

# 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 NR Liquid A*
- **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:**

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

## 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:**  
*CO<sub>2</sub>, 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.*

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Trade name: **Futurabond NR Liquid A**

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- **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

|                |                |
|----------------|----------------|
| <b>Form:</b>   | Fluid          |
| <b>Colour:</b> | Yellow         |
| <b>Odour:</b>  | Characteristic |

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

## 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) |
|------|------|--------------------|

- **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.*

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Trade name: *Futurabond NR Liquid A*

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**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 NR Liquid B*
- **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 |         |         |         |

## 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:** *CO<sub>2</sub>, 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.*
- **Measures for cleaning/collecting:**  
*Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).*

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Trade name: **Futurabond NR Liquid B**

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## 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:**  
See storage instructions on package  
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:**

64-17-5 ethanol

WEL Long-term value: 1920 mg/m<sup>3</sup>, 1000 ppm

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

- **Personal protective equipment:**
- **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**

|                |                |
|----------------|----------------|
| <b>Form:</b>   | Fluid          |
| <b>Colour:</b> | Colourless     |
| <b>Odour:</b>  | Characteristic |

- **Change in condition**

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

- **Flash point:** 24°C

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**Trade name: Futurabond NR Liquid B**

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|  |   |
|--|---|
| · <b>Self-igniting:</b>                          | Product is not selfigniting.  |
| · <b>Danger of explosion:</b>                    | Product is not explosive. However, formation of explosive air/vapour mixtures are possible. |
| · <b>Density at 20°C:</b>                        | 0.9 g/cm <sup>3</sup>   |
| · <b>Solubility in / Miscibility with water:</b> | 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.

**14 Transport information**

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



- **ADR/RID class:** 3 Flammable liquids.
- **Danger code (Kemler):** 30
- **UN-Number:** 1170
- **Packaging group:** II
- **Hazard label:** 3
- **Description of goods:** 1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)

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Trade name: **Futurabond NR Liquid B**

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- **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 SOLUTION (ETHYL ALCOHOL SOLUTION)

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



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

## 15 Regulatory information

· **Labelling according to EU guidelines:**

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.

43 In case of fire, use sand, carbon dioxide or powdered extinguishing agent. Never use water.

## 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