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

1.1 Product identifier

Trade name: Vivaglass CEM PL - Liquid

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 Self-curing glass ionomer based radiopaque luting cement

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:
Ivoclar Vivadent AG
Bendererstrasse 2
FL-9494 Schaan
PRINCIPALITY OF LIECHTENSTEIN

Tel: +423 235 35 35
Fax: +423 235 33 60

Further information obtainable from:
Regulatory Affairs
sds@ivoclarvivadent.com

1.4 Emergency telephone number: +423 / 235 33 13 (Ivoclar Vivadent AG, FL-9494 Schaan, Liechtenstein)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Eye Irrit. 2 H319 Causes serious eye irritation.

2.2 Label elements

The product is classified and labelled according to the CLP regulation.

Hazard pictograms

GHS07

Signal word Warning

Hazard statements
H319 Causes serious eye irritation.

Precautionary statements
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P337+P313 If eye irritation persists: Get medical advice/attention.

Additional information:
Medical devices as defined in Directive 93/42/EEC and which are invasive or used in direct physical contact with the human body, are exempted from the provisions of Regulation (EC) No 1272/2008 (CLP/GHS) usually if they are in the finished state and intended for the final user.

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: Mixture of substances listed below with nonhazardous additions.

Dangerous components:

<table>
<thead>
<tr>
<th>CAS: 87-69-4</th>
<th>(+)-tartaric acid</th>
</tr>
</thead>
<tbody>
<tr>
<td>EINECS: 201-766-0</td>
<td>Eye Irrit. 2, H319</td>
</tr>
</tbody>
</table>

Dangerous components:

Cas: 87-69-4 (+)-tartaric acid
EINECS: 201-766-0 Eye Irrit. 2, H319 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: No special measures required.

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:
Rinse with water.
Generally the product does not irritate the skin.

After eye contact:
Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing:
Rinse out mouth and then drink plenty of water.

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, powder or water spray. Fight larger fires with water spray 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:
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.

6.3 Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

6.4 Reference to other sections
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
For use in dentistry only.

(Contd. of page 1)
Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 29.03.2018
Revision: 22.03.2018
Version number 5

Trade name: Vivaglass CEM PL - Liquid

- Information about fire - and explosion protection: No special measures required.
- 7.2 Conditions for safe storage, including any incompatibilities
  - Storage:
    - Requirements to be met by storerooms and receptacles: Store only in the original receptacle.
    - 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*

- Additional information about design of technical facilities: No further data; see item 7.
  - 8.1 Control parameters
    - Ingredients with limit values that require monitoring at the workplace:
      - The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
    - Additional information: The lists valid during the making were used as basis.
  - 8.2 Exposure controls
    - Personal protective equipment:
      - General protective and hygienic measures:
        - Usual hygienic measures for dental practice and dental laboratories.
        - Wash hands before breaks and at the end of work.
        - Keep away from foodstuffs, beverages and feed.
      - Respiratory protection: Not required.
    - Protection of hands:
      - The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
      - After use of gloves apply skin-cleaning agents and skin cosmetics.
    - 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 through time has to be found out by the manufacturer of the protective gloves and has to be observed.
    - Eye protection: Safety glasses

*SECTION 9: Physical and chemical properties*

- 9.1 Information on basic physical and chemical properties
  - General Information
    - Appearance:
      - Form: Liquid
      - Colour: Colourless
      - Odour: Odourless
      - Odour threshold: Not determined.
    - pH-value: Not applicable.
  - Change in condition
    - Melting point/freezing point: Undetermined.
    - Initial boiling point and boiling range: Undetermined.

(Contd. of page 2)
(Contd. on page 4)
### SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability** Stable under normal handling and storage conditions.
- **Thermal decomposition / conditions to be avoided** No decomposition if used 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 under normal conditions of storage and use.

### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
  - Acute toxicity Based on available data, the classification criteria are not met.
  - Skin corrosion/irritation Based on available data, the classification criteria are not met.
  - Serious eye damage/irritation Causes serious eye irritation.
  - Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
  - **Additional toxicological information**: No further relevant information available.
  - 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.

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<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash point</td>
<td>Undetermined</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Product is not selfigniting</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Product does not present an explosion hazard.</td>
</tr>
<tr>
<td>Explosion limits</td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>Not determined</td>
</tr>
<tr>
<td>Upper</td>
<td>Not determined</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>Not determined</td>
</tr>
<tr>
<td>Density</td>
<td>Not determined</td>
</tr>
<tr>
<td>Relative density</td>
<td>Not determined</td>
</tr>
<tr>
<td>Vapour density</td>
<td>Not determined</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not determined</td>
</tr>
<tr>
<td>Solubility in / Miscibility with water</td>
<td>Fully miscible</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>Not determined</td>
</tr>
<tr>
<td>Viscosity</td>
<td></td>
</tr>
<tr>
<td>Dynamic</td>
<td>Not determined</td>
</tr>
<tr>
<td>Kinematic</td>
<td>Not determined</td>
</tr>
</tbody>
</table>

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* (Contd. on page 5)
SECTION 12: Ecological information

12.1 Toxicity
No further relevant information available.

12.2 Aquatic toxicity
No further relevant information available.

12.3 Bioaccumulative potential
No further relevant information available.

12.4 Mobility in soil
No further relevant information available.

Additional 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.

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
Take to an approved landfill or a waste incineration plant, under conditions approved by the local authority.

13.2 European waste catalogue
18 01 07 chemicals other than those mentioned in 18 01 06

13.3 Uncleaned packaging
Recommendation: Disposal must be made according to official regulations.

SECTION 14: Transport information

14.1 UN-Number
ADR/RID/ADN, ADN, IMDG, IATA Void

14.2 UN proper shipping name
ADR/RID/ADN, ADN, IMDG, IATA Void

14.3 Transport hazard class(es)
ADR/RID/ADN, ADN, IMDG, IATA Void

14.4 Packing group
ADR/RID/ADN, IMDG, IATA Void

14.5 Environmental hazards:
Marine pollutant: No

14.6 Special precautions for user
Not applicable.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code
Not applicable.

Transport/Additional information:
Product is not classified as a dangerous good for transport (ADR, IMDG, IATA).
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
  - National regulations:

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 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 phrases
  - H319 Causes serious eye irritation.

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
  - Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

* Data compared to the previous version altered.