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

1.1 Product identifier
   · Trade name: Phosphate Cement powder

1.2 Relevant identified uses of the substance or mixture and uses advised against
   No further relevant information available.
   · Application of the substance / the mixture Dental cement

1.3 Details of the supplier of the safety data sheet
   · Manufacturer/Supplier: Kulzer GmbH
     Leipziger Straße 2, 63450 Hanau (Germany) Tel.: +49 (0)800 4372522
   · Informing department: E-Mail: msds@kulzer-dental.com
   · Emergency telephone number: Emergency CONTACT (24-Hour-Number): +49 (0)6132-84463

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
   · Classification according to Regulation (EC) No 1272/2008
     Aquatic Acute 1 H400 Very toxic to aquatic life.
     Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.

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

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: -
**Trade name:** Phosphate Cement powder

### Dangerous components:

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Hazard Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>zinc oxide</td>
<td>Aquatic Acute 1, H400; Aquatic Chronic 1, H410</td>
<td>75-90%</td>
</tr>
<tr>
<td>calcium fluoride</td>
<td>substance with a Community workplace exposure limit</td>
<td>0-5%</td>
</tr>
</tbody>
</table>

**CAS:** 7789-75-5  
**EINECS:** 232-188-7

### Additional information

For the wording of the listed hazard phrases refer to section 16.

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### SECTION 4: First aid measures

**4.1 Description of first aid measures**

- **General information:** No special measures required.
- **After skin contact:** The product is not skin irritating.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** Rinse out mouth and then drink plenty of water.  
  In case of persistent symptoms consult doctor.

**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.

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### SECTION 5: Firefighting measures

**5.1 Extinguishing media**

- **Suitable extinguishing agents:** CO2, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.

**5.2 Special hazards arising from the substance or mixture**

No further relevant information available.

**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**

Not required.

**6.2 Environmental precautions:**

Inform respective authorities in case product reaches water or sewage system.

**6.3 Methods and material for containment and cleaning up:**

Collect mechanically.

**6.4 Reference to other sections**

No dangerous materials are released.  
See Section 8 for information on personal protection equipment.

---

### SECTION 7: Handling and storage

**7.1 Precautions for safe handling**

No special measures required.

**Information about protection against explosions and fires:**

No special measures required.
Safety data sheet
according to 1907/2006/EC, Article 31

Trade name: Phosphate Cement powder

7.2 Conditions for safe storage, including any incompatibilities
- **Storage**
  - **Requirements to be met by storerooms and containers:** No special requirements.
  - **Information about storage in one common storage facility:** Not required.
  - **Further information about storage conditions:** None.

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

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
- **Components with critical values that require monitoring at the workplace:**
  - **zinc oxide**
    - OES () Short-term value: 10 mg/m³
    - Long-term value: 5 mg/m³
      - fume
  - **1309-48-4 magnesium oxide**
    - OES () Long-term value: 10* 4** mg/m³
      - *total inhalable dust
      - **fume and respirable dust
  - **7789-75-5 calcium fluoride**
    - OES () Long-term value: 2.5 mg/m³
      - as F

- **Additional information:** The lists that were valid during the compilation were used as basis.

8.2 Exposure controls
- **Personal protective equipment**
  - **General protective and hygienic measures**
    - The usual precautionary measures should be adhered to in handling the chemicals.
  - **Breathing equipment:** Not required.
  - **Protection of hands:**
    - Check protective gloves prior to each use for their proper condition.
    - Recommended
      - **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.
      - **For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**
        - Butyl rubber, BR
        - Nitrile rubber, NBR
  - **Eye protection:** not absolutely neccessary
SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

- **Appearance:** Powder
- **Form:** Yellowish
- **Colour:** Yellowish
- **Smell:** Odourless
- **Odour threshold:** Not determined.

- **pH-value:** Not applicable.

- **Change in condition**
  - **Melting point/Melting range:** Not determined
  - **Boiling point/Boiling range:** Not determined

- **Flash point:** Not applicable

- **Inflammability (solid, gaseous):** Not determined.

- **Ignition temperature:**
  - **Decomposition temperature:** Not determined.
  - **Self-inflammability:** Product is not selfigniting.
  - **Danger of explosion:** Product is not explosive.

- **Critical values for explosion:**
  - **Lower:** Not determined.
  - **Upper:** Not determined.

- **Steam pressure:** Not applicable.

- **Density**
  - **Settled apparent density:** 500 kg/m³
  - **Relative density:** Not determined.
  - **Vapour density:** Not applicable.
  - **Evaporation rate:** Not applicable.

- **Solubility in / Miscibility with**
  - **Water:** Insoluble

- **Partition coefficient (n-octanol/water):** Not determined.

- **Viscosity:**
  - **Dynamic:** Not applicable.
  - **Kinematic:** Not applicable.

9.2 Other information

No further relevant information available.
SECTION 10: Stability and reactivity

10.1 Reactivity No further relevant information available.

10.2 Chemical stability
   - Conditions to be avoided: No decomposition if used and stored according to specifications.

10.3 Possibility of hazardous reactions No dangerous reactions known

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

SECTION 11: Toxicological information

11.1 Information on toxicological effects
   - Acute toxicity: Based on available data, the classification criteria are not met.
     - Primary irritant effect:
       - Skin corrosion/irritation: Based on available data, the classification criteria are not met.
       - Serious eye damage/irritation: Based on available data, the classification criteria are not met.
     - Respiratory or skin sensitisation: Based on available data, the classification criteria are not met.
     - CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
       - Germ cell mutagenicity: Based on available data, the classification criteria are not met.
       - Carcinogenicity: Based on available data, the classification criteria are not met.
       - Reproductive toxicity: Based on available data, the classification criteria are not met.
     - STOT-single exposure: Based on available data, the classification criteria are not met.
     - STOT-repeated exposure: Based on available data, the classification criteria are not met.
     - Aspiration hazard: Based on available data, the classification criteria are not met.

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.

Ecotoxicological effects:
   - Remark: Very toxic for fish

Additional ecological information:
   - General notes:
     - Do not allow product to reach ground water, water bodies or sewage system.
     - Danger to drinking water if even small quantities leak into soil.
     - Also poisonous for fish and plankton in water bodies.
     - Very toxic for aquatic organisms

12.5 Results of PBT and vPvB assessment
   - PBT: Not applicable.
   - vPvB: Not applicable.

12.6 Other adverse effects: No further relevant information available.
Trade name: Phosphate Cement powder

SECTION 13: Disposal considerations

13.1 Waste treatment methods
   Recommendation
   Must not be disposed of 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 packagings:
   Recommendation: Packaging can be reused or recycled after cleaning.

SECTION 14: Transport information

14.1 UN-Number
   ADR, IMDG, IATA 3077

14.2 UN proper shipping name
   ADR 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (zinc oxide)
   IMDG, IATA ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (zinc oxide)

14.3 Transport hazard class(es)
   ADR
   Class 9 (M7) Miscellaneous dangerous substances and articles.
   Label 9

   IMDG
   Class 9 Miscellaneous dangerous substances and articles.
   Label 9

(Contd. on page 7)
Trade name: Phosphate Cement powder

- IATA
  - Class: 9 Miscellaneous dangerous substances and articles.
  - Label: 9
- 14.4 Packing group
  - ADR, IMDG, IATA: III
- 14.5 Environmental hazards:
  - Marine pollutant: Yes
  - Special marking (ADR): Symbol (fish and tree)
  - Special marking (IATA): Symbol (fish and tree)
- 14.6 Special precautions for user
  - Kemler Number: 90
  - EMS Number: F-A,S-F
- 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code
  - Transport/Additional information: Not applicable.
- UN "Model Regulation":
  - UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., 9, III

SECTION 15: Regulatory information
- 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information
These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.
- Relevant phrases
  - H400 Very toxic to aquatic life.
  - H410 Very toxic to aquatic life with long lasting effects.
- 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)
  - PBT: Persistent, Bioaccumulative and Toxic
  - vPvB: very Persistent and very Bioaccumulative

(Contd. on page 8)
### Trade name: Phosphate Cement powder

- Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
- Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

*Data compared to the previous version altered.*