1 Identification

- **Product identifier**
  - **Trade name:** IPS e.max Ceram Glaze and Stain Liquid longlife
  - **CAS Number:** 111-29-5
  - **EC number:** 203-854-4
  - **Relevant identified uses of the substance or mixture and uses advised against**
    - No further relevant information available.
  - **Application of the substance / the mixture** Auxiliary for manufacture of dental prothesis
  - **Details of the supplier of the safety data sheet**
    - **Manufacturer/Supplier:** Ivoclar Vivadent Inc.
      175 Pineview Drive, Amherst, N.Y. 14228
      USA
      Tel. +1 800 533 6825
      Fax +1 716 691 2285
    - Ivoclar Vivadent Inc.
      1-6600 Dixie Road
      Mississauga, Ontario
      L5T 2Y2
      Canada
      Phone: +1 905 670 8499
      Fax: +1 905 670 3102
    - **Information department:** Quality Assurance / Regulatory Affairs
    - **Emergency telephone number:**
      24 Hour Emergency Assistance:
      Emergency-Call USA - Infotrac: 1-800-535-5053
      Emergency-Call Canada - Canutec: 1-613-996-6666
      General SDS Assistance:
      US: 1-800-533-6825
      Canada: 1-800-263-8182

2 Hazard(s) identification

- **Classification of the substance or mixture**
  The substance 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 (scale 0 - 4)**
      - Health = 1
      - Fire = 1
      - Reactivity = 0

(Contd. on page 2)
Material Safety Data Sheet
acc. to ISO 11014

Trade name: IPS e.max Ceram Glaze and Stain Liquid longlife

- HMIS-ratings (scale 0 - 4)
  - Health = 1
  - Fire = 1
  - Reactivity = 0

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

3 Composition/information on ingredients
- Chemical characterization: Substances
- CAS No. Description
  - 111-29-5 pentane-1,5-diol
- Identification number(s)
- EC number: 203-854-4

4 First-aid measures
- Description of first aid measures
- General information: No special measures required.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- 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. If symptoms persist, consult a doctor.
- 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.

6 Accidental release measures
- Personal precautions, protective equipment and emergency procedures: Not required.
- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up:
  - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Trade name: IPS e.max Ceram Glaze and Stain Liquid longlife

7 Handling and storage

- Handling:
- Precautions for safe handling
  Only adequately trained personnel should handle this product.
  For use in dentistry only.
- Information about protection against explosions and fires: No special measures required.
- 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:
  - This product is hygroscopic.
  - Keep receptacle tightly sealed.
- 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: Not required.
- Additional information: The lists that were valid during the creation were used as basis.
- Exposure controls
- Personal protective equipment:
  - General protective and hygienic measures:
    - Usual hygienic measures for dental practice.
    - Wash hands before breaks and at the end of work.
    - Keep away from foodstuffs, beverages and feed.
  - Breathing equipment: Not required.
  - Protection of hands:
    - 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.
  - 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
# 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
  - **General Information**
    - **Appearance:**
      - Form: Fluid
      - Color: Colorless
      - Odor: Odorless
      - Odour threshold: Not determined.
  - **pH-value:**
    - Not determined.
  - **Change in condition**
    - Melting point/Melting range: -18 °C
    - Boiling point/Boiling range: 239 °C
  - **Flash point:**
    - 135 °C
  - **Flammability (solid, gaseous):**
    - Not applicable.
  - **Ignition temperature:**
    - 330 °C
  - **Auto igniting:**
    - Not determined.
  - **Danger of explosion:**
    - Product does not present an explosion hazard.
  - **Explosion limits:**
    - Lower: 1.3 Vol %
    - Upper: 13.1 Vol %
  - **Vapor pressure at 20 °C:**
    - <0.01 hPa
  - **Density at 20 °C:**
    - 0.99 g/cm³
  - **Relative density:**
    - Not determined.
  - **Vapour density:**
    - Not determined.
  - **Evaporation rate:**
    - Not determined.
  - **Solubility in / Miscibility with**
    - Water:
      - Fully miscible.
  - **Partition coefficient (n-octanol/water):**
    - Not determined.
  - **Viscosity:**
    - Dynamic:
      - Not determined.
    - Kinematic:
      - Not determined.
  - **Other information**
    - No further relevant information available.

# 10 Stability and reactivity

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

- Information on toxicological effects
- Acute toxicity:
  - LD/LC50 values that are relevant for classification:
    - 111-29-5 pentane-1,5-diol
      - Oral LD50 2000 mg/kg (rat)
- Primary irritant effect:
  - on the skin: No irritant effect.
  - on the eye: No irritating effect.
  - Sensitization: No sensitizing effects known.
  - Additional toxicological information: No further relevant information available.
- Carcinogenic categories
  - NTP (National Toxicology Program)
    - Substance is not listed.
  - OSHA-Ca (Occupational Safety & Health Administration)
    - Substance is not 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.
- Additional ecological information:
- General notes:
  - Water hazard class 1 (Assessment by list): slightly hazardous for water
  - Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- 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:
  - Take to an approved landfill or a waste incineration plant, under conditions approved by the local authority.
- Uncleaned packagings:
- Recommendation: Disposal must be made according to official regulations.
- Recommended cleansing agent: Water, if necessary with cleansing agents.
14 Transport information

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN-Number</td>
<td>Void</td>
</tr>
<tr>
<td>DOT, TDG, ADN, IMDG, IATA</td>
<td>Void</td>
</tr>
<tr>
<td>UN proper shipping name</td>
<td>Void</td>
</tr>
<tr>
<td>DOT, ADN, IMDG, IATA</td>
<td>Void</td>
</tr>
<tr>
<td>TDG</td>
<td>Void</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>DOT, TDG, ADN, IMDG, IATA</td>
</tr>
<tr>
<td>Class</td>
<td>Void</td>
</tr>
<tr>
<td>Packing group</td>
<td>DOT, TDG, IMDG, IATA</td>
</tr>
<tr>
<td>Environmental hazards:</td>
<td></td>
</tr>
<tr>
<td>Marine pollutant:</td>
<td>No</td>
</tr>
<tr>
<td>Special precautions for user</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Transport in bulk according to Annex II of</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>MARPOL73/78 and the IBC Code</td>
<td></td>
</tr>
<tr>
<td>Transport/Additional information:</td>
<td>Product is not classified as a dangerous</td>
</tr>
<tr>
<td></td>
<td>good for transport (ADR, IMDG, IATA).</td>
</tr>
<tr>
<td>UN &quot;Model Regulation&quot;:</td>
<td>-</td>
</tr>
</tbody>
</table>

15 Regulatory information

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety, health and environmental regulations/legislation specific for the substance or mixture</td>
<td></td>
</tr>
<tr>
<td>Sara</td>
<td></td>
</tr>
<tr>
<td>Section 355 (extremely hazardous substances):</td>
<td>Substance is not listed.</td>
</tr>
<tr>
<td>Section 313 (Specific toxic chemical listings):</td>
<td>Substance is not listed.</td>
</tr>
<tr>
<td>TSCA (Toxic Substances Control Act):</td>
<td>Substance is listed.</td>
</tr>
<tr>
<td>Proposition 65</td>
<td></td>
</tr>
<tr>
<td>Chemicals known to cause cancer:</td>
<td>Substance is not listed.</td>
</tr>
<tr>
<td>Chemicals known to cause reproductive toxicity for females:</td>
<td>Substance is not listed.</td>
</tr>
<tr>
<td>Chemicals known to cause reproductive toxicity for males:</td>
<td>Substance is not listed.</td>
</tr>
<tr>
<td>Chemicals known to cause developmental toxicity:</td>
<td>Substance is not listed.</td>
</tr>
<tr>
<td>Carcinogenic categories</td>
<td></td>
</tr>
<tr>
<td>EPA (Environmental Protection Agency)</td>
<td>Substance is not listed.</td>
</tr>
</tbody>
</table>
**Trade name:** IPS e.max Ceram Glaze and Stain Liquid longlife

### TLV (Threshold Limit Value established by ACGIH)
- Substance is not listed.

### NIOSH-Ca (National Institute for Occupational Safety and Health)
- Substance is not listed.

### GHS label elements
- Void
- Hazard pictograms: Void
- Signal word: Void
- Hazard statements: Void

### National regulations:
- Other regulations, limitations and prohibitive regulations
  - The product is a medical device according to the Directive 93/42/EEC.
  - This product is classified as a medical device under US and Canadian regulations and has been reviewed by the US Food and Drug Administration and Health Canada.
- Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

### 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.

### Date of preparation / last revision
- 05/18/2015 / 4

### Abbreviations and acronyms:
- ICAO: International Civil Aviation Organisation
- 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
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- NFPA: National Fire Protection Association (USA)
- HMIS: Hazardous Materials Identification System (USA)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent

* Data compared to the previous version altered.