1 Identification

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

- **Application of the substance / the mixture** Dental cement

- **Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier:** Kulzer GmbH
    Leipziger Straße 2, 63450 Hanau (Germany)  
    Tel.: +49 (0)800 4372522
  - **Information department:**
    Tel. +1 (800) 431-1785  Fax: +1 (800) 522-1545  
    e-mail: customer.servicehkna@kulzer-dental.com
  - **Emergency telephone number:**
    Emergency CONTACT (24-Hour-Number)  
    GBK/Infotrac ID 105860: (domestic) 1 800 535 5053 or international (001) 352 323 3500

2 Hazard(s) identification

- **Classification of the substance or mixture**
  The product is not classified according to the Globally Harmonized System (GHS).

- **Label elements**
  - **GHS label elements** Void
  - **Hazard pictograms** Void
  - **Signal word** Void
  - **Hazard statements** Void

- **Classification system**
  - **NFPA ratings for USA (scale 0-4)**
    - Health = 0
    - Fire = 0
    - Reactivity = 0
  - **HMIS-Ratings (Scale 0-4)**
    - Health = 0
    - Fire = 0
    - Reactivity = 0

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

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
  - **Description:** -
  - **Dangerous components:**
    - zinc oxide 75-90%
    - 1309-48-4 magnesium oxide 5-10%

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Safety Data Sheet
acc. to OSHA HCS

Printing date 06/03/2017
Reviewed on 06/03/2017

Trade name: Phosphate Cement powder

7789-75-5 calcium fluoride 0-5%

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

4 First-aid measures

- Description of first aid measures
  - General information No special measures required.
  - After skin contact Generally the product does not irritate the skin.
  - After eye contact Rinse opened eye for several minutes under running water.
  - After swallowing Rinse out mouth and then drink plenty of water.
    If symptoms persist consult doctor.
  - Information for doctor
    - Most important symptoms and effects, both acute and delayed
      No further relevant information available.
    - Indication of any immediate medical attention and special treatment needed
      No further relevant information available.

5 Fire-fighting measures

- Extinguishing media
  - Suitable extinguishing agents
    CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
  - Special hazards arising from the substance or mixture No further relevant information available.
  - Advice for firefighters
    - Protective equipment: No special measures required.
  - Additional information

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures Not required.
  - Environmental precautions:
    Inform respective authorities in case of seepage into water course or sewage system.
  - Methods and material for containment and cleaning up: Pick up mechanically.
  - Reference to other sections
    No dangerous substances are released.
    See Section 8 for information on personal protection equipment.

7 Handling and storage

- Handling
  - Precautions for safe handling No special measures required.
  - Information about protection against explosions and fires: No special measures required.

(Contd. of page 1)
Trade name: Phosphate Cement powder

- Conditions for safe storage, including any incompatibilities
  - Storage
    - Requirements to be met by storerooms and receptacles: No special requirements.
    - Information about storage in one common storage facility: Not required.
    - Further information about storage conditions: None.
- Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- Additional information about design of technical systems: No further data; see item 7.
- Control parameters
  - Components with limit values that require monitoring at the workplace:

<table>
<thead>
<tr>
<th>Component</th>
<th>PEL (mg/m³)</th>
<th>REL (mg/m³)</th>
<th>TLV (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zinc oxide</td>
<td>15*; 5**</td>
<td>C 15*; 10**</td>
<td>10 R</td>
</tr>
<tr>
<td></td>
<td>Total dust</td>
<td>Long-term</td>
<td>Long-term</td>
</tr>
<tr>
<td></td>
<td>2.5 mg/m³</td>
<td>value: 5;5**</td>
<td>value: 2</td>
</tr>
<tr>
<td></td>
<td>Respirable</td>
<td>mg/m³</td>
<td>mg/m³</td>
</tr>
<tr>
<td></td>
<td>dust</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Magnesium oxide</td>
<td>15*</td>
<td>15-min Dust</td>
<td>10 I</td>
</tr>
<tr>
<td></td>
<td>Total particulate</td>
<td>only; **15-min Dust only; **Zinc</td>
<td></td>
</tr>
<tr>
<td>Calcium fluoride</td>
<td>2.5</td>
<td>2.5</td>
<td>2.5</td>
</tr>
<tr>
<td></td>
<td>mg/m³</td>
<td>mg/m³</td>
<td>mg/m³</td>
</tr>
</tbody>
</table>

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

- Exposure controls
  - Personal protective equipment
    - General protective and hygienic measures
      The usual precautionary measures for handling chemicals should be followed.
    - 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.
**Trade name:** Phosphate Cement powder

- **Penetration time of glove material**
  The exact break through 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 necessary.
- **Body protection:** Light weight protective clothing

### 9 Physical and chemical properties

**Information on basic physical and chemical properties**

**General Information**

- **Appearance:** Powder
- **Form:** Powder
- **Color:** Yellowish
- **Odor:** Odorless
- **Odor threshold:** Not determined.
- **pH-value:** Not applicable.

**Change in condition**

- **Melting point/Melting range:** Undetermined
- **Boiling point/Boiling range:** Undetermined

- **Flash point:** Not applicable

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

- **Ignition temperature:**
  - **Decomposition temperature:** Not determined.
  - **Auto igniting:** Product is not selfigniting.
  - **Danger of explosion:** Product does not present an explosion hazard.

- **Explosion limits:**
  - **Lower:** Not determined.
  - **Upper:** Not determined.

- **Vapor pressure:** Not applicable.

- **Density:** Not determined
  - **Bulk density:** 500 kg/m³
  - **Relative density:** Not determined.
  - **Vapor density:** Not applicable.
  - **Evaporation rate:** Not applicable.

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

- **Partition coefficient (n-octanol/water):** Not determined.
Trade name: Phosphate Cement powder

10 Stability and reactivity
- Reactivity: No further relevant information available.
- Possibility of hazardous reactions: No dangerous reactions known.
- Conditions to avoid: No further relevant information available.
- Incompatible materials: No further relevant information available.
- Hazardous decomposition products: none

11 Toxicological information
- Information on toxicological effects
  - Acute toxicity:
    - Primary irritant effect:
      - on the skin: No irritant effect.
      - on the eye: No irritating effect.
    - Sensitization: No sensitizing effects known.
  - Additional toxicological information:
    - Carcinogenic categories
      - IARC (International Agency for Research on Cancer)
        None of the ingredients is listed.
      - NTP (National Toxicology Program)
        None of the ingredients is listed.
      - OSHA-Ca (Occupational Safety & Health Administration)
        None of the ingredients is listed.

12 Ecological information
- Toxicity
  - Aquatic toxicity: No further relevant information available.
  - Persistence and degradability: No further relevant information available.
- Behavior in environmental systems:
  - Bioaccumulative potential: No further relevant information available.
  - 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 course or sewage system.
      Danger to drinking water if even small quantities leak into the ground.
      Also poisonous for fish and plankton in water bodies.
Trade name: Phosphate Cement powder

Very toxic for aquatic organisms

**Results of PBT and vPvB assessment**

- **PBT**: Not applicable.
- **vPvB**: Not applicable.

**Other adverse effects** No further relevant information available.

### 13 Disposal considerations

- **Waste treatment methods**
  - **Recommendation**: Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- **Uncleaned packagings**:
  - **Recommendation**: Packaging can be reused or recycled after cleaning.

### 14 Transport information

- **UN-Number**
  - **DOT**: UN3077
  - **ADR, IMDG, IATA**: 3077

- **UN proper shipping name**
  - **IMDG, IATA**: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (zinc oxide)

- **Transport hazard class(es)**
  - **DOT, IMDG**
    - **Class**: 9 Miscellaneous dangerous substances and articles
    - **Label**: 9

- **ADR**
  - **Class**: 9 (M7) Miscellaneous dangerous substances and articles

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Trade name: Phosphate Cement powder

- Label
- IATA
- Class
- Label

- Packing group
  - DOT, ADR, IMDG, IATA
- DOT, ADR, IMDG, IATA

- Environmental hazards:
  - Marine pollutant:
  - Special marking (ADR):
  - Special marking (IATA):
- Special marking (ADR):
- Special marking (IATA):
- Special precautions for user
  - Danger code (Kemler):
  - EMS Number:
- EMS Number:

- Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
- UN "Model Regulation":

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
  - SARA Section 355 (extremely hazardous substances)
  - None of the ingredients is listed.

- Cancerogenity categories
  - TLV (Threshold Limit Value established by ACGIH)
  - None of the ingredients is listed.

- GHS label elements
  - Hazard pictograms
  - Signal word
  - Hazard statements
  - Chemical safety assessment:

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.
· **Trade name:** Phosphate Cement powder

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- **Date of preparation / last revision:** 06/03/2017 / 2
- **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
  - DOT: US Department of Transportation
  - IATA: International Air Transport Association
  - ACGIH: American Conference of Governmental Industrial Hygienists
  - 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)
  - NFPA: National Fire Protection Association (USA)
  - HMIS: Hazardous Materials Identification System (USA)
  - PBT: Persistent, Bioaccumulative and Toxic
  - vPvB: very Persistent and very Bioaccumulative
  - OSHA: Occupational Safety & Health
  - TLV: Threshold Limit Value
  - PEL: Permissible Exposure Limit
  - REL: Recommended Exposure Limit
- *Data compared to the previous version altered.*