

EU Safety Data Sheet

Excite



Date of issue / Reference

27.10.2006

licasa

Replaces version of

30.03.2005

hot

Date of printing

27.10.2006

Sheet No. 1348

Page 1 of 5

Company

Ivoclar Vivadent AG, Bendererstrasse 2, FL - 9494 Schaan
Principality of Liechtenstein

1 Commercial product name and supplier

1.1 Commercial product name /
Designation

Excite

1.2 Application / Use

Bonding agent

1.3 Producer

Ivoclar Vivadent AG, Bendererstrasse 2, FL - 9494 Schaan
Fürstentum Liechtenstein

1.4 Supplier

1.5 TOX emergency number

Emergency-Call: +423 / 235 35 35 or 373 40 40
Ivoclar Vivadent AG, FL-9494 Schaan, Liechtenstein

2 Composition

2.1 Chemical characterization

Mixture of dimethacrylates, alcohol, phosphonic acid acrylate, HEMA
(hydroxyethyl methacrylate), SiO₂, initiators and stabilizers

2.2 Hazardous components

CAS No. 223681-84-3 < 11 % Phosphonic acid acrylate

Xi: Irritant. R43: May cause sensitisation by skin contact. R36/38: Irritating to eyes
and skin.

CAS No. 868-77-7

< 15 % HEMA

Xi: Irritant. R43: May cause sensitisation by skin contact. R36/38: Irritating to eyes
and skin.

< 53 % Dimethacrylates (CAS-No. 1565-94-2; 1830-78-0; 72869-86-
4)

CAS No. 64-17-5

< 20 % Alcohol

F: Highly flammable. R11: Highly flammable.

2.3 Further information

None.

3 Hazards identification

May cause sensitisation by skin contact. Irritating to eyes and skin.

4 First aid measures

4.1 Eye contact

Flush eyes with plenty of water (10-15 min.). Call a physician.

4.2 Skin contact

Wash thoroughly with water.

4.3 Ingestion

After ingestion call a physician immediately and show this safety data
sheet. Give large amounts of water.

4.4 Inhalation

Take into fresh air.

4.5 Further information

Remove contaminated clothing.

EU Safety Data Sheet

Excite

ivoclar
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Date of issue / Reference

27.10.2006

licasa

Replaces version of

30.03.2005

hot

Date of printing

27.10.2006

Sheet No. 1348

Page 2 of 5

5 Fire-fighting measures

- | | | |
|-----|------------------------------|---------------------------|
| 5.1 | Suitable extinguishing media | No specific requirements. |
| 5.2 | Extinguishing media to avoid | None. |
| 5.3 | Further information | None. |

6 Accidental release measures

Clean up with absorbent material.
Clean area with large amounts of water.
Prevent skin and eye contact.

7 Handling and storage

- | | | |
|-----|--------------------------------|--|
| 7.1 | Handling | Only adequately trained personnel should handle this product. |
| 7.2 | Industrial hygiene | Usual hygienic measures for dental practice.
Practice care and caution to avoid skin and eye contact.
Keep out of reach of children. |
| 7.3 | Storage | Store at 2-28 °C / 36-82 °F |
| 7.4 | Place of storage | Do not store in open sunshine. |
| 7.5 | Fire- and explosion-protection | Keep away from heat source. |

8 Exposure controls / Personal protection

- | | | |
|-------|-------------------------------|--|
| 8.1 | Technical measures | Good general ventilation should be sufficient. |
| 8.2 | Control of threshold limits | None established. |
| 8.3 | Personal protective equipment | |
| 8.3.1 | Respiratory protection | Respiratory Protection. |
| 8.3.2 | Hand protection | Gloves
Commercial medical gloves do not provide protection against the sensitizing effect of methacrylates.
Check penetration time for the specific gloves used with the glove manufacturer. |
| 8.3.3 | Eye protection | Safety goggles or face-shield.
Eye wash fountain should be located in immediate work area. |
| 8.3.4 | Other | None. |

9 Physical and chemical properties

- | | | |
|-----|------------|----------------|
| 9.1 | Appearance | liquid |
| 9.2 | Colour | colourless |
| 9.3 | Odour | characteristic |

EU Safety Data Sheet

Excite



Date of issue / Reference

27.10.2006

licasa

Replaces version of

30.03.2005

hot

Date of printing

27.10.2006

Sheet No. 1348

Page 3 of 5

9.4 Change of physical state

Test method:

not applicable

9.5 Density

1.04 g/cm³ (20°C)

9.6 Vapour pressure

not applicable

9.7 Viscosity

not known

9.8 Solubility

Solubility in

partially miscible

9.9 pH

1.7

9.10 Flash point

> 40 °C

9.11 Ignition temperature

not applicable

9.12 Explosion limits

Lower:

Upper:

not applicable

9.13 Further information

None.

10 Stability and reactivity

10.1 Thermal decomposition

None, if used in accordance to instructions.

10.2 Hazardous decomposition products

None under normal conditions of storage and use.

10.3 Hazardous reactions

Avoid excessive heat and direct sunlight.

10.4 Further information

Avoid exposure to light.

11 Toxicological information

11.1 Acute toxicity

Oral LD50 for rats: > 2000 mg/kg

Prevent skin and eye contact.

Mucous membranes: irritating.

11.2 Subacute / Chronic toxicity

Uncured material: prolonged or frequently repeated skin contact may cause allergic skin reactions in some individuals.

11.3 Further information

None.

12 Ecological information

No specific ecological effects.

German "Wassergefährdungs Klasse (WGK)": 1

EU Safety Data Sheet

Excite



Date of issue / Reference

27.10.2006

licasa

Replaces version of

30.03.2005

hot

Date of printing

27.10.2006

Sheet No. 1348

Page 4 of 5

13 Disposal considerations

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

13.1 EU waste key

18 01 06

14 Transport information

14.1 Transport at land

ADR

RID

UN Number

Kemler Number

Packing Group

Proper shipping name

14.2 Transport at sea

ADNR

IMDG

UN Number

EMS

MFAG

Packing Group

Proper shipping name

14.3 Air transport

ICAO / IATA-DGR

UN Number

Proper shipping name

Subsidiary Risk

Labels

Packing Group

Passenger airplane

Packing Instructions

max.

Cargo Airplane

Packing Instructions

max.

14.4 Further information

Product is not classified as a dangerous good for transport.

15 Regulatory information

The product is a medical device according to the EC-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.

15.1 UN number

15.2 National regulations

15.3 EU number

15.4 Hazard symbols

Xi

EU Safety Data Sheet

Excite

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Date of issue / Reference

27.10.2006

licasa

Replaces version of

30.03.2005

hot

Date of printing

27.10.2006

Sheet No. 1348

Page 5 of 5



15.5 Hazard designation

Xi: Irritant. Contains HEMA, Alcohol, Dimethacrylates (CAS-No. 1565-94-2; 1830-78-0; 72869-86-4), Phosphonic acid acrylate.

15.6 Risk phrases

R: 43-36/38

43

May cause sensitisation by skin contact.

36/38

Irritating to eyes and skin.

15.7 Safety phrases

S: 2-26-28-24/25-37/39

2

Keep out of the reach of children.

26

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

28

After contact with skin, wash immediately with plenty of water and soap.

24/25

Avoid contact with skin and eyes.

37/39

Wear suitable gloves and eye/face protection.

15.8 MAK value

--- ml/m³ (ppm)

15.9 BVD classification (CH)

15.10 VbF (D)

15.11 Further information

None.

16 Other information

Version: 3

Changes: 2, 5, 8, 12, 13, 15

The above mentioned data correspond to our present state of knowledge and experience. The safety data sheet serves as description of the products in regard to necessary safety measures. The indications do not have the meaning of guarantees on properties.




This safety data sheet has been generated with the safety database 'ChemManager',
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91/155/EEC

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

- **Product identifier**
- **Trade name:** **Variolink Veneer**
- **Relevant identified uses of the substance or mixture and uses advised against**
- **Application of the substance / the preparation**
Light-curing dental luting composite suitable for ceramic and composite restorations
- **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
msds@ivoclarvivadent.com
- **Emergency telephone number:** +423 / 235 33 13

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
 Xi; Irritant
R36: Irritating to eyes.
-  Xi; Sensitising
R43: May cause sensitisation by skin contact.
- R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- **Classification system:**
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.
- **Label elements**
- **Labelling according to EU guidelines:**
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 Dangerous Substance Directive 1999/45/EC usually if they are in the finished state and intended for the final user.
- **Code letter and hazard designation of product:**
 Xi Irritant
- **Hazard-determining components of labelling:**
urethane dimethacrylate
decamethylene dimethacrylate
- **Risk phrases:**
36 Irritating to eyes.
43 May cause sensitisation by skin contact.
52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- **Safety phrases:**
24 Avoid contact with skin.

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 12.07.2011

Version number 3

Revision: 12.07.2011

Trade name: Variolink Veneer

(Contd. of page 1)

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

37 Wear suitable gloves.

60 This material and its container must be disposed of as hazardous waste.

61 Avoid release to the environment. Refer to special instructions/safety data sheets.

- **Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**

- **Description:** Mixture of substances listed below with nonhazardous additions.

- **Dangerous components:**

CAS: 72869-86-4	urethane dimethacrylate	Xi R36; Xi R43 R52/53	25-50%
EINECS: 276-957-5			
CAS: 6701-13-9	decamethylene dimethacrylate	Xi R36; Xi R43	2.5-10%

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

4 First aid measures

- **Description of first aid measures**

- **After inhalation:**

Supply fresh air and to be sure call for a doctor.

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:** 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 Firefighting measures

- **Extinguishing media**

- **Suitable extinguishing agents:**

CO₂, 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:** Pick up mechanically.

- **Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

(Contd. on page 3)

GB

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

Printing date 12.07.2011

Version number 3

Revision: 12.07.2011

Trade name: Variolink Veneer

(Contd. of page 2)

See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Only adequately trained personnel should handle this product.
For use in dentistry only.
- **Information about fire - and explosion protection:** 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:**
Protect from exposure to the light.
Protect from heat and direct sunlight.
Keep container tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **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.
- **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.
Avoid contact with the eyes and skin.
Keep away from foodstuffs, beverages and feed.
- **Respiratory protection:** Not required.
- **Protection of hands:**



Protective gloves

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. 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.

(Contd. on page 4)

GB

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

Printing date 12.07.2011

Version number 3

Revision: 12.07.2011

Trade name: Variolink Veneer

(Contd. of page 3)

· **Eye protection:** Safety glasses**9 Physical and chemical properties**· **Information on basic physical and chemical properties**· **General Information**· **Appearance:**

Form:

Pasty

Colour:

According to product specification

· **Odour:**

Characteristic

· **Odour threshold:**

Not determined.

· **pH-value:**

Not determined.

· **Change in condition**

Melting point/Melting range:

Undetermined.

Boiling point/Boiling range:

Undetermined.

· **Flash point:**

Not applicable.

· **Self-igniting:**

Product is not selfigniting.

· **Danger of explosion:**

Product does not present an explosion hazard.

· **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 determined.

· **Solubility in / Miscibility with water:**

Nearly insoluble.

· **Segregation 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.

Photoreactive (Danger of polymerization).

· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.· **Possibility of hazardous reactions** No dangerous reactions known.· **Conditions to avoid**

Protect from exposure to the light.

Keep away from heat and direct sunlight.

· **Incompatible materials:** No further relevant information available.· **Hazardous decomposition products:** None under normal conditions of storage and use.

GB

(Contd. on page 5)

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

Printing date 12.07.2011

Version number 3

Revision: 12.07.2011

Trade name: **Variolink Veneer**

(Contd. of page 4)

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Irritating effect.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Irritant
- **Sensitisation** May cause sensitisation by skin contact.

12 Ecological information

- **Toxicity**
- **Acquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour 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 (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.
- **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 packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **Land transport ADR/RID (cross-border)**
- **ADR/RID class:** -
- **Maritime transport IMDG:**
- **IMDG Class:** -
- **Marine pollutant:** No
- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** -
- **Special precautions for user** Not applicable.

(Contd. on page 6)

GB

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

Printing date 12.07.2011

Version number 3

Revision: 12.07.2011

Trade name: Variolink Veneer

(Contd. of page 5)

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

15 Regulatory information

- **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 EC-directive 93/42/EEC.
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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**
R36 Irritating to eyes.
R43 May cause sensitisation by skin contact.
R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

GB

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

- **Product identifier**
- **Trade name:** **Variolink Veneer Try-In**
- **Relevant identified uses of the substance or mixture and uses advised against**
- **Application of the substance / the preparation** Water-soluble glycerine try-in paste
- **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
msds@ivoclarvivadent.com
- **Emergency telephone number:** +423 / 235 33 13

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC** Not applicable.
- **Classification system:**
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.
- **Label elements**
- **Labelling according to EU guidelines:**
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 Dangerous Substance Directive 1999/45/EC usually if they are in the finished state and intended for the final user.
- **Special labelling of certain preparations:**
Safety data sheet available for professional user on request.
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization:** Mixtures
- **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 56-81-5	glycerol	50-100%
EINECS: 200-289-5		

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

4 First aid measures

- **Description of first aid measures**
- **General information:** No special measures required.
- **After inhalation:**
Supply fresh air and to be sure call for a doctor.

(Contd. on page 2)

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

Printing date 18.08.2011

Version number 3

Revision: 18.08.2011

Trade name: Variolink Veneer Try-In

(Contd. of page 1)

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:** 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 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, 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:** Pick up mechanically.
- **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.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Only adequately trained personnel should handle this product.
For use in dentistry only.
- **Information about fire - and explosion protection:** 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:**
Protect from exposure to the light.
Protect from heat and direct sunlight.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

56-81-5 glycerol

WEL () Long-term value: 10 mg/m³

(Contd. on page 3)

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

Printing date 18.08.2011

Version number 3

Revision: 18.08.2011

Trade name: **Variolink Veneer Try-In**

(Contd. of page 2)

- **Additional information:** The lists valid during the making 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.
Avoid contact with the eyes and skin.
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.
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. 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

9 Physical and chemical properties

- | | |
|--|---|
| • Information on basic physical and chemical properties | |
| • General Information | |
| • Appearance: | |
| Form: | Pasty |
| Colour: | According to product specification |
| • Odour: | Characteristic |
| • Odour threshold: | Not determined. |
| • pH-value: | Not determined. |
| • Change in condition | |
| Melting point/Melting range: | Undetermined. |
| Boiling point/Boiling range: | Undetermined. |
| • Flash point: | Not applicable. |
| • Self-igniting: | Product is not selfigniting. |
| • Danger of explosion: | Product does not present an explosion hazard. |
| • 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 determined. |
| • Solubility in / Miscibility with water: | Nearly insoluble. |

(Contd. on page 4)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 18.08.2011

Version number 3

Revision: 18.08.2011

Trade name: **Variolink Veneer Try-In**

(Contd. of page 3)

- **Segregation 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.
Photoreactive (Danger of polymerization).
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid**
Protect from exposure to the light.
Keep away from heat and direct sunlight.
- **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:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.
When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

12 Ecological information

- **Toxicity**
- **Acquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour 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 (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.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

GB

(Contd. on page 5)

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

Printing date 18.08.2011

Version number 3

Revision: 18.08.2011

Trade name: Variolink Veneer Try-In

(Contd. of page 4)

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 packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **Land transport ADR/RID (cross-border)**
- **ADR/RID class:** -
- **Maritime transport IMDG:**
- **IMDG Class:** -
- **Marine pollutant:** No
- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** -
- **Special precautions for user** Not applicable.
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

15 Regulatory information

- **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 EC-directive 93/42/EEC.
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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.

GB

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

Printing date 12.07.2011

Version number 5

Revision: 12.07.2011

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

- **Product identifier**
- **Trade name:** **Liquid Strip**
- **Relevant identified uses of the substance or mixture and uses advised against**
- **Application of the substance / the preparation** Water-soluble glycerine paste
- **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
msds@ivoclarvivadent.com
- **Emergency telephone number:** +423 / 235 33 13

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC** Not applicable.
- **Classification system:**
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.
- **Label elements**
- **Labelling according to EU guidelines:**
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 Dangerous Substance Directive 1999/45/EC usually if they are in the finished state and intended for the final user.
- **Special labelling of certain preparations:**
Safety data sheet available for professional user on request.
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization:** Mixtures
- **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 56-81-5	glycerol	50-100%
EINECS: 200-289-5		

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

4 First aid measures

- **Description of first aid measures**
- **General information:** No special measures required.
- **After inhalation:**
Supply fresh air and to be sure call for a doctor.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 12.07.2011

Version number 5

Revision: 12.07.2011

Trade name: Liquid Strip

(Contd. of page 1)

- 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:** 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 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, 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:** Pick up mechanically.
- **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.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Only adequately trained personnel should handle this product.
For use in dentistry only.
- **Information about fire - and explosion protection:** 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:**
Protect from exposure to the light.
Protect from heat and direct sunlight.
Keep container tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**

· Ingredients with limit values that require monitoring at the workplace:
56-81-5 glycerol
WEL () Long-term value: 10 mg/m ³

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 12.07.2011

Version number 5

Revision: 12.07.2011

Trade name: **Liquid Strip**

(Contd. of page 2)

- **Additional information:** The lists valid during the making 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.
Avoid contact with the eyes and skin.
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.
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. 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

9 Physical and chemical properties

• Information on basic physical and chemical properties

• General Information

• Appearance:

Form:	Pasty
Colour:	White
Odour:	Characteristic
Odour threshold:	Not determined.

• **pH-value:** Not determined.

• Change in condition

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.

• **Flash point:** Not applicable.

• **Self-igniting:** Product is not selfigniting.

• **Danger of explosion:** Product does not present an explosion hazard.

• 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 determined.

• **Solubility in / Miscibility with water:** Nearly insoluble.

(Contd. on page 4)

GB

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

Printing date 12.07.2011

Version number 5

Revision: 12.07.2011

Trade name: **Liquid Strip**

(Contd. of page 3)

- **Segregation 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**
 - Protect from exposure to the light.
 - Keep away from heat and direct sunlight.
- **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:**
- **Primary irritant effect:**
 - on the skin:** No irritant effect.
 - on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
 - The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.
 - When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

12 Ecological information

- **Toxicity**
- **Acquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour 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 (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.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

GB

(Contd. on page 5)

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

Printing date 12.07.2011

Version number 5

Revision: 12.07.2011

Trade name: Liquid Strip

(Contd. of page 4)

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 packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **Land transport ADR/RID (cross-border)**
- **ADR/RID class:** -
- **Maritime transport IMDG:**
- **IMDG Class:** -
- **Marine pollutant:** No
- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** -
- **Special precautions for user** Not applicable.
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

15 Regulatory information

- **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 EC-directive 93/42/EEC.
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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.

GB

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

- **Product identifier**
- **Trade name:** **Total Etch**
- **Relevant identified uses of the substance or mixture and uses advised against**
- **Application of the substance / the preparation** Etching Gel
- **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
msds@ivoclarvivadent.com
- **Emergency telephone number:** +423 / 235 33 13

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
 C; Corrosive
R34: Causes burns.
- **Information concerning particular hazards for human and environment:**
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
- **Classification system:**
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.
- **Label elements**
- **Labelling according to EU guidelines:**
The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.
- **Code letter and hazard designation of product:**
 C Corrosive
- **Hazard-determining components of labelling:**
phosphoric acid
- **Risk phrases:**
34 Causes burns.
- **Safety phrases:**
 - 20 When using do not eat or drink.
 - 23 Do not breathe aerosol.
 - 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 - 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
 - 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
 - 60 This material and its container must be disposed of as hazardous waste.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 26.05.2011

Version number 7

Revision: 26.05.2011

Trade name: Total Etch

(Contd. of page 1)

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

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of substances listed below with nonhazardous additions.

- **Dangerous components:**

CAS: 7664-38-2	phosphoric acid	■ C R34	25-50%
EINECS: 231-633-2			

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

4 First aid measures

- **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:**
Immediately rinse with water.
If skin irritation continues, consult a doctor.
- **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.
Do not induce vomiting; call for medical help immediately.
- **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 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
The product is not flammable.
Use fire extinguishing methods suitable to surrounding conditions.
- **Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Dilute with plenty water.
Use neutralizing agent.
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.

(Contd. on page 3)

GB

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

Printing date 26.05.2011

Version number 7

Revision: 26.05.2011

Trade name: Total Etch

(Contd. of page 2)

- **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.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about fire - and explosion protection:** 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:**
Keep container tightly sealed.
Protect from heat and direct sunlight.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**

• **Ingredients with limit values that require monitoring at the workplace:**

7664-38-2 phosphoric acid

WEL ()	Short-term value: 2 mg/m ³ Long-term value: 1 mg/m ³
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• **Additional information:** The lists valid during the making were used as basis.

- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Usual hygienic measures for dental practice.
Avoid contact with the eyes and skin.
Immediately remove all soiled and contaminated clothing
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
- **Respiratory protection:** Not required.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**
Butyl rubber, BR
Fluorocarbon rubber (Viton)
Nitrile rubber, NBR
Natural rubber, NR
Chloroprene rubber, CR

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

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 26.05.2011

Version number 7

Revision: 26.05.2011

Trade name: **Total Etch**

(Contd. of page 3)

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

9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form:	Viscous
Colour:	Blue
Odour:	Odourless
Odour threshold:	Not determined.

pH-value at 20°C:	< 1
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- **Change in condition**

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.

Flash point:	Not applicable.
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Ignition temperature:	Not determined.
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Decomposition temperature:	Not determined.
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Self-igniting:	Product is not selfigniting.
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Danger of explosion:	Product does not present an explosion hazard.
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- **Explosion limits:**

Lower:	Not determined.
Upper:	Not determined.

Vapour pressure:	Not determined.
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Density at 20°C:	1.29 g/cm ³
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Relative density	Not determined.
------------------	-----------------

Vapour density	Not determined.
----------------	-----------------

Evaporation rate	Not determined.
------------------	-----------------

- **Solubility in / Miscibility with water:**

Soluble.

Segregation coefficient (n-octanol/water):	Not determined.
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- **Viscosity:**

Dynamic:	Not determined.
Kinematic:	Not determined.

Other information	No further relevant information available.
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10 Stability and reactivity

- **Reactivity** No further relevant information available.

- **Chemical stability** Stable under normal handling and storage conditions.

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 26.05.2011

Version number 7

Revision: 26.05.2011

Trade name: **Total Etch**

(Contd. of page 4)

- **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 relevant for classification:**

7664-38-2 phosphoric acid

Oral	LD50	1530 mg/kg (rat)
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- **Primary irritant effect:**
- **on the skin:** Caustic effect on skin and mucous membranes.
- **on the eye:** Strong caustic effect.
- **Sensitization:** No sensitizing effects known.

- **Additional toxicological information:**

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Corrosive

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour 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 (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.

Must not reach sewage water or drainage ditch undiluted or unneutralized.

Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

- **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**
- **European waste catalogue**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

18 02 05*	chemicals consisting of or containing dangerous substances
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(Contd. on page 6)

GB

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

Printing date 26.05.2011

Version number 7

Revision: 26.05.2011

Trade name: **Total Etch**

(Contd. of page 5)

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

14 Transport information

· Land transport ADR/RID (cross-border)



- **ADR/RID class:** 8 (C1) Corrosive substances.
- **Danger code (Kemler):** 80
- **UN-Number:** 1805
- **Packaging group:** III
- **Hazard label:** 8
- **UN proper shipping name:** 1805 PHOSPHORIC ACID, SOLUTION, mixture
- **Tunnel restriction code** E

· Maritime transport IMDG:



- **IMDG Class:** 8
- **UN Number:** 1805
- **Label** 8
- **Packaging group:** III
- **EMS Number:** F-A,S-B
- **Marine pollutant:** No
- **Segregation groups** Acids
- **Proper shipping name:** PHOSPHORIC ACID, SOLUTION

· Air transport ICAO-TI and IATA-DGR:



- **ICAO/IATA Class:** 8
- **UN/ID Number:** 1805
- **Label** 8
- **Packaging group:** III
- **Proper shipping name:** PHOSPHORIC ACID, SOLUTION

- **Special precautions for user** Warning: Corrosive substances.
- **Transport in bulk** according to Annex II of MARPOL73/78 and the IBC Code Not applicable.

15 Regulatory information

- **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 EC-directive 93/42/EEC.

(Contd. on page 7)

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

Printing date 26.05.2011

Version number 7

Revision: 26.05.2011

Trade name: Total Etch

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

(Contd. of page 6)

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**

R34 Causes burns.

· *** Data compared to the previous version altered.**

GB

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

Printing date 09.01.2014

Version number 10

Revision: 17.12.2013

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

- **1.1 Product identifier**
- **Trade name:** **Monobond-S**
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the preparation** Bonding agent
- **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
msds@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 Directive 67/548/EEC or Directive 1999/45/EC**
R10: Flammable.
- **Classification system:**
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.
- **2.2 Label elements**
- **Labelling according to EU guidelines:**
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 Dangerous Preparations Directive 1999/45/EC usually if they are in the finished state and intended for the final user.
- **Risk phrases:**
10 Flammable.
- **Safety phrases:**
7 Keep container tightly closed.
16 Keep away from sources of ignition - No smoking.
60 This material and its container must be disposed of as hazardous waste.
- **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 characterization: Mixtures**
- **Description:** Mixture of substances listed below with nonhazardous additions.

(Contd. on page 2)

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

Printing date 09.01.2014

Version number 10

Revision: 17.12.2013

Trade name: Monobond-S

(Contd. of page 1)

· Dangerous components:

CAS: 64-17-5	ethanol	F R11	50-100%
EINECS: 200-578-6			

· **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; 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. 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.
- **5.3 Advice for firefighters**
- **Protective equipment:** No special measures required.
- **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:**
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** No special precautions are necessary if used correctly.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.

(Contd. on page 3)

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

Printing date 09.01.2014

Version number 10

Revision: 17.12.2013

Trade name: **Monobond-S**

(Contd. of page 2)

Protect against electrostatic charges.

· **7.2 Conditions for safe storage, including any incompatibilities**

· **Storage:**

· **Requirements to be met by storerooms and receptacles:** No special requirements.

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

· **Further information about storage conditions:** Keep container tightly sealed.

· **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:**

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:** Safety glasses

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Fluid

Colour: Colourless

· **Odour:** Alcohol-like

· **Odour threshold:** Not determined.

· **pH-value at 20 °C:** 4

(Contd. on page 4)

GB

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

Printing date 09.01.2014

Version number 10

Revision: 17.12.2013

Trade name: **Monobond-S**

(Contd. of page 3)

· Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.
· Flash point:	25 °C
· Ignition temperature:	425 °C
· Self-igniting:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· Explosion limits:	
Lower:	3.5 Vol %
Upper:	15.0 Vol %
· Vapour pressure at 20 °C:	59 hPa
· Density at 20 °C:	0.913 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with water:	Soluble.
· 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** 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:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.

GB

(Contd. on page 5)

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

Printing date 09.01.2014

Version number 10

Revision: 17.12.2013

Trade name: **Monobond-S**

(Contd. of page 4)


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.
 - **European waste catalogue**
- | | |
|-----------|--|
| 18 01 06* | chemicals consisting of or containing dangerous substances |
|-----------|--|
- **Uncleaned packaging:**
 - **Recommendation:** Disposal must be made according to official regulations.
 - **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

SECTION 14: Transport information

- | | |
|---|--|
| • 14.1 UN-Number | |
| • ADR, IMDG, IATA | 1170 |
| • 14.2 UN proper shipping name | |
| • ADR | 1170 ETHANOL (ETHYL ALCOHOL), solution |
| • IMDG | ETHANOL (ETHYL ALCOHOL), solution |
| • IATA | ETHANOL, solution |
| • 14.3 Transport hazard class(es) | |
| • ADR | |
|  | |
| • Class | 3 (F1) Flammable liquids. |
| • Label | 3 |

(Contd. on page 6)

GB

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

Printing date 09.01.2014

Version number 10

Revision: 17.12.2013

Trade name: **Monobond-S**

(Contd. of page 5)

· **IMDG, IATA**

- **Class** 3 Flammable liquids.
- **Label** 3

- **14.4 Packing group**
- **ADR, IMDG, IATA** III

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

- **14.6 Special precautions for user** Warning: Flammable liquids.
- **Danger code (Kemler):** 30
- **EMS Number:** F-E,S-D

- **14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable.

· **Transport/Additional information:**

- **ADR**
- **Limited quantities (LQ)** LQ7
- **Transport category** 3
- **Tunnel restriction code** D/E

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**
R11 Highly flammable.
- *** Data compared to the previous version altered.**