

Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 28.02.2011

Revision: 24.07.2007

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

- **Product details**
- **Trade name:** Futurabond DC Liquid 1
- **Application of the substance / the preparation** Bonding
- **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:**
C Corrosive
- **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 34 Causes burns.
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.

3 Composition/information on ingredients

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

- **Dangerous components:**

	Acidic adhesive monomer	Xi; R 36/38	50-100%
CAS: 1565-94-2	BIS-GMA	Xi; R 36/38	5-10%
CAS: 868-77-9 EINECS: 212-782-2	2-hydroxyethyl methacrylate	Xi; R 36/38	5-10%

4 First aid measures

- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** Supply fresh air; consult doctor 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.

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.

(Contd. on page 2)

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Revision: 24.07.2007

Trade name: Futurabond DC Liquid 1

(Contd. of page 1)

- **Measures for cleaning/collecting:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralizing agent.
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:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
See storage instructions on package

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:**
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.
- **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

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

- **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:	Yellow
Odour:	Characteristic

(Contd. on page 3)

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Trade name: **Futurabond DC Liquid 1**

(Contd. of page 2)

- | | |
|--|---|
| · Change in condition | |
| Melting point/Melting range: | Undetermined. |
| Boiling point/Boiling range: | Undetermined. |
| · Flash point: | Not applicable. |
| · Danger of explosion: | Product does not present an explosion hazard. |
| · Density at 20°C: | 1.2 g/cm ³ |
| · Solubility in / Miscibility with water: | Partly miscible. |
| · pH-value at 20°C: | 1.5 |

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:**

- **LD/LC50 values relevant for classification:**

Acidic adhesive monomer

Oral	LD50	> 2000 mg/kg (rat)
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- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **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
- **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.

GB

(Contd. on page 4)

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Revision: 24.07.2007

Trade name: **Futurabond DC Liquid 1**

(Contd. of page 3)

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:



C Corrosive

- Hazard-determining components of labelling:

2-hydroxyethyl methacrylate
Acidic adhesive monomer

- Risk phrases:

34 Causes burns.
43 May cause sensitisation by skin contact.

- Safety phrases:

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.

- 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

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

- **Product details**
- **Trade name:** *Futurabond DC Liquid 2*
- **Application of the substance / the preparation** *Bonding*
- **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:** *Not applicable.*
- **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 10 Flammable.*
- **Classification system:**
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

3 Composition/information on ingredients

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

- **Dangerous components:**

CAS: 64-17-5	ethanol	F; R 11	50-100%
EINECS: 200-578-6			
	Initiator	Xn; R 22	2.5-5%

4 First aid measures

- **After inhalation:** *Supply fresh air; consult doctor in case of complaints.*
- **After skin contact:** *Generally the product does not irritate the skin.*
- **After eye contact:** *Rinse opened eye for several minutes under running water.*
- **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*
- **Protective equipment:** *No special measures required.*

6 Accidental release measures

- **Person-related safety precautions:** *Wear protective equipment. Keep unprotected persons away.*
- **Measures for environmental protection:**
*Do not allow to enter sewers/ surface or ground water.
Dilute with plenty of water.*

(Contd. on page 2)

GB

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Revision: 24.07.2007

Trade name: **Futurabond DC Liquid 2**

(Contd. of page 1)

- **Measures for cleaning/collecting:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

7 Handling and storage

- **Handling:**
- **Information for safe handling:**
For dental use only.
No special measures required.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **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.
See storage instructions on package

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:**

64-17-5 ethanol
WEL Long-term value: 1920 mg/m ³ , 1000 ppm

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

- **Personal protective equipment:**
- **General protective and hygienic measures:** Avoid contact with the eyes and skin.
- **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.

- **Eye protection:** Safety glasses

9 Physical and chemical properties

- **General Information**

Form:	Fluid
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(Contd. on page 3)

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Trade name: *Futurabond DC Liquid 2*

(Contd. of page 2)

Colour:	Colourless
Odour:	Characteristic
· Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.
· Flash point:	21°C
· Ignition temperature:	Not determined
· Self-igniting:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· Density at 20°C:	0.87 g/cm ³
· Solubility in / Miscibility with water:	Fully miscible.

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:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.

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.

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(Contd. on page 4)

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(Contd. of page 3)

14 Transport information

· Land transport ADR/RID (cross-border)



- **ADR/RID class:** 3 Flammable liquids.
- **Danger code (Kemler):** 33
- **UN-Number:** 1170
- **Packaging group:** II
- **Hazard label:** 3
- **Description of goods:** 1170 ETHANOL (ETHYL ALCOHOL), mixture
- **Limited quantities (LQ) LQ4**
- **Transport category** 2
- **Tunnel restriction code** D/E

· Maritime transport IMDG:



- **IMDG Class:** 3
- **UN Number:** 1170
- **Label** 3
- **Packaging group:** II
- **EMS Number:** F-E,S-D
- **Marine pollutant:** No
- **Proper shipping name:** ETHANOL (ETHYL ALCOHOL), mixture

· Air transport ICAO-TI and IATA-DGR:



- **ICAO/IATA Class:** 3
- **UN/ID Number:** 1170
- **Label** 3
- **Packaging group:** II
- **Proper shipping name:** ETHANOL, mixture

15 Regulatory information

· Labelling according to EU guidelines:

Observe the general safety regulations when handling chemicals.

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

· Risk phrases:

10 Flammable.

· Safety phrases:

7 Keep container tightly closed.

16 Keep away from sources of ignition - No smoking.

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