

Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 27.01.2011

Revision: 27.01.2011

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

- **Product details**
- **Trade name:** Solobond Plus adhesive
- **Application of the substance / the preparation** Dental bonding material
- **Manufacturer/Supplier:**
 VOCO GmbH
 Anton-Flettner-Str. 1-3
 D-27472 Cuxhaven
- **Further information obtainable from:** Scientific department tel. +49 (0)4721-719-0
- **Information in case of emergency:** Poison Control Center Mainz +49 (0)6131-19240

2 Hazards identification

- **Hazard description:**
 Xi Irritant
 F Highly flammable
- **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.
 R 11 Highly flammable.
 R 36/38 Irritating to eyes and skin.
 R 43 May cause sensitisation by skin contact.
- **Classification system:**
 The classification is according to the latest editions of the EU-lists, and extended by company and literature data.
- **Additional information:** Use only for intended scope of application

3 Composition/information on ingredients

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

- **Dangerous components:**

CAS: 67-64-1 EINECS: 200-662-2	acetone	Xi, F; R 11-36-66-67	50-100%
CAS: 1565-94-2	BIS-GMA	Xi; R 36/38	10-25%
CAS: 868-77-9 EINECS: 212-782-2	2-hydroxyethyl methacrylate	Xi; R 36/38	5-10%
	Catalyst	Xn, Xi, N; R 20/22-36/38-50	≤ 2.5%

4 First aid measures

- **After inhalation:**
 Seek medical treatment in case of complaints.
 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:** Immediately wash with water and soap and rinse thoroughly.
- **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.

5 Fire-fighting measures

- **Suitable extinguishing agents:** CO₂, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet

(Contd. on page 2)

Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 27.01.2011

Revision: 27.01.2011

Trade name: Solobond Plus adhesive

(Contd. of page 1)

- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Person-related safety precautions:** Ensure adequate ventilation
- **Measures for environmental protection:** Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Do not flush with water or aqueous cleansing agents

7 Handling and storage

- **Handling:**
- **Information for safe handling:** For dental use only.
- **Information about fire - and explosion protection:** Keep ignition sources away - Do not smoke.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** See storage instructions on package
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.

8 Exposure controls/personal protection

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

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

67-64-1 acetone

WEL	Short-term value: 3620 mg/m ³ , 1500 ppm
	Long-term value: 1210 mg/m ³ , 500 ppm

- **Additional information:** The lists valid during the making were used as basis.

- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
- **Respiratory protection:** Not required.
- **Protection of hands:**



Protective gloves

- **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

GB

(Contd. on page 3)

Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 27.01.2011

Revision: 27.01.2011

Trade name: Solobond Plus adhesive

(Contd. of page 2)

9 Physical and chemical properties

· General Information

Form: Fluid
Colour: Yellowish
Odour: Characteristic

· Change in condition

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

· **Flash point:** -12°C

· **Ignition temperature:** 465°C

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

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

· **Density:** Not determined.

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

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Dangerous reactions** No dangerous reactions known.
- **Dangerous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

· Acute toxicity:

· LD/LC50 values relevant for classification:

67-64-1 acetone

Oral	LD50	5800 mg/kg (rat)
Dermal	LD50	20000 mg/kg (rabbit)

· Primary irritant effect:

- **on the skin:** Irritant to skin and mucous membranes.
- **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

· 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.

GB

(Contd. on page 4)

Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 27.01.2011

Revision: 27.01.2011

Trade name: Solobond Plus adhesive

(Contd. of page 3)

13 Disposal considerations

- **Product:**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **Land transport ADR/RID (cross-border)**



- **ADR/RID class:** 3 Flammable liquids.
- **Danger code (Kemler):** 33
- **UN-Number:** 1090
- **Packaging group:** II
- **Hazard label:** 3
- **Description of goods:** 1090 ACETONE
- **Limited quantities (LQ) LQ4**
- **Transport category** 2
- **Tunnel restriction code** D/E

- **Maritime transport IMDG:**



- **IMDG Class:** 3
- **UN Number:** 1090
- **Label** 3
- **Packaging group:** II
- **EMS Number:** F-E,S-D
- **Marine pollutant:** No
- **Proper shipping name:** ACETONE

- **Air transport ICAO-TI and IATA-DGR:**



- **ICAO/IATA Class:** 3
- **UN/ID Number:** 1090
- **Label** 3
- **Packaging group:** II
- **Proper shipping name:** ACETONE

15 Regulatory information

- **Labelling according to EU guidelines:**
The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

(Contd. on page 5)

GB

Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 27.01.2011

Revision: 27.01.2011

Trade name: Solobond Plus adhesive

(Contd. of page 4)

· Code letter and hazard designation of product:*Xi Irritant**F Highly flammable***· Hazard-determining components of labelling:***2-hydroxyethyl methacrylate***· Risk phrases:***11 Highly flammable.**36/38 Irritating to eyes and skin.**43 May cause sensitisation by skin contact.***· Safety phrases:***16 Keep away from sources of ignition - No smoking.**24 Avoid contact with skin.**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.**37 Wear suitable gloves.**43 In case of fire, use sand, carbon dioxide or powdered extinguishing agent. Never use water.***· Special labelling of certain preparations:***Contains 2-hydroxyethyl methacrylate. May produce an allergic reaction.***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.

· Department issuing MSDS: *Scientific departement***· Contact:** *Tel.: +49 (0)4721-719-0*

GB

Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 27.01.2011

Revision: 27.01.2011

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

- **Product details**
- **Trade name:** *Solobond Plus primer*
- **Application of the substance / the preparation** *Adhesive*
- **Manufacturer/Supplier:**
*VOCO GmbH
Anton-Flettner-Str. 1-3
D-27472 Cuxhaven*
- **Further information obtainable from:** *Scientific department tel. +49 (0)4721-719-0*
- **Information in case of emergency:** *Poison Control Center Mainz +49 (0)6131-19240*

2 Hazards identification

- **Hazard description:**
Xi Irritant
- **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.
R 36/38 Irritating to eyes and skin.
R 43 May cause sensitisation by skin contact.
- **Classification system:**
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.
- **Additional information:** *Use only for intended scope of application*

3 Composition/information on ingredients

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

- **Dangerous components:**

CAS: 868-77-9 EINECS: 212-782-2	2-hydroxyethyl methacrylate	Xi; R 36/38	10-25%
CAS: 67-64-1 EINECS: 200-662-2	acetone	Xi, F; R 11-36-66-67	10-25%
CAS: 27813-02-1 EINECS: 248-666-3	Hydroxypropylmethacrylate	Xi; R 36/38-43	10-25%
	Catalyst	Xn, Xi, N; R 20/22-36/38-50	≤ 2.5%

4 First aid measures

- **After inhalation:** *Seek medical treatment in case of complaints.*
- **After skin contact:** *Immediately wash with water and soap and rinse thoroughly.*
- **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.*

5 Fire-fighting measures

- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Protective equipment:** *No special measures required.*

GB

(Contd. on page 2)

Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 27.01.2011

Revision: 27.01.2011

Trade name: Solobond Plus primer

(Contd. of page 1)

6 Accidental release measures

- **Person-related safety precautions:** Not required.
- **Measures for environmental protection:** Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.

7 Handling and storage

- **Handling:**
- **Information for safe handling:** For dental use only.
- **Information about fire - and explosion protection:** No special measures required.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** See storage instructions on package
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.

8 Exposure controls/personal protection

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

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

67-64-1 acetone

WEL	Short-term value: 3620 mg/m ³ , 1500 ppm Long-term value: 1210 mg/m ³ , 500 ppm
-----	--

- **Additional information:** The lists valid during the making were used as basis.

- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
- **Respiratory protection:** Not required.
- **Protection of hands:**



Protective gloves

- **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

- **General Information**

Form:	Fluid
Colour:	Colourless

(Contd. on page 3)

Safety Data Sheet
according to 1907/2006/EC, Article 31

Printing date 27.01.2011

Revision: 27.01.2011

Trade name: Solobond Plus primer

(Contd. of page 2)

Odour:	Characteristic
· 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.
· Density at 20°C:	1.01 g/cm ³
· Solubility in / Miscibility with water:	Fully miscible.
· pH-value at 20°C:	2.5

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Dangerous reactions** No dangerous reactions known.
- **Dangerous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **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

- **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.

13 Disposal considerations

- **Product:**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

(Contd. on page 4)

-GB-

Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 27.01.2011

Revision: 27.01.2011

Trade name: Solobond Plus primer

(Contd. of page 3)

· **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

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:** -

15 Regulatory information

· **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:**



Xi Irritant

· **Hazard-determining components of labelling:**

2-hydroxyethyl methacrylate

· **Risk phrases:**

36/38 Irritating to eyes and skin.

43 May cause sensitisation by skin contact.

· **Safety phrases:**

16 Keep away from sources of ignition - No smoking.

24/25 Avoid contact with skin and eyes.

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.

37/39 Wear suitable gloves and eye/face protection.

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.

· **Department issuing MSDS:** Scientific departement

· **Contact:** Tel.: +49 (0)4721-719-0