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

- **1.1 Product identifier**
  - Trade name: **VivaSens**

- **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: Desensitizer

- **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)

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**SECTION 2: Hazards identification**

- **2.1 Classification of the substance or mixture**
  - Classification according to Regulation (EC) No 1272/2008
    - Flam. Liq. 2 H225 Highly flammable liquid and vapour.
    - Skin Irrit. 2 H315 Causes skin irritation.
    - Eye Irrit. 2 H319 Causes serious eye irritation.
    - Skin Sens. 1 H317 May cause an allergic skin reaction.
    - STOT SE 3 H335 May cause respiratory irritation.

- **Additional information:**
  - The coating on the applicator brush is corrosive. Contact with skin, mucous membranes and eyes must be avoided.

- **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**
  - GHS02
  - GHS07

- **Signal word** Danger

- **Hazard-determining components of labelling:**
  - methacrylate modified polyacrylic acid
  - polyethylene glycol dimethacrylate

- **Hazard statements**
  - H225 Highly flammable liquid and vapour.
  - H315 Causes skin irritation.
  - H319 Causes serious eye irritation.
  - H317 May cause an allergic skin reaction.
  - H335 May cause respiratory irritation.

(Contd. on page 2)
Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P363 Wash contaminated clothing before reuse.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.

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</th>
<th>Chemical Name</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>64-17-5</td>
<td>Ethanol</td>
<td>25-50%</td>
</tr>
<tr>
<td>200-578-6</td>
<td>Flammable Liquid</td>
<td></td>
</tr>
<tr>
<td>25852-47-5</td>
<td>Polyethylene glycol dimethacrylate</td>
<td>10-&lt;25%</td>
</tr>
<tr>
<td>7789-23-3</td>
<td>Potassium fluoride</td>
<td>0.3-&lt;1%</td>
</tr>
<tr>
<td>232-151-5</td>
<td>Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331</td>
<td>3-&lt;10%</td>
</tr>
</tbody>
</table>

Additional information:
Applicator brush coated with organic acid (CAS No. 349582-18-9).
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; consult doctor in case of complaints.
In case of unconsciousness place patient stably in side position for transportation.

After skin contact: Immediately rinse with water.

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.
If symptoms persist consult 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, 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.

**SECTION 6: Accidental release measures**

- **6.1 Personal precautions, protective equipment and emergency procedures**
  - Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions**: 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). Ensure adequate ventilation.

**SECTION 7: Handling and storage**

- **7.1 Precautions for safe handling**
  - Ensure good ventilation/exhaustion at the workplace.
  - Prevent formation of aerosols.
  - 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.
    - 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.
- **7.3 Specific end use(s)** No further relevant information available.

**SECTION 8: Exposure controls/personal protection**

- **8.1 Control parameters**
  - Ingredients with limit values that require monitoring at the workplace:
    - 64-17-5 ethanol
      - **WEL** Long-term value: 1920 mg/m³, 1000 ppm
      - **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.
       Avoid contact with the eyes and skin.
       Do not inhale gases / fumes / aerosols.
   - Respiratory protection:
     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:
     - Protective gloves
     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.
     - Not suitable are gloves made of the following materials:
       Commercial medical gloves do not provide protection against the sensitizing effect of methacrylates.
   - Eye protection:
     - Tightly sealed goggles

SECTION 9: Physical and chemical properties

- 9.1 Information on basic physical and chemical properties
- General Information
- Appearance:
  - Form: Fluid
  - Colour: Colourless
  - Odour: like peppermint
  - Odour threshold: Not determined.
- pH-value: Not applicable.
- Change in condition
  - Melting point/Melting range: Undetermined.
  - Boiling point/Boiling range: Undetermined.
- Flash point: 19 °C
- Ignition temperature: 425 °C
**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 Thermal decomposition / conditions to be avoided** No decomposition if used according to specifications.
- **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:**
  - **Primary irritant effect:**
    - on the skin: Irritant to skin and mucous membranes.
    - on the eye: Irritating effect.
  - **Sensitisation:** Sensitisation possible through skin contact.
  - **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.
40.1.5 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.

European waste catalogue
18 01 06* chemicals consisting of or containing dangerous substances

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

SECTION 14: Transport information

14.1 UN-Number
· ADR, IMDG, IATA UN1170

14.2 UN proper shipping name
· ADR 1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)
· IMDG ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)
· IATA ETHANOL SOLUTION

14.3 Transport hazard class(es)
· ADR
  · Class 3 (F1) Flammable liquids.
  · Label 3

· IMDG, IATA
  · Class 3 Flammable liquids.
  · Label 3

14.4 Packing group
· ADR, IMDG, IATA II
Trade name: VivaSens

- **14.5 Environmental hazards:**
  - Marine pollutant: No

- **14.6 Special precautions for user**
  - Warning: Flammable liquids.
  - Danger code (Kemler): 33
  - EMS Number: F-E,S-D

- **14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**
  - Not applicable.

**Transport/Additional information:**

- **ADR**
  - Limited quantities (LQ): 1L
  - Excepted quantities (EQ): Code: E2
    - Maximum net quantity per inner packaging: 30 ml
    - Maximum net quantity per outer packaging: 500 ml

- **IMDG**
  - Limited quantities (LQ): 1L
  - Excepted quantities (EQ): Code: E2
    - Maximum net quantity per inner packaging: 30 ml
    - Maximum net quantity per outer packaging: 500 ml

- **UN "Model Regulation":**
  - UN1993, FLAMMABLE LIQUID, N.O.S. (ETHANOL (ETHYL ALCOHOL)), 3, II

**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**
  - H225 Highly flammable liquid and vapour.
  - H301 Toxic if swallowed.
  - H311 Toxic in contact with skin.
  - H315 Causes skin irritation.
  - H317 May cause an allergic skin reaction.
  - H319 Causes serious eye irritation.
  - H331 Toxic if inhaled.
  - H335 May cause respiratory 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
Trade name: **VivaSens**

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flam. Liq. 2</td>
<td>Flammable liquids, Hazard Category 2</td>
</tr>
<tr>
<td>Acute Tox. 3</td>
<td>Acute toxicity, Hazard Category 3</td>
</tr>
<tr>
<td>Skin Irrit. 2</td>
<td>Skin corrosion/irritation, Hazard Category 2</td>
</tr>
<tr>
<td>Eye Irrit. 2</td>
<td>Serious eye damage/eye irritation, Hazard Category 2</td>
</tr>
<tr>
<td>Skin Sens. 1</td>
<td>Sensitisation - Skin, Hazard Category 1</td>
</tr>
<tr>
<td>STOT SE 3</td>
<td>Specific target organ toxicity - Single exposure, Hazard Category 3</td>
</tr>
</tbody>
</table>

* Data compared to the previous version altered.