

# Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 02.01.2014

Revision: 02.01.2014

## 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:**

	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:**  
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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- **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>	<i>Fluid</i>
<b>Colour:</b>	<i>Yellow</i>
<b>Odour:</b>	<i>Characteristic</i>

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- **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<sup>3</sup>
- **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 &gt; 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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## 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