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

- **1.1 Product identifier**
  - **Trade name:** Fluor Protector S

- **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

- **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**
    - Flam. Liq. 2 H225 Highly flammable liquid and vapour.

- **2.2 Label elements**
  - The product is classified and labelled according to the CLP regulation.

- **Hazard pictograms**
  - GHS02

- **Signal word** Danger

- **Hazard statements**
  - H225 Highly flammable liquid and vapour.

- **Precautionary statements**
  - P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
  - P233 Keep container tightly closed.
  - P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **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.

(Contd. on page 2)
SECTION 3: Composition/information on ingredients

- 3.2 Chemical characterisation: Mixtures
  - Description: Mixture of substances listed below with nonhazardous additions.
  - Dangerous components:
    - **CAS:** 64-17-5  
      **EINECS:** 200-578-6  
      **Ethanol**  
      **Flam. Liq. 2, H225**  
      50-100%
    - **CAS:** 12125-01-8  
      **EINECS:** 235-185-9  
      **Ammonium fluoride**  
      **Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331**  
      1-<2.5%
  - 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
  - **General information:** Immediately remove any clothing soiled by the product.
  - 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.
  - 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.
  - 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.
  - **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:** Wear self-contained respiratory protective device.
    - **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.
- 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.
- 6.4 Reference to other sections
  - See Section 7 for information on safe handling.
  - See Section 8 for information on personal protection equipment.
SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**
  Only adequately trained personnel should handle this product.
  For use in dentistry only.

· **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.
  · **Information about storage in one common storage facility:**
    Store away from oxidising agents.
  · **Further information about storage conditions:**
    Keep container tightly sealed.
    Store receptacle in a well ventilated area.

· **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:**
     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.
  · **Respiratory protection:**
    Not required.
    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.
  · **Recommended filter device for short term use:** Filter AX
  · **Protection of hands:**

  Protective gloves

  After use of gloves apply skin-cleaning agents and skin cosmetics.

  · **Material of gloves**
    Butyl rubber, BR
    Fluorocarbon rubber (Viton)
    Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
Trade name: **Fluor Protector S**

- **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:** 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:** 20 °C
  - **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**
  - **Vapour density**
  - **Evaporation rate**
  - **Solubility in / Miscibility with water:** Fully miscible.
  - **Partition coefficient (n-octanol/water):** Not determined.
  - **Viscosity:**
    - **Dynamic:** Not determined.
    - **Kinematic:** Not determined.
  - **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** 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** Reacts with oxidising agents.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
**Safety data sheet**

according to 1907/2006/EC, Article 31

Printing date 19.05.2015  
Revision: 29.04.2015  
Version number 3

**Trade name:** Fluor Protector S

- **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:** No irritating effect.
      - **Sensitisation:** No sensitising effects known.

### 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**
    - 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

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Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 19.05.2015
Version number 3
Revision: 29.04.2015

Trade name: Fluor Protector S

<table>
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<tr>
<th>14.3 Transport hazard class(es)</th>
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<tr>
<td><strong>ADR</strong></td>
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<td><strong>Class</strong> 3 (F1) Flammable liquids.</td>
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<td><strong>Label</strong> 3</td>
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<th>14.4 Packing group</th>
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<tr>
<th>14.5 Environmental hazards:</th>
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<tr>
<td><strong>Marine pollutant:</strong> No</td>
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<tr>
<th>14.6 Special precautions for user</th>
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</thead>
<tbody>
<tr>
<td><strong>Warning:</strong> Flammable liquids.</td>
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<tr>
<td><strong>Danger code (Kemler):</strong> 33</td>
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<td><strong>EMS Number:</strong> F-E,S-D</td>
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<tr>
<th>14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</th>
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<th>Transport/Additional information:</th>
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<td><strong>Limited quantities (LQ):</strong> 1L</td>
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<td><strong>Transport category</strong> 2</td>
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<td><strong>Tunnel restriction code</strong> D/E</td>
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<tr>
<td><strong>UN &quot;Model Regulation&quot;:</strong> UN1170, ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION), 3, II</td>
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SECTION 15: Regulatory information

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

- **National regulations:**
  - The product is a medical device according to the Directive 93/42/EEC.

- **Other regulations, limitations and prohibitive regulations**
  - 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.

(Contd. on page 7)
Trade name: Fluor Protector S

H301 Toxic if swallowed.
H311 Toxic in contact with skin.
H331 Toxic if inhaled.

*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. Liq. 2: Flammable liquids, Hazard Category 2
Acute Tox. 3: Acute toxicity, Hazard Category 3

* Data compared to the previous version altered.