1 Identification of the substance/preparation and of the company/undertaking

- **Product details**
  - **Trade name:** Dentaclean - Denture cleaner
  - **Article number:** 520 0099 2
  - **Application of the substance / the preparation**
    Concentrate for easy removal of plaque, tartar and coatings on dentures.
  - **Manufacturer/Supplier:**
    Bredent
    Weißenhorner Straße 2
    D-89250 Senden
    Tel.: +49 (0) 7309/872-0
    Fax: +49 (0) 7309/872-24

- **Further information obtainable from:** R & D
- **Information in case of emergency:** Tel.: +49 (0) 6132-84436 (24 h)

2 Composition/information on ingredients

- **Chemical characterization**
  - **Description:** Mixture of substances listed below with nonhazardous additions.
  - **Dangerous components:**
    - **CAS:** 7664-38-2
      - **Description:** phosphoric acid
      - **R:** 34
      - **C:** 25-50%
    - **EINECS:** 231-633-2
      - **Description:** phosphoric acid ester
      - **R:** 34
      - **C:** 2.5-10%
    - **Description:** phosphonic acid
      - **Xi:** 41
      - **R:** 2.5-10%
  - **Additional information:** For the wording of the listed risk phrases refer to section 16.

3 Hazards identification

- **Hazard description:**
  - **Corrosive**

- **Information concerning particular hazards for human and environment:**
  The product has to be labelled due to the calculation procedure of the “General Classification guideline for preparations of the EU” in the latest valid version.
  - **R 34** Causes burns.

- **Classification system:**
  The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

4 First aid measures

- **General information:**
  Immediately remove any clothing soiled by the product.
  Take affected persons out of danger area and lay down.

- **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 wash with water and soap and rinse thoroughly.
  Immediate medical treatment necessary. Failure to treat burns can prevent wounds from healing.

- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
Trade name: Dentaclean - Denture cleaner

After swallowing:
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; call for medical help immediately.

5 Fire-fighting measures

- Suitable extinguishing agents:
  CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- For safety reasons unsuitable extinguishing agents: Water with full jet
- Special hazards caused by the substance, its products of combustion or resulting gases:
  Formation of toxic gases is possible during heating or in case of fire.
- Protective equipment:
  Wear self-contained respiratory protective device.
  Wear fully protective suit.
- Additional information
  Cool endangered receptacles with water spray.
  Collect contaminated fire fighting water separately. It must not enter the sewage system.

6 Accidental release measures

- Person-related safety precautions:
  Wear protective equipment. Keep unprotected persons away.
  Use respiratory protective device against the effects of fumes/dust/aerosol.
  Wear protective clothing.
- Measures for environmental protection:
  Do not allow to enter sewers/surface or ground water.
  Do not allow to penetrate the ground/soil.
  Inform respective authorities in case of seepage into water course or sewage system.
  In case of seepage into the ground inform responsible authorities.
  Prevent from spreading (e.g. by damming-in or oil barriers).
  Dilute with plenty of water.
- Measures for cleaning/collecting:
  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.

7 Handling and storage

- Handling:
  - Information for safe handling:
    Ensure good ventilation/exhaustion at the workplace.
    Keep receptacles tightly sealed.
    Open and handle receptacle with care.
    Prevent formation of aerosols.
  - Information about fire - and explosion protection: No special measures required.
- Storage:
  - Requirements to be met by storerooms and receptacles: Store only in the original receptacle.
  - Information about storage in one common storage facility:
    Do not store together with alkalis (caustic solutions).
    Store away from oxidizing agents.
  - Further information about storage conditions:
    Keep container tightly sealed.
8 Exposure controls/personal protection

- Additional information about design of technical facilities: No further data; see item 7.

- Ingredients with limit values that require monitoring at the workplace:

<table>
<thead>
<tr>
<th>Substance</th>
<th>OES Short-term value</th>
<th>OES Long-term value</th>
<th>New, IOELV, Sk</th>
</tr>
</thead>
<tbody>
<tr>
<td>7664-38-2 phosphoric acid</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

- Personal protective equipment:

  - General protective and hygienic measures:
    The usual precautionary measures are to be adhered to when handling chemicals.
    Immediately remove all soiled and contaminated clothing.
    Avoid contact with the eyes and skin.
    Do not inhale gases / fumes / aerosols.
    Keep away from foodstuffs, beverages and feed.
    Do not eat, drink, smoke or sniff while working.
    Wash hands before breaks and at the end of work.

  - Respiratory protection:
    Use suitable respiratory protective device when high concentrations are present.
    Use suitable respiratory protective device only when aerosol or mist is formed.
    Filter P2

  - Protection of hands:
    Acid resistant 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.
    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

  - Body protection:
    Protective work clothing
    Boots

9 Physical and chemical properties

- General Information

<table>
<thead>
<tr>
<th>Form</th>
<th>Fluid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour</td>
<td>Colourless</td>
</tr>
</tbody>
</table>
Trade name: Dentaclean - Denture cleaner

### Odour:
- Odourless

### Change in condition
- Melting point/Melting range: Undetermined.
- Boiling point/Boiling range: Undetermined.

### Flash point:
- Not applicable.

### Self-igniting:
- Product is not self-igniting.

### Danger of explosion:
- Product does not present an explosion hazard.

### Density:
- Not determined.

### Solubility in / Miscibility with water:
- Fully miscible.

### Solvent content:
- Organic solvents: 0.0 %

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### Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Dangerous reactions**
  - Heating occurs when water is added.
  - When diluting, always add acid to water, never vice versa.
  - Reacts with alkali (lyes).
  - Violent reaction with concentrated alkali and oxidizing agents.
  - Reacts with light alloys to form hydrogen.
- **Dangerous decomposition products:** No dangerous decomposition products known.

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### Toxicological information

- **Acute toxicity:**
  - **LD/LC50 values relevant for classification:**
    - 7664-38-2 phosphoric acid
      - Oral LD50 1530 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 the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
      - Corrosive
      - Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

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### 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.

(Contd. on page 5)
13 Disposal considerations

- **Product:**
  - **Recommendation:**
    The concentrate must be specially treated adhering to official regulations.
    The used (diluted) solution (see instructions for use) can be disposed of through the sink.

- **European waste catalogue**
  - **16 10 01 aqueous liquid wastes containing dangerous substances**

- **Uncleaned packaging:**
  - **Recommendation:**
    Disposal must be made according to official regulations.
    Packagings that may not be cleansed are to be disposed of in the same manner as the product.

14 Transport information

- **Land transport ADR/RID (cross-border):**
  - **ADR/RID class:** 8 Corrosive substances.
  - **Danger code (Kemler):** 80
  - **UN-Number:** 1760
  - **Packaging group:** III
  - **Hazard label:** 8
  - **Description of goods:** 1760 CORROSIVE LIQUID, N.O.S. (PHOSPHORIC ACID, LIQUID, Phosphonsäure)

- **Maritime transport IMDG:**
  - **IMDG Class:** 8
  - **UN Number:** 1760
  - **Label** 8
  - **Packaging group:** III
  - **EMS Number:** F-A,S-B
  - **Marine pollutant:** No
  - **Proper shipping name:** CORROSIVE LIQUID, N.O.S. (PHOSPHORIC ACID, LIQUID)

- **Air transport ICAO-TI and IATA-DGR:**
  - **ICAO/IATA Class:** 8
  - **UN/ID Number:** 1760
  - **Label** 8
  - **Packaging group:** III
**Trade name: Dentaclean - Denture cleaner**

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**15 Regulatory information**

- **Labelling according to EU guidelines:**
  The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

- **Code letter and hazard designation of product:**
  C Corrosive

- **Hazard-determining components of labelling:**
  phosphoric acid
  phosphoric acid ester
  phosphonic acid

- **Risk phrases:**
  34 Causes burns.

- **Safety phrases:**
  26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
  36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
  45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
  60 This material and its container must be disposed of as hazardous waste.

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**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 R-phrases**
  34 Causes burns.
  41 Risk of serious damage to eyes.

- **Department issuing MSDS:** R & D
- **Contact:** R & D