This SDS packet was issued with item:
075897848

The safety data sheets (SDS) in this packet apply to the individual products listed below. Please refer to invoice for specific item number(s).

073650017 075897806 075897814 075897822 075897830 075897855
Safety Data Sheet

Trade Name: *Etch Royale, 37% Phosphoric Acid Etching Gel*

### 1.0 Commercial Product Name and Supplier

1.1 Commercial product name / designation

*Etch Royale, 37% Phosphoric Acid Etching Gel*

1.2 Application / Use

Dental etching gel for use by dental professional only.

1.2.2 SIC

851 Human health activity

1.2.3 Use Category

55

1.3 Manufacturer

**Pulpdent Corporation**
80 Oakland Street, P.O. Box 780
Watertown, MA 02472 USA

Telephone: 1 617 926-6666; Fax: 1 617 926-6262

Email: Pulpdent@pulpdent.com

1.4 Emergency Telephone Number

1-800-535-5053 (24 Hour Emergency / USA)

1.5 Authorized European Representative

Advena Ltd.
Pure Offices, Plato Close
Warwick, CV34 6WE
United Kingdom

### 2.0 Hazards Identification

#### 2.1 Classification

2.1.1 Classification according to Regulation (EC) No. 1272/2008 [CLP]

<table>
<thead>
<tr>
<th>Hazard Class</th>
<th>Hazard Category</th>
<th>Hazard Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin corrosion</td>
<td>1B</td>
<td>H314</td>
</tr>
<tr>
<td>Eye irritation</td>
<td>2</td>
<td>H319</td>
</tr>
</tbody>
</table>

2.1.2 Classification according to Directive 67/548/EEC

(See SECTION 16 for full text of risk phrases)

Corrosive (C); R 34; R 36 / 37 / 38

#### 2.2 GHS Label Elements

Hazard Pictograms

![Signal Word: DANGER](image)

**Restricted to use by dental professional only.**

**Hazard Statements**

H314: Causes severe skin burns and eye damage.

H319: Causes serious eye irritation.

**Precautionary Statements**

P264: Wash hands thoroughly after handling.

P280: Wear protective gloves, clothing and eye/face protection.

P301 + P330 + P331: If swallowed, rinse mouth. Do NOT induce vomiting.

P303 + P361 + P353: If on skin (or hair), remove all contaminated clothing. Rinse skin with water.

P363: Wash contaminated clothing before reuse.

P310: Immediately call a Poison Center or doctor/physician.

P305 + P351 + P338: If in eyes, rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing until pH of tears is 7.

### 3.0 Composition

3.1 Chemical characterization of the preparation

Phosphoric acid in a gel matrix.
Safety Data Sheet

Trade Name: *Etch Royale, 37% Phosphoric Acid Etching Gel*

### 3.2 Hazardous Ingredients

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Name of the Ingredient</th>
<th>Concentration</th>
<th>Classification per 67/548/EEC</th>
<th>Classification per Regulation (EC) No.1272/2008 (CLP).</th>
</tr>
</thead>
<tbody>
<tr>
<td>7664-38-2</td>
<td>Phosphoric Acid</td>
<td>37%</td>
<td>Corrosive (C)</td>
<td>Skin corrosion; 1B</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>R34; R36/37/38</td>
<td>Eye irritant, 2</td>
</tr>
</tbody>
</table>

### 4.0 First Aid Measures

#### 4.1 General Information
May cause burns or irritation to eyes, skin or mucous membranes. Acute effects may be delayed. Show this safety data sheet to medical personnel. Get medical attention in case of uncertainty.

#### 4.2 Eye Contact
Remove contact lenses. Keep eyelids apart and flush with running water for 15+ minutes or until pH of tears is 7. Get medical attention.

#### 4.3 Skin Contact
Immediately flush skin with running water for 15 minutes. Get medical attention for persistent irritation or burns.

#### 4.4 Ingestion
Rinse mouth with water. Do not induce vomiting. Give water to dilute. Get immediate medical attention. Never give anything by mouth to an unconscious person.

#### 4.5 Inhalation
Move to fresh air. If necessary, administer oxygen and/or artificial respiration and seek medical attention.

#### 4.6 Precautions for first responders
Ventilate the area. Wear safety glasses, gloves and lab coat.

#### 4.7 Information for physicians
- **Symptoms**: Irritation, pain or redness in eyes, mucous membranes or skin. Acute effects may be delayed so continued monitoring of the patient is indicated.
- **Hazards**: May cause burns or irritation to eyes, skin or mucous membranes. Acute effects may be delayed.
- **Treatment**: Same as above under First Aid.

### 5.0 Fire Fighting Measures

#### 5.1 Suitable extinguishing media
Not a fire hazard. Use water spray to keep fire-exposed containers cool. Extinguish fire with agent suitable for surrounding fire.

#### 5.2 Extinguishing media to avoid
None

#### 5.3 Special exposure hazards in a fire
Phosphoric acid can react with metals to liberate hydrogen, a flammable gas. Combustion by-products include oxides of phosphorus.

#### 5.4 Special protective equipment for firefighters
A self-contained breathing apparatus should be worn by firefighting personnel.

### 6.0 Accidental Release Measures

#### 6.1 Personal precautions
Wear chemical splash goggles and gloves.

#### 6.2 Environmental precautions
Avoid releasing large quantities into the environment as phosphoric acid may affect pH of water or soil.

#### 6.3 Method for clean up
For small quantities (as in this product): Wear safety glasses, lab coat and gloves. Absorb or wipe up spill with dry paper towels. Place all material in covered chemical waste container for disposal. Flush spill area with water.
7.0 Handling and Storage

7.1 Handling
For use by dental professionals only. Wear safety glasses and gloves; wash hands after use. Avoid unnecessary exposure. Follow good hygiene practices. Protect soft tissue from etchant during intraoral procedures.

7.2 Storage
Remove applicator tip after use. Keep tightly capped in original container. Store at cool room temperature. Avoid extremes of temperature (>27°C/80°F, <5°C/40°F), alkalis, sulfites, sulfides and most metals.

7.3 Specific uses
Dental etchant

8.0 Exposure Controls / Personal Protection

8.1 Exposure limit values
TWA: 1 mg/m³  TLV: 3 mg/m³

8.2 Exposure controls

8.2.1 Occupational exposure controls
No special equipment required under normal conditions of use of this product in the quantity provided.

8.2.1.1 Respiratory protection
Good general ventilation is sufficient to control airborne vapors.

8.2.1.2 Hand protection
No special requirements other than surgical gloves.

8.2.1.3 Eye protection
No special requirements other than safety glasses.

8.2.1.4 Skin protection
No special requirements. Good personal hygiene and safety practices, wearing a lab coat will protect from unnecessary exposure to etchant.

8.2.1.5 Other controls
Emergency eye wash fountain should be available. Protect soft tissue from etchant during intraoral procedures. Wash hands after use.

8.2.2 Environmental exposure controls
Avoid releasing large quantities of phosphoric acid into the environment as phosphoric acid may affect pH of water or soil.

9.0 Physical and Chemical Properties

9.1 Appearance / Color

9.1.1 Color / Physical state
Dark blue gel

9.1.2 Odor
Mild, characteristic

9.2 Important health, safety and environmental information

9.2.1 pH
pH 1

9.2.2 Boiling point
135°C

9.2.3 Flash point
Not combustible

9.2.4 Flammability (solid, gas)
Not combustible

9.2.5 Explosive properties
Not applicable

9.2.6 Oxidizing properties
Not determined

9.2.7 Vapor pressure
2.933 mbar / Id: C

9.2.8 Specific gravity
1.300

9.2.9 Solubility in water
Complete

9.2.10 Partition coefficient
Not determined

9.2.11 Viscosity
Not determined
# Safety Data Sheet

**Trade Name:** *Etch Royale, 37% Phosphoric Acid Etching Gel*

### 9.2.12 Vapor density
Not determined

### 9.2.13 Evaporation rate
Not determined

### 10.0 Stability and reactivity

#### 10.1 Conditions to avoid
Not applicable

#### 10.2 Materials to avoid
Avoid contact with materials such as sulfides and sulfites that could release toxic gases. Avoid strong alkalis because high heat of reaction can generate steam. Avoid most metals because phosphoric acid can react to liberate hydrogen, a flammable gas.

#### 10.3 Hazardous decomposition products
Avoid contact with materials such as sulfides and sulfites that could release toxic gases. Avoid strong alkalis because high heat of reaction can generate steam. Avoid most metals because phosphoric acid can react to liberate hydrogen, a flammable gas.

#### 10.4 Further information
Stable under normal conditions of use and storage.

### 11.0 Toxicological information

#### 11.1 Acute toxicity
Not toxic

#### 11.2 Irritation and corrosiveness
Corrosive. May cause burns or irritation to eyes, skin, mouth, throat or gastrointestinal tract. Not expected to be an inhalation hazard unless product is misted or heated at high temperatures.

#### 11.3 Sensitization
Not applicable.

#### 11.4 Sub-acute, sub-chronic, prolonged toxicity
None known.

#### 11.5 Carcinogenicity, Mutagenicity, Reproductive Toxicity
Not considered a carcinogen, mutagen, teratogen or reproductive toxin.

#### 11.6 Empirical data
Not available

#### 11.7 Clinical Experience
Using phosphoric acid etchants to prepare teeth for bonding procedures is a well-established (more than 20 years), industry-accepted, dental procedure. Etching enamel with phosphoric acid is safe and effective treatment in the hands of a dental professional.

### 12.0 Ecological Information

#### 12.1 Ecotoxicity
No specific information available. Use according to good working practices. Avoid release into the environment as it may cause pH variation.

### 13.0 Disposal Considerations

#### 13.1 Regulations
Follow all local and national government regulations in disposing material or contaminated packaging.

### 14.0 Transport Information

#### 14.1 UN Number
1805

#### 14.2 Technical name
Phosphoric acid

#### 14.3 Packing group
Packing Group III

#### 14.4 IATA class
Class 8, Corrosive
Safety Data Sheet

Trade Name: *Etch Royale, 37% Phosphoric Acid Etching Gel*

<table>
<thead>
<tr>
<th>15.0</th>
<th>Regulatory Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>15.1</td>
<td>EU</td>
</tr>
<tr>
<td>15.2</td>
<td>US FDA</td>
</tr>
<tr>
<td>15.3</td>
<td>Health Canada</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>16.0</th>
<th>Other information</th>
</tr>
</thead>
</table>
| 16.1 | List of relevant R phrases | R 34: Causes burns  
R 36 / 37 / 38: Irritating to eyes, respiratory system and skin. |
| 16.2 | Hazard Statements | H314: Causes severe skin burns and eye damage.  
H319: Causes serious eye irritation. |
| 16.3 | Precautionary Statements | P264: Wash hands thoroughly after handling.  
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P305 + P351 + P338: If in eyes, rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing until pH of tears is 7. |
| 16.4 | Restrictions on use | Dental etchants are to be sold to/used by dental professionals only. |
| 16.5 | Further information | The information presented herein is believed to be factual as it has been derived from the works of persons believed to be qualified experts. However, nothing contained in this information is to be taken as a warranty or representation for which Pulpdent Corporation bears legal responsibility. The user should review any recommendations in the specific context of the intended use to determine whether they are appropriate. |
| 16.6 | Sources of key data | National Institute for Occupational Safety (NIOSH)  
Occupational Safety and Health Administration (OSHA)  
| 16.7 | Information which has been added, deleted or revised. | This Safety Data Sheet has been revised to meet the requirements of the GHS SDS format and Regulations (EC) No. 1272/2008 (CLP) and (EC) No. 1907/2006 (REACH). Specifically, Sections 2.1, 2.2, 3.2, 16.2, 16.3 have been modified. |