SECTION 1: Identification of the substance/mixture and of the company/undertaking

· 1.1 Product identifier
  · Trade name: Total Etch

· 1.2 Relevant identified uses of the substance or mixture and uses advised against
  · Application of the substance / the mixture: Etching Gel

· 1.3 Details of the supplier of the safety data sheet
  · Manufacturer/Supplier:
    Ivoclar Vivadent AG
    Bendererstrasse 2
    FL-9494 Schaan
    FÜRSTENTUM LIECHTENSTEIN
    Tel: +423 235 35 35
    Fax: +423 235 33 60

· 1.4 Emergency telephone number:
  · +423 / 235 33 13 (Ivoclar Vivadent AG, FL-9494 Schaan, Liechtenstein)

SECTION 2: Hazards identification

· 2.1 Classification of the substance or mixture
  · Classification according to Regulation (EC) No 1272/2008
    Skin Corr. 1A H314 Causes severe skin burns and eye damage.
    Eye Dam. 1 H318 Causes serious eye damage.

· 2.2 Label elements
  · Labelling according to Regulation (EC) No 1272/2008
    The product is classified and labelled according to the CLP regulation.
  · Hazard pictograms
    GHS05

· 2.3 Signal word Danger

· 2.4 Hazard-determining components of labelling:
  · phosphoric acid

· 2.5 Hazard statements
  · H314 Causes severe skin burns and eye damage.

· 2.6 Precautionary statements
  · P280 Wear protective gloves/protective clothing/eye protection/face protection.
  · P303+P361+P335 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
  · 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.
  · P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

· 2.7 Additional information:
  · Medical devices as defined in Directive 93/42/EEC and which are invasive or used in direct physical contact with the human body, are exempted from the provisions of Regulation (EC) No 1272/2008 (CLP/GHS) usually if they are in the finished state and intended for the final user.

(Contd. on page 2)
Trade name: **Total Etch**

- **2.3 Other hazards**
  - **Results of PBT and vPvB assessment**
  - **PBT:** Not applicable.
  - **vPvB:** Not applicable.

*SECTION 3: Composition/information on ingredients*

- **3.2 Chemical characterisation: Mixtures**
  - **Description:** Mixture of substances listed below with nonhazardous additions.
  - **Dangerous components:**
    - **CAS:** 7664-38-2
    - **EINECS:** 231-633-2
    - **phosphoric acid Skin Corr. 1B, H314 25-50%**
    - **Additional information:** For the wording of the listed risk phrases refer to section 16.

*SECTION 4: First aid measures*

- **4.1 Description of first aid measures**
  - **General information:** Immediately remove any clothing soiled by the product.
  - **After inhalation:**
    - Supply fresh air; consult doctor in case of complaints.
    - In case of unconsciousness place patient stably in side position for transportation.
  - **After skin contact:**
    - Immediately rinse with water.
    - If skin irritation continues, consult a doctor.
  - **After eye contact:**
    - Rinse opened eye for several minutes under running water. Then consult a doctor.
  - **After swallowing:**
    - Rinse out mouth and then drink plenty of water.
    - Do not induce vomiting; call for medical help immediately.
  - **4.2 Most important symptoms and effects, both acute and delayed**
    - No further relevant information available.
  - **4.3 Indication of any immediate medical attention and special treatment needed**
    - No further relevant information available.

*SECTION 5: Firefighting measures*

- **5.1 Extinguishing media**
  - **Suitable extinguishing agents:**
    - The product is not flammable.
    - Use fire extinguishing methods suitable to surrounding conditions.
  - **5.2 Special hazards arising from the substance or mixture**
    - Formation of toxic gases is possible during heating or in case of fire.
  - **5.3 Advice for firefighters**
    - **Protective equipment:** No special measures required.

*SECTION 6: Accidental release measures*

- **6.1 Personal precautions, protective equipment and emergency procedures**
  - Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:** Do not allow to enter sewers/surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
  - Dilute with plenty water.
  - Use neutralising agent.

(Contd. on page 3)
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.

6.4 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.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
No special precautions are necessary if used correctly.

7.2 Conditions for safe storage, including any incompatibilities

Storage:
Requirements to be met by storerooms and receptacles: Store only in the original receptacle.
Information about storage in one common storage facility: Not required.
Further information about storage conditions:
Keep container tightly sealed.
Protect from heat and direct sunlight.

7.3 Specific end use(s)
No further relevant information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:
7664-38-2 phosphoric acid
WEL Short-term value: 2 mg/m³
Long-term value: 1 mg/m³

Additional information: The lists valid during the making were used as basis.

8.2 Exposure controls
Personal protective equipment:
General protective and hygienic measures:
Usual hygienic measures for dental practice.
Avoid contact with the eyes and skin.
Immediately remove all soiled and contaminated clothing
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
Respiratory protection: Not required.
Protection of hands:

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves
Butyl rubber, BR
Fluorocarbon rubber (Viton)
Nitrile rubber, NBR
Natural rubber, NR
Chloroprene rubber, CR  
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 through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- Eye protection:  
  Tightly sealed goggles

### SECTION 9: Physical and chemical properties

<table>
<thead>
<tr>
<th>9.1 Information on basic physical and chemical properties</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Information</td>
</tr>
<tr>
<td>Appearance:</td>
</tr>
<tr>
<td>Form: Viscous</td>
</tr>
<tr>
<td>Colour: Blue</td>
</tr>
<tr>
<td>Odour: Odourless</td>
</tr>
<tr>
<td>Odour threshold: Not determined.</td>
</tr>
<tr>
<td>pH-value at 20 °C: &lt; 1</td>
</tr>
<tr>
<td>Change in condition</td>
</tr>
<tr>
<td>Melting point/Melting range: Undetermined.</td>
</tr>
<tr>
<td>Boiling point/Boiling range: Undetermined.</td>
</tr>
<tr>
<td>Flash point: Not applicable.</td>
</tr>
<tr>
<td>Flammability (solid, gaseous): Not applicable.</td>
</tr>
<tr>
<td>Ignition temperature:</td>
</tr>
<tr>
<td>Decomposition temperature: Not determined.</td>
</tr>
<tr>
<td>Self-igniting: Product is not selfigniting.</td>
</tr>
<tr>
<td>Danger of explosion: Product does not present an explosion hazard.</td>
</tr>
<tr>
<td>Explosion limits:</td>
</tr>
<tr>
<td>Lower: Not determined.</td>
</tr>
<tr>
<td>Upper: Not determined.</td>
</tr>
<tr>
<td>Vapour pressure: Not determined.</td>
</tr>
<tr>
<td>Density at 20 °C: 1.29 g/cm³</td>
</tr>
<tr>
<td>Relative density: Not determined.</td>
</tr>
<tr>
<td>Vapour density: Not determined.</td>
</tr>
<tr>
<td>Evaporation rate: Not determined.</td>
</tr>
<tr>
<td>Solubility in / Miscibility with water: Soluble.</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water): Not determined.</td>
</tr>
<tr>
<td>Viscosity: Dynamic: Not determined.</td>
</tr>
</tbody>
</table>
**SECTION 10: Stability and reactivity**

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability** Stable under normal handling and storage conditions.
- **10.3 Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** None under normal conditions of storage and use.

**SECTION 11: Toxicological information**

- **11.1 Information on toxicological effects**
  - **Acute toxicity:**
    - **LD/LC50 values relevant for classification:**
      - 7664-38-2 phosphoric acid
      - Oral LD50 1530 mg/kg (rat)
  - **Primary irritant effect:**
    - **on the skin:** Caustic effect on skin and mucous membranes.
    - **on the eye:** Strong caustic effect.
    - **Sensitisation:** No sensitising effects known.
  - **Additional toxicological information:**
    - Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

**SECTION 12: Ecological information**

- **12.1 Toxicity**
  - **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
  - **General notes:**
    - Water hazard class 1 (German Regulation) (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 sewage water or drainage ditch undiluted or unneutralised.
    - 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.
  - **12.5 Results of PBT and vPvB assessment**
    - **PBT:** Not applicable.
    - **vPvB:** Not applicable.
  - **12.6 Other adverse effects** No further relevant information available.
SECTION 13: Disposal considerations

13.1 Waste treatment methods

Recommendation
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

European waste catalogue
18 01 06* chemicals consisting of or containing dangerous substances

Uncleaned packaging:
Recommendation: Disposal must be made according to official regulations.

SECTION 14: Transport information

14.1 UN-Number
ADR, IMDG, IATA UN1805

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

14.3 Transport hazard class(es)
ADR

- Class 8 (C1) Corrosive substances.
- Label 8

IMDG, IATA

- Class 8 Corrosive substances.
- Label 8

14.4 Packing group
ADR, IMDG, IATA III

14.5 Environmental hazards:
- Marine pollutant: No

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

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

Transport/Additional information:
ADR
- Limited quantities (LQ) 5L
Trade name: Total Etch

- Excepted quantities (EQ)
  - Code: E1
  - Maximum net quantity per inner packaging: 30 ml
  - Maximum net quantity per outer packaging: 1000 ml

- Transport category
  - Tunnel restriction code
    - E

- IMDG
  - Limited quantities (LQ)
    - 5L
  - Excepted quantities (EQ)
    - Code: E1
      - Maximum net quantity per inner packaging: 30 ml
      - Maximum net quantity per outer packaging: 1000 ml

- UN "Model Regulation":
  - UN1805, PHOSPHORIC ACID, SOLUTION, 8, III

SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
  - National regulations:
    - Other regulations, limitations and prohibitive regulations
      - The product is a medical device according to the Directive 93/42/EEC.

- 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

* Data compared to the previous version altered.

SECTION 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
  - H314 Causes severe skin burns and eye damage.

- Abbreviations and acronyms:
  - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  - IMDG: International Maritime Code for Dangerous Goods
  - IATA: International Air Transport Association
  - GHS: Globally Harmonised System of Classification and Labelling of Chemicals
  - EINECS: European Inventory of Existing Commercial Chemical Substances
  - ELINCS: European List of Notified Chemical Substances
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent
  - Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A
  - Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B
  - Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

* Data compared to the previous version altered.