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

- **1.1 Product identifier**
  - **Trade name**: Phosphate Cement liquid

- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
  - **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
  - **1.4 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**
    - Skin Corr. 1B H314 Causes severe skin burns and eye damage.
    - Eye Dam. 1 H318 Causes serious eye damage.
    - Aquatic Chronic 2 H411 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**
        - GHS05
        - GHS09
  - **Signal word**: Danger
  - **Hazard-determining components of labelling**: orthophosphoric acid
  - **Hazard statements**
    - H314 Causes severe skin burns and eye damage.
    - H411 Toxic to aquatic life with long lasting effects.
  - **Precautionary statements**
    - P260 Do not breathe dust/fume/gas/mist/vapours/spray.
    - P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
    - P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
    - P310 Immediately call a POISON CENTER/doctor.
    - P321 Specific treatment (see on this label).
    - P405 Store locked up.

- **2.3 Other hazards** -
Trade name: Phosphate Cement liquid

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

SECTION 3: Composition/information on ingredients

3.2 Chemical characterisation: Mixtures
- Description:
- Dangerous components:
  - orthophosphoric acid
    - Skin Corr. 1B, H314
    - CAS: 7664-38-2
    - EINECS: 231-633-2
    - 50-75%
  - zinc oxide
    - Aquatic Acute 1, H400; Aquatic Chronic 1, H410
    - 10-25%

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

SECTION 4: First aid measures

4.1 Description of first aid measures
- General information
  - Instantly remove any clothing soiled by the product.
- After skin contact
  - Instantly wash with water and soap and rinse thoroughly.
- After eye contact
  - Rinse opened eye for several minutes under running water. Then consult doctor.
- After swallowing
  - Drink copious amounts of water and provide fresh air. Instantly call for 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.

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.
- Additional information

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.
Dilute with much water.

6.3 Methods and material for containment and cleaning up:
Absorb with liquid-binding material (diatomite, universal binders, for small amounts tissues).
Use neutralising agent.
Dispose of contaminated material as waste according to item 13.
SECTION 7: Handling and storage

7.1 Precautions for safe handling
Keep containers tightly sealed.
Ensure good ventilation/exhaustion at the workplace.

Information about protection against explosions and fires: No special measures required.

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:

7664-38-2 orthophosphoric acid

OES () Short-term value: 2 mg/m³
Long-term value: 1 mg/m³

New, IOELV, Sk

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
Keep away from foodstuffs, beverages and food.
Immediately remove any soiled and impregnated garments.
Wash hands during breaks and at the end of the work.
Avoid contact with the eyes and skin.

Breathing equipment: Not required.

Protection of hands:
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
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.
Trade name: Phosphate Cement liquid

- 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:
  PVC or PE gloves
- Eye protection: Protective goggles are recommended.
- Body protection: Light weight protective clothing

SECTION 9: Physical and chemical properties

- 9.1 Information on basic physical and chemical properties
  - General Information
    - Form: Fluid
    - Colour: Colourless
    - Smell: Odourless
  - Change in condition
    - Melting point/Melting range: Not determined
    - Boiling point/Boiling range: > 100 °C
  - Flash point: Not applicable
  - Self-inflammability: Product is not selfigniting.
  - Danger of explosion: Product is not explosive.
  - Steam pressure at 20 °C: 23 hPa
  - Density at 20 °C: 1.800 g/cm³
  - Solubility in / Miscibility with
    - Water: Fully miscible
  - Solvent content:
    - Water: 25.5 %
    - VOC EU g/l
  - Solids content: 18.3 %
  - 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.
**Trade name:** Phosphate Cement liquid

**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.
  - LD/LC50 values that are relevant for classification:
    - 7664-38-2 orthophosphoric acid
      - Oral LD50: 1530 mg/kg (rat)
      - Dermal LD50: 2740 mg/kg (can)
      - Inhalative LC50/4 h: >850 mg/l (rat)

- **Primary irritant effect:**
  - Skin corrosion/irritation
    - Causes severe skin burns and eye damage.
  - Serious eye damage/irritation
    - Causes severe eye damage.

- **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:** Toxic for fish

- **Additional ecological information:**
  - **General notes:**
    - Do not allow product to reach ground water, water bodies or sewage system.
    - Must not reach sewage water or drainage ditch undiluted or unneutralised.
    - Danger to drinking water if even small quantities leak into soil.
    - Also poisonous for fish and plankton in water bodies.
    - 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.
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: Disposal must be made according to official regulations.
Recommended cleaning agent: Water, if necessary with cleaning agent.

SECTION 14: Transport information

14.1 UN-Number
ADR, IMDG, IATA
1805

14.2 UN proper shipping name
ADR
IMDG, IATA
1805 PHOSPHORIC ACID SOLUTION
PHOSPHORIC ACID SOLUTION

14.3 Transport hazard class(es)
ADR

Class Label
8 (C1) Corrosive substances. 8

IMDG, IATA

Class Label
8 Corrosive substances. 8

14.4 Packing group
ADR, IMDG, IATA
III

14.5 Environmental hazards:
Marine pollutant: Yes
Special marking (ADR): Symbol (fish and tree)

14.6 Special precautions for user
Kemler Number: Warning: Corrosive substances. 80
**Trade name:** Phosphate Cement liquid

- **EMS Number:** F-A,S-B
- **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code** Not applicable.
- **Transport/Additional information:** -
- **UN "Model Regulation":** UN1805, PHOSPHORIC ACID, SOLUTION, 8, III

### SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
  - REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3
- **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**
  - H314 Causes severe skin burns and eye damage.
  - 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)
  - VOCV: Lenkungsabgabe auf flüchtigen organischen Verbindungen, Schweis (Swiss Ordinance on volatile organic compounds)
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent
  - PBT: Persistent, Bioaccumulative and Toxic
  - vPvB: very Persistent and very Bioaccumulative
  - Skin Corr. 1B: Skin corrosion/irritation – Category 1B
  - Eye Dam. 1: Serious eye damage/eye irritation – Category 1
  - 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
  - Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2
- **Data compared to the previous version altered.**