TLV** Short-term value: 3 mg/m³
        - Long-term value: 1 mg/m³
  - **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.
Trade name: K-ETCHANT Syringe

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

<table>
<thead>
<tr>
<th><strong>Information on basic physical and chemical properties</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Information</strong></td>
</tr>
<tr>
<td><strong>Appearance:</strong></td>
</tr>
<tr>
<td>- Form: Gel</td>
</tr>
<tr>
<td>- Color: Blue</td>
</tr>
<tr>
<td>- Odor: Odorless</td>
</tr>
<tr>
<td><strong>pH-value:</strong> 1.9</td>
</tr>
<tr>
<td><strong>Change in condition</strong></td>
</tr>
<tr>
<td>- Melting point/Melting range: 42.4 °C (phosphoric acid)</td>
</tr>
<tr>
<td>- Boiling point/Boiling range: Not determined</td>
</tr>
<tr>
<td><strong>Flash point:</strong> Not determined</td>
</tr>
<tr>
<td><strong>Ignition temperature:</strong> Not determined</td>
</tr>
<tr>
<td><strong>Decomposition temperature:</strong> Not determined</td>
</tr>
<tr>
<td><strong>Danger of explosion:</strong> Product does not present an explosion hazard.</td>
</tr>
<tr>
<td><strong>Explosion limits:</strong> Not determined</td>
</tr>
<tr>
<td><strong>Vapor pressure:</strong> Not determined</td>
</tr>
<tr>
<td><strong>Density:</strong> 1.3 g/cm³</td>
</tr>
<tr>
<td><strong>Relative density</strong> Not determined</td>
</tr>
<tr>
<td><strong>Vapor density</strong> Not determined</td>
</tr>
<tr>
<td><strong>Evaporation rate</strong> Not determined</td>
</tr>
<tr>
<td><strong>Solubility in / Miscibility with Water:</strong> Partly miscible.</td>
</tr>
<tr>
<td><strong>Partition coefficient (n-octanol/water):</strong> Not determined</td>
</tr>
<tr>
<td><strong>Viscosity:</strong> Not determined</td>
</tr>
<tr>
<td><strong>Other information</strong> No further relevant information available.</td>
</tr>
</tbody>
</table>

(Contd. of page 3)
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**:
    
    | 7664-38-2 phosphoric acid |
    |---------------------------|
    | Oral LD50 | 1250 mg/kg (mouse) |
    | | 1250 mg/kg (rat) |
    | Dermal LD50 | 2740 mg/kg (rabbit) |

  - **Primary irritant effect**:
    - **on the skin**: Caustic effect on skin and mucous membranes.
    - **on the eye**: Strong caustic effect.
    - **Sensitization**: No sensitizing effects known.
  
  - **Additional toxicological information**:
    - The product shows the following dangers according to internally approved calculation methods for preparations:
      - Corrosive
      - Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

- **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.
    - Must not reach bodies of water or drainage ditch undiluted or unneutralized.
    - Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.
Trade name: K-ETCHANT Syringe

(Contd. of page 5)

- 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 UN1805
  - ADR, IMDG, IATA 1805

- UN proper shipping name
  - ADR 1805 PHOSPHORIC ACID, SOLUTION
  - IMDG, IATA PHOSPHORIC ACID, SOLUTION

- Transport hazard class(es)
  - DOT
    - Class 8 Corrosive substances
    - Label 8
  - ADR, IMDG, IATA
    - Class 8 Corrosive substances
    - Label 8

- Packing group
  - DOT, ADR, IMDG, IATA III

- Environmental hazards:
  - Marine pollutant: No

- Special precautions for user
  - Warning: Corrosive substances
  - Danger code (Kemler): 80
  - EMS Number: F-A,S-B

- Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
  - Not applicable.
Trade name: K-ETCHANT Syringe

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):
      7664-38-2 phosphoric acid
    - TSCA (Toxic Substances Control Act):
      All ingredients are listed.
  - 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)
    None of the ingredients is listed.
  - 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.

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
  H302 Harmful if swallowed.
  H314 Causes severe skin burns and eye damage.
- NFPA ratings (scale 0 - 4)
  Health = 3
  Fire = 0
  Reactivity = 0
- HMIS-ratings (scale 0 - 4)
  Health = 3
  Fire = 0
  Reactivity = 0
Trade name: K-ETCHANT Syringe

- Abbreviations and acronyms:
  - Acute Tox. 4: Acute toxicity – Category 4
  - Skin Corr. 1B: Skin corrosion/irritation – Category 1B

* Data compared to the previous version altered.