

SAFETY DATA SHEET according to OSHA HCS

Issue Date: 05/25/2015

Version No: 1

1. Identification

- **Product identifier**
Trade name: DEFEND Etchant Gel
- **Application of the substance or the preparation**
Acid etchant for enamel and dentin
- **Manufacturer/Supplier**
DEFEND by Mydent International
80 Suffolk Court
Hauppauge, NY 11788
800-275-0020
Fax: 631-434-7750
E-mail: sales@defend.com
- **24H Emergency Telephone numbers**
ChemTel Contract No. MIS0007996
North America: 1-800-255-3924
International: +01-813-248-0585

2. Hazards Identifications

The preparation of this document has been carried out according to the U.S. OSHA Hazard Communication Standard. Therefore, all the known hazards of the product or components have to be included regardless the potential risk.

- **Hazard classification**
Serious eye damage/Irritation: Category 1.
Skin Corrosion/Irritation: Category 1A.
Corrosive to metal: Category 1.
- **Label elements**
Signal word: Danger.
Symbols: Corrosion.
Pictograms



Restricted use by dental professional only.

- **Hazard statement**
Causes severe skin burns and eye damage.
May be corrosive to metals.
- **Precautionary statements**
Prevention:
Wear protective gloves, protective clothing and eye/face protection.
Wash thoroughly after handling.
Keep in original container only.

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Response:

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 Immediately call a POISON CENTER or doctor/physician.
 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
 Disposal: Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

- **Classification system**

NFPA ratings (scale 0 – 4)



HMIS ratings (scale 0 – 4)



- **Hazards not otherwise classified**

May cause chemical gastrointestinal burns.

- **Other hazards**

Results of PBT and vPvB assessment.
 PBT: not applicable
 vPvB: not applicable

3. Composition/Information on ingredients

- **Chemical characterization**

Gel matrix which includes phosphoric acid.

| C.A.S. No. | Component | % Wt |
|------------|-----------------|---------|
| 7732-18-5 | Water | > 50 |
| 7664-38-2 | Phosphoric acid | 30 – 40 |

4. First aid measures

Description of first aid measures

- **After inhalation**

Remove person to fresh air. Get medical attention if you feel unwell.

- **After contact with skin**

Immediately flush with water for 15 minutes and then wash with soap and water. In case skin irritation persists, get medical attention.

- **After contact with eyes**

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Rinse, opened eye, with copious amounts of water for at least 15 minutes. Remove contact lenses, if possible. Get medical attention.

- **After ingestion**
Flush mouth with water and then drink plenty of water for dilution.
Do NOT induce vomiting. Get medical attention immediately.
- **Information for physician**
Most important symptoms and effects, both acute and delayed: See Section 11.
Indication of any immediate medical attention and special treatment needed: Not applicable.

5. Fire-fighting measures

- **Suitable extinguishing media**
Not a fire hazard. Use fire fighting agents suitable for the surrounding fire.
- **Extinguishing media to avoid**
None.
- **Special hazards arising from combustion**
Formation of toxic gases is possible during heating or in case of fire.
- **Special protective equipment for fire-fighters**
A self-contained breathing apparatus.

6. Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Ventilate area. Wear protective equipment (chemical splash gloves and goggles). Keep away unprotected persons.
- **Environmental precautions**
Do not allow to enter sewers or ground water
- **Methods for cleaning up/collecting**
Wear personal protective equipment. For small quantities wipe spill with dry paper towels. For larger quantities dilute with plenty of water. The product may be absorbed by liquid-binding material (sand, diatomite, acid binders). Flush spill area with water.

7. Handling and storage

- **Precautions for safe handling**
Adequately trained personnel should handle this product. Do not eat, drink or smoke when using the product. Wear safety gloves and glasses. Wash thoroughly after handling. Avoid unnecessary exposure.
- **Conditions for safe storage, including any incompatibilities**
Store product in a cool and dry place. Keep in original container with the cap always tightly closed. Store away from strong bases and from reactive metals (eg. Aluminum, zinc etc.).

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8. Exposure controls/personal protection

- **Control parameters**

Occupational exposure limits

In case a component is shown in section 3 but it does not appear in the table below, there are not any available data for this component.

| C.A.S. No. | Component | Agency | Limit |
|------------|-----------------|--------|---|
| 7664-38-2 | Phosphoric acid | ACGIH | TWA: 1 mg/m ³ STEL: 3 mg/m ³ |
| 7664-38-2 | Phosphoric acid | OSHA | TWA: 1 mg/m ³ |

ACGIH: American Conference of Government Industrial Hygienists
OSHA: United States Department of Labour – Occupational Safety and Health Administration
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit

- **Exposure control**

Personal protective equipment (PPE)

Ventilation: Ensure adequate ventilation of the premises where the product is stored and/or handled. Respiratory protection: Not required.

Hand protection: Suitable protective gloves should be worn. Eye protection: Safety goggles with side shields should be worn.

Skin protection: Do not eat, drink or smoke when using the product.

Other: Lab coat is suggested when using the product.

9. Physical and chemical properties

- **Information on basic physical and chemical properties**

| | |
|----------------------------|-------------------------------------|
| Appearance: | Thixotropic gel |
| Colour: | Blue |
| Odour: | Characteristic |
| Odour threshold: | Not available |
| pH value | Approximately 1 |
| Melting point: | Not applicable |
| Boiling point: | Not applicable |
| Flash point: | Not applicable |
| Evaporation rate: | No data available |
| Flammability (solid, gas): | Not applicable |
| Density: | Approximately 1,2 g/cm ³ |
| Vapour pressure: | Not applicable |
| Vapour density: | Not applicable |
| Viscosity: | Not determined |
| Solubility: | Soluble in water |
| Auto ignition: | Product is not self igniting |
| Boiling point: | Not applicable |
| Viscosity: | No data available |

10. Stability and reactivity

- **Reactivity**

The product may be reactive with certain agents under certain conditions. See headings below.

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- **Chemical stability**
Stable under normal storage and handle conditions.
- **Hazardous decomposition products**
None, if used in accordance with instructions.
- **Conditions and/or materials to avoid**
Avoid strong bases. Avoid contact with materials such as sulphides and sulphites that could release toxic gases. Avoid most metals since phosphoric acid can react to liberate hydrogen.
- **Possibility of hazardous reactions**
Avoid strong bases. Avoid contact with materials such as sulphides and sulphites that could release toxic gases. Avoid most metals since phosphoric acid can react to liberate hydrogen.

11. Toxicological information

It is required by the U.S. OSHA Hazard Communication Standard to include all the known hazards of the product or components included regardless the potential risk.

The risks of the hazards communicated in this document may vary depending on the potential of exposure.

- **Information on toxicological effects**
 Inhalation: Not expected to be an inhalation hazard unless product is misted or heated at high temperatures.
 Skin contact: Corrosive (Skin burns). Signs/symptoms may include localized redness, swelling, itching, intense pain, blistering, ulceration, and tissue destruction.
 Eye contact: Corrosive (Eye Burns): Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision. Ingestion: May be harmful if swallowed. There is a possibility of gastrointestinal corrosion with the symptoms being a strong caustic effect on mouth and throat, stomach pain and upset, nausea, diarrhoea and vomiting.

- **Toxicological data**
 In case a component is shown in section 3 but it does not appear in the tables below, there are not any available data for this component.

Acute toxicity

| Component | Route | Species | Value |
|-----------------|-----------|---------|--------------------|
| Phosphoric acid | Dermal | Rabbit | LD50 > 2,740 mg/Kg |
| | Ingestion | Rat | LD50 > 1,530 mg/Kg |

Skin corrosion/irritation

| Component | Species | Value |
|-----------------|---------|-----------|
| Phosphoric acid | Rabbit | Corrosive |

Serious eye damage/Irritation

| Component | Species | Value |
|-----------------|-------------------------|-----------|
| Phosphoric acid | Official classification | Corrosive |

Skin sensitization

| Component | Species | Value |
|-----------------|---------|-----------------|
| Phosphoric acid | Human | Not sensitizing |

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Respiratory sensitization:

In case a component is shown in section 3 but it does not appear here, there are not any available data for this component.

Germ cell mutagenicity

| Component | Route | Value |
|-----------------|----------|---------------|
| Phosphoric acid | In vitro | Not mutagenic |

Carcinogenicity

In case a component is shown in section 3 but it does not appear here, there are not any available data for this component

Reproduced toxicity:

In case a component is shown in section 3 but it does not appear in the table below, there are not any available data for this component.

Reproduced and/or development effects

| Component | Route | Value | Species | Test Result | Exposure duration |
|-----------------|-----------|----------------------------------|---------|------------------------|-------------------|
| Phosphoric acid | Ingestion | Not toxic to female reproduction | Rat | NOAEL 750 mg/Kg/day | 2 generation |
| Phosphoric acid | Ingestion | Not toxic to male reproduction | Rat | NOAEL 750 mg/Kg/day | 2 generation |
| Phosphoric acid | Ingestion | Not to development | Rat | NOAEL 750 mg/Kg/day | 2 generation |

Target organ(s):

In case a component is shown in section 3 but it does not appear here, there are not any available data for this component.

Specific target organ toxicity – single exposure

| Component | Route | Target Organ(s) | Value | Species | Test Result | Exposure duration |
|-----------------|------------|------------------------|---|---------|------------------------|-----------------------|
| Phosphoric acid | Inhalation | respiratory irritation | Some positive data exist, but not sufficient for classification | Human | NOAEL Not available | Occupational exposure |

Specific target organ toxicity – repeated exposure

In case a component is shown in section 3 but it does not appear here, there are not any available data for this component.

Aspiration hazard:

In case a component is shown in section 3 but it does not appear here, there are not any available data for this component.

12. Ecological information

If material is properly used and handled no ecological problems are to be anticipated.
Do not discard material into drains/sewers or aquatic environment as it may cause pH variations.

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13. Disposal considerations

Disposal must be carried out in accordance to the local and national regulations currently in force

14. Transport information

| | |
|--|---|
| UN-Number DOT, ADR, ADN, IMDG, IATA | UN 1805 |
| UN proper shipping name DOT, ADR, ADN, IMDG, IATA | Phosphoric acid solution 1805 Phosphoric acid solution |
| Transport hazard class DOT, ADR, ADN, IMDG, IATA | Class: 8 corrosive substances Label: 8 |
| Packing group DOT, ADR, IMDG, IATA | III |

15. Regulatory information

The product is a medical device according to EC directive 93/42/EEC.

This product is classified as a medical device under US regulations and it has been reviewed by the US Food and Drug Administration (FDA).

16. Other information

CAUTION: PRODUCT FOR PROFESSIONAL USE ONLY

The information provided above is based on our present knowledge and experience. This safety data sheet refers explicitly to the product indicated and comprises no guarantee of particular quality. Any use of this product in any way not indicated on this safety data sheet will be exclusively under the user's responsibility.