SECTION 1
PRODUCT AND COMPANY INFORMATION

Product Name: 37% Phosphoric Acid Etching Gel
Uses/Application: Dental Products
Manufacturer: PENTRON CLINICAL
1717 West Collins Avenue
Orange, CA 92867
USA
Telephone: 1-800-551-0283

In Case of Emergency: CHEMTREC, US.: 1-800-424-9300  International: +703-527-3887
Date Prepared: May 2011
Date Revised: 

SECTION 2
COMPOSITION INFORMATION

<table>
<thead>
<tr>
<th>HAZARDOUS INGREDIENTS</th>
<th>CAS No.</th>
<th>PEL</th>
<th>TLV</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphoric Acid</td>
<td>7664-38-2</td>
<td>1 mg/m³</td>
<td>1 mg/m³</td>
<td>30-60</td>
</tr>
<tr>
<td>Cobalt Aluminate Blue Spinel</td>
<td>1345-16-0</td>
<td>N/A</td>
<td>N/A</td>
<td>0.1-1</td>
</tr>
</tbody>
</table>

SECTION 3
HAZARD IDENTIFICATION

Hazard statements: CAUSES RESPIRATORY TRACT, EYE AND SKIN BURNS. MAY BE HARMFUL IF SWALLOWED. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA. POSSIBLE CANCER HAZARD - CONTAINS MATERIAL WHICH MAY CAUSE CANCER, BASED ON ANIMAL DATA.

Color: Blue

Precautions: Do not ingest. Do not get in eyes or on skin or clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Routes of entry: Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects:
Inhalation: Corrosive to the respiratory system.
Ingestion: Harmful if swallowed. May cause burns to mouth, throat and stomach.
Skin: Corrosive to the skin. Causes burns.
Eyes: Corrosive to eyes. Causes burns.
PENTRON CLINICAL  

Material Safety Data Sheet for: 37% Phosphoric Acid

Potential chronic health effects:
Chronic effects: Contains material that may cause target organ damage, based on animal data.

Target organs: Contains material which may cause damage to the following organs: upper respiratory tract, skin, eye, lens or cornea.

Carcinogenicity classification: Contains material which may cause cancer, based on animal data. Risk of cancer depends on duration and level of exposure.

Mutagenicity: No known significant effects or critical hazards.

Teratogenicity: No known significant effects or critical hazards.

Developmental effects: No known significant effects or critical hazards.

Fertility effects: No known significant effects or critical hazards.

SECTION 4  
EMERGENCY FIRST AID PROCEDURES

Skin: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Get medical attention if symptoms persist.

Eyes: Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.

Inhalation: Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention immediately.

Ingestion: Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if symptoms persist.

Note to physician: In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

SECTION 5  
FIRE AND EXPLOSION HAZARD DATA

Flammability of the product: In a fire or if heated, a pressure increase will occur and the container may burst.

Extinguishing media:
Suitable: Carbon dioxide, dry chemical or foam. Use water spray to keep fire-exposed containers cool.

Not suitable: Do not use water jet.

Special exposure hazards: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Hazardous thermal decomposition products: Decomposition products may include the following materials: phosphorus oxides, metal oxide/oxides, Flammability of the product: hydrogen.

Special fire fighting procedures: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
SECTION 6
ACCIDENTAL RELEASE MEASURES

Personal precautions: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Put on appropriate personal protective equipment.

Environmental precautions: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Product is toxic to aquatic organisms. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods for cleaning up:
Small spills: Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spills: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor.

SECTION 7
PRECAUTIONS FOR HANDLING & STORAGE

Precautions to be taken in handling:
Workers should wash hands and face before eating, drinking and smoking. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from alkalis. Empty containers retain product residue and can be hazardous. Do not reuse container. Avoid skin, mucous membrane, oral mucosa and gingival (gum tissue) contact.

Precautions to be taken for storage:
Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 6) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Other precautions:
Keep out of reach of children. Avoid skin and eye contact. Avoid contamination of food.
## SECTION 8
### CONTROL MEASURES

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>TWA (8 hours)</th>
<th>STEL (15 mins)</th>
<th>Ceiling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphoric Acid</td>
<td>1 mg/m³</td>
<td>3 mg/m³</td>
<td>ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>mg/m³</td>
</tr>
</tbody>
</table>

**Engineering measures:** Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

**Work/Hygiene Practices:** Handle in accordance with good personal hygiene and safety practices. These practices include avoiding unnecessary exposure.

**Personal Protection:**

**Hands:** Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

**Eye protections:** Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. Recommended: Safety glasses, goggles or face shield.

**Respiratory:** If a risk assessment indicates that respirators are needed, use a properly fitted, air purifying or air-fed respirator complying with an approved standard this is necessary.

**Skin:** Based on the risks assessment, personal protective equipment for the body should be selected based on the task being performed and recommendations. The use of lab coat is recommended.

**Environmental exposure controls:** None determined.

## SECTION 9
### PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Physical state:</th>
<th>Liquid (Gel)</th>
<th>Evaporation rate:</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash point:</td>
<td>N/A</td>
<td>Relative density:</td>
<td>N/A</td>
</tr>
<tr>
<td>Color:</td>
<td>Blue</td>
<td>Vapor pressure:</td>
<td>N/A</td>
</tr>
<tr>
<td>Odor:</td>
<td>Odorless</td>
<td>Melting/freezing point:</td>
<td>N/A</td>
</tr>
<tr>
<td>Vapor density:</td>
<td>1 gm/cm³</td>
<td>Viscosity:</td>
<td>N/A</td>
</tr>
<tr>
<td>pH:</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boiling/condensation point:</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solubility:</td>
<td>Soluble in the following materials: Cold water and hot water</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SECTION 10
STABILITY AND REACTIVITY DATA

<table>
<thead>
<tr>
<th>Stability:</th>
<th>The product is stable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conditions to Avoid:</td>
<td>No specific data</td>
</tr>
<tr>
<td>Incompatibility &amp; Reactive (Material to Avoid):</td>
<td>Reactive or incompatible with the following materials: oxidizing materials, reducing materials, metals, acids, alkalis and moisture, amines, peroxides</td>
</tr>
<tr>
<td>Hazardous Decomposition:</td>
<td>Under normal conditions of storage and use, hazardous decomposition products should not be produced.</td>
</tr>
<tr>
<td>Hazardous Polymerization:</td>
<td>Under normal conditions of storage and use, hazardous polymerization will not occur.</td>
</tr>
</tbody>
</table>

SECTION 11
TOXICOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Acute toxic:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Product/ingredient name</td>
<td>Result</td>
</tr>
<tr>
<td>Phosphoric acid</td>
<td>LD50 Oral</td>
</tr>
</tbody>
</table>

Irritation/Corrosion: Not available

Carcinogenicity Classification: Cobalt aluminate blue spinal - 2B under IRAC.
Sensitizer: Not available
Mutagenicity: Not available
Teratogenicity: Not available
Reproductive Toxicity: Not available

SECTION 12
ECOLOGICAL INFORMATION

Ecotoxicity: No known significant effects or critical hazards.

SECTION 13
DISPOSAL CONSIDERATION

Waste Disposal: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some products residues. Avoid dispersal or spilled material and runoff and contact with soil, waterways, drains and sewers.
### SECTION 14
TRANSPORATION INFORMATION

<table>
<thead>
<tr>
<th>Regulatory information</th>
<th>UN number</th>
<th>Proper shipping name</th>
<th>Classes</th>
<th>PG*</th>
<th>Label</th>
<th>Additional information</th>
</tr>
</thead>
</table>
| DOT Classification     | 1805      | Phosphoric Acid Solution | 8       | III | ![Label](image) | Limited quantity: Yes.  
Packaging instruction  
Passenger aircraft  
Quantity limitation: 5 L  
Cargo aircraft  
Quantity limitation: 60 L  
Special provisions  
A7, IB3, N34, T4, TP1 |
| IMDG Class             | 1805      | PHOSPORIC ACID SOLUTION | 8       | III | ![Label](image) | Emergency schedules  
(EmS)  
F-A, S-B |
| IATA-DGR Class         | 1805      | Phosphoric Acid Solution | 8       | III | ![Label](image) | Passenger and Cargo Aircraft  
Quantity limitation: 5 L  
Packaging instructions: 852  
Cargo Aircraft Only  
Quantity limitation: 60 L  
Packaging instructions: 856  
Limited Quantities -  
Passenger Aircraft  
Quantity limitation: 1 L  
Packaging instructions: Y841 |

PG*: Packing Group

### SECTION 15
REGULATORY INFORMATION

U.S. Federal regulations TSCA 8(a) IUR: Partial exemption  
United States inventory (TSCA 8b): All components are listed or exempted.
### SECTION 16
### OTHER INFORMATION

Hazardous Material Information System (HMIS):
- Health 3, Flammability 0, Physical Hazard 0.

**Note:** To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.