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

1.1 Product identifier

Trade name: **IPS Empress Universal Glaze Spray / IPS e.max Ceram Glaze Spray**

1.2 Relevant identified uses of the substance or mixture and uses advised against

No further relevant information available.

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.

STOT SE 3  H336  May cause drowsiness or dizziness.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

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

2.3 Hazard pictograms

- GHS02
- GHS07

Signal word Danger

Hazard-determining components of labelling:
propan-2-ol

Hazard statements

H222-H229  Extremely flammable aerosol. Pressurised container: May burst if heated.

H319  Causes serious eye irritation.

H336  May cause drowsiness or dizziness.

Precautionary statements

P210  Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P280  Wear eye protection / face protection.

P251  Do not pierce or burn, even after use.

P260  Do not breathe spray.

P211  Do not spray on an open flame or other ignition source.

P410+P412  Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
40.1.5

- 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.

<table>
<thead>
<tr>
<th>CAS</th>
<th>Hazard Class</th>
<th>% Composition</th>
</tr>
</thead>
<tbody>
<tr>
<td>75-28-5</td>
<td>isobutane Flam. Gas 1, Press. Gas C, H280</td>
<td>50-100%</td>
</tr>
<tr>
<td>67-63-0</td>
<td>propan-2-ol Flam. Liq. 2, Eye Irrit. 2, H319; STOT SE 3, H336</td>
<td>25-50%</td>
</tr>
</tbody>
</table>

- Additional information: For the wording of the listed risk phrases refer to section 16.

*SECTION 4: First aid measures*

- 4.1 Description of first aid measures
  - After inhalation: Supply fresh air.
  - 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.
  - For safety reasons unsuitable extinguishing agents: Water with full jet
- 5.2 Special hazards arising from the substance or mixture: No further relevant information available.
- 5.3 Advice for firefighters
  - Protective equipment: Do not inhale explosion gases or combustion gases.
  - Additional information: Cool endangered receptacles with water spray.

*SECTION 6: Accidental release measures*

- 6.1 Personal precautions, protective equipment and emergency procedures
  - Wear protective equipment. Keep unprotected persons away.
  - Ensure adequate ventilation.
- 6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- 6.3 Methods and material for containment and cleaning up:
  - Ensure adequate ventilation.
  - Absorb liquid components with liquid-binding material.
SECTION 7: Handling and storage

7.1 Precautions for safe handling
Only adequately trained personnel should handle this product.
For use in dentistry only.
Keep away from heat and direct sunlight.
Open and handle receptacle with care.
Use only in well ventilated areas.

Information about fire - and explosion protection:
Keep ignition sources away – Do not smoke.
Protect against electrostatic charges.

7.2 Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles:
Store in a cool location.
Store only in the original receptacle.
Observe official regulations on storing packagings with pressurised containers.

Information about storage in one common storage facility: Not required.

Further information about storage conditions:
Keep container tightly sealed.
Store in cool, dry conditions in well-sealed receptacles.
Protect from heat and direct sunlight.

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:

<table>
<thead>
<tr>
<th>Substance</th>
<th>WEL Short-term value</th>
<th>Long-term value</th>
</tr>
</thead>
<tbody>
<tr>
<td>67-63-0 propan-2-ol</td>
<td>1250 mg/m³, 500 ppm</td>
<td>999 mg/m³, 400 ppm</td>
</tr>
</tbody>
</table>

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.
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
Do not inhale gases / fumes / aerosols.
Avoid contact with the eyes.

Respiratory protection:
Not necessary if room is well-ventilated.
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
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:

Tightly sealed goggles

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties
General Information

Appearance:
Form: Aerosol
Colour: Whitish
Odour: Characteristic
Odour threshold: Not determined.

pH-value: Not applicable.

Change in condition
Melting point/Melting range: Undetermined.
Boiling point/Boiling range: Not applicable, as aerosol.

Flash point: Not applicable, as aerosol.

Flammability (solid, gaseous): Not applicable.

Self-igniting: Product is not self-igniting.

Danger of explosion: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

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

Vapour pressure: Not determined.

Density: Not determined.
Relative density: Not determined.
Vapour density: Not determined.
Evaporation rate: Not applicable.

Solubility in / Miscibility with water: Not miscible or difficult to mix.

Partition coefficient (n-octanol/water): Not determined.
 SECTION 10: Stability and reactivity

- 10.1 Reactivity  No further relevant information available.
- 10.2 Chemical stability  Stable under normal handling and storage conditions.
- 10.3 Possibility of hazardous reactions  Danger of explosion.
- 10.4 Conditions to avoid  Keep away from heat and direct sunlight.
- 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:
    - Primary irritant effect:
      - on the skin: No irritant effect.
      - on the eye: Irritating effect.
    - Sensitisation: No sensitising effects known.
  - Additional toxicological information: No further relevant information available.

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.
- 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
    Must not be disposed together with household garbage. Do not allow product to reach sewage system.
    Take to an approved landfill or a waste incineration plant, under conditions approved by the local authority.
### SECTION 14: Transport information

<table>
<thead>
<tr>
<th>14.1 UN-Number</th>
<th>UN1950</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.2 UN proper shipping name</td>
<td></td>
</tr>
<tr>
<td>ADR</td>
<td>1950 AEROSOLS</td>
</tr>
<tr>
<td>IMDG</td>
<td>AEROSOLS</td>
</tr>
<tr>
<td>IATA</td>
<td>AEROSOLS, flammable</td>
</tr>
</tbody>
</table>

**14.3 Transport hazard class(es)**

| ADR |   |
| Class | 2 5F Gases. |
| Label | 2.1 |

| IMDG, IATA |   |
| Class | 2.1 |
| Label | 2.1 |

**14.4 Packing group**

| ADR, IMDG, IATA | Void |

**14.5 Environmental hazards:**

| Marine pollutant: | No |
| Special precautions for user | Warning: Gases. |
| Danger code (Kemler): | - |
| EMS Number: | F-D-S-U |

**14.6 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

| Not applicable. |

**Transport/Additional information:**

| ADR |   |
| Limited quantities (LQ) | 1L |
| Code: | E0 |
| Excepted quantities (EQ) | Not permitted as Excepted Quantity |
| Transport category | 2 |
| Tunnel restriction code | D |

| IMDG |   |
| Limited quantities (LQ) | 1L |
| Code: | E0 |
| Excepted quantities (EQ) | Not permitted as Excepted Quantity |
SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations:

Other regulations, limitations and prohibitive regulations
The product is a medical device according to the Directive 93/42/EEC.

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

H220 Extremely flammable gas.
H225 Highly flammable liquid and vapour.
H280 Contains gas under pressure; may explode if heated.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

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)
Flam. Gas 1: Flammable gases, Hazard Category 1
Flam. Aerosol 1: Flammable aerosols, Hazard Category 1
Press. Gas C: Gases under pressure: Compressed gas
Flam. Liq. 2: Flammable liquids, Hazard Category 2
Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

* Data compared to the previous version altered.