

## Material Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 28.01.2009

Revision: 03.12.2007

### 1 Identification of substance

- **Product details**
- **Trade name** Viscacid Conductive Layer W, Component B
- **Article number:** 1476
- **Application of the substance / the preparation** Coating
- **Manufacturer/Supplier:**  
Remmers Baustofftechnik GmbH  
Postfach 1255  
D-49624 Lönningen / Germany  
Tel.: 05432/83-0  
Fax: 05432/3985
- **Informing department:**  
Product Safety department: Tel.: +49 (0)5432/83-138/-538  
E-Mail: sales@remmers.co.uk
- **Emergency information:**  
during working hours:  
U.K.: Tel.: +44 (0) 845 373 0103  
Far East: Tel.: +65( 0) 67410277  
Head Office Germany: Tel.: +49 (0)5432 83 185  
after working hours: Tel.: +49 (0)171/6428-297

### 2 Hazards identification

- **Hazard designation:**



Xi Irritant  
N Dangerous for the environment

- **Information pertaining to particular dangers for man and environment**  
R 36/38 Irritating to eyes and skin.  
R 43 May cause sensitisation by skin contact.  
R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
Contains epoxy constituents. See information supplied by the manufacturer.
- **Classification system**  
The classification is in line with current EC lists. It is expanded, however, by information from technical literature and by information furnished by supplier companies.

### 3 Composition/information on ingredients

- **Chemical characterization**
- **Description:** Modified epoxide resin

- **Dangerous components:**

CAS: 28064-14-4	Bisphenol-F-Epichlorhydrin-Harze MG < 700 Xi, N; R 36/38-43-51/53	40-<60%
CAS: 25068-38-6 NLP: 500-033-5	reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight = 700) Xi, N; R 36/38-43-51/53	20-<40%
CAS: 16096-31-4 EINECS: 240-260-4	hexandiol diglycidylether Xi; R 36/38-43-52/53	10-<20%

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CAS: 111-76-2	2-butoxyethanol	10-<20%
EINECS: 203-905-0	Xn, Xi; R 20/21/22-36/38	

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

## 4 First aid measures

· **General information**

When symptoms occur or in case of doubt, seek medical advice  
Immediately remove any clothing soiled by the product.  
In case of irregular breathing or respiratory arrest, provide artificial respiration.

· **After inhalation**

Take affected persons into the open air and position comfortably  
Seek medical treatment in case of complaints.  
In case of unconsciousness bring patient into stable side position for transport.

· **After skin contact**

Wash immediately with water and soap and rinse thoroughly.  
If skin irritation continues, consult a doctor.

· **After eye contact**

Rinse opened eye for several minutes under running water.  
Seek immediate medical advice.

· **After swallowing**

Rinse out mouth and then drink plenty of water.  
Do not induce vomiting; call for medical help immediately.

· **Information for doctor**

· **The following symptoms may occur:**

In case of prolonged/repeated exposure or in high concentrations:  
Headache  
nausea  
Dazed  
Gastro-intestinal symptoms  
Irritating effect on skin and eyes.  
Irritating effect on respiratory organs.  
Allergic reactions

· **Treatment** symptomatic treatment

## 5 Fire fighting measures

· **Suitable extinguishing agents**

CO<sub>2</sub>, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.

· **For safety reasons unsuitable extinguishing agents** Water with a full water jet.

· **Special hazards caused by the material, its products of combustion or flue gases:**

May be released in case of fire  
Carbon monoxide (CO)  
Under certain fire conditions, traces of other toxic gases cannot be excluded, e.g.:  
Hydrogen chloride (HCl)  
further harmful conflagration gases and fumes  
Not rated as flammable, however, it is combustible.

· **Protective equipment:**

Wear full protective suit.  
Wear self-contained breathing apparatus.

· **Additional information**

Cool endangered containers with water spray jet.  
Collect contaminated fire fighting water separately. It must not enter drains.

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Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

## 6 Accidental release measures

- **Person-related safety precautions:**  
Wear protective equipment. Keep unprotected persons away.  
Keep away from ignition sources  
Ensure adequate ventilation
- **Measures for environmental protection:**  
Do not allow product to reach sewage system or water bodies.  
Do not allow to enter the ground/soil.
- **Measures for cleaning/collecting:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose of contaminated material as waste according to item 13.  
Ensure adequate ventilation.
- **Additional information:** See Section 8 for information on personal protection equipment.

## 7 Handling and storage

- **Handling**
- **Information for safe handling:**  
Use only in well ventilated areas.  
Avoid contact with skin and eyes.  
Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).
- **Information about protection against explosions and fires:**  
Keep ignition sources away - Do not smoke.  
Fumes can combine with air to form an explosive mixture.
- **Storage**
- **Requirements to be met by storerooms and containers:** Prevent any penetration into the ground.
- **Information on storage in a common storage facility:**  
Do not store together with fire promoting and self-igniting materials  
Store away from oxidizing agents.  
Store away from metals.
- **Further information about storage conditions:**  
Store cool and dry in tightly closed containers.  
Store container in a well ventilated position.  
Protect from heat and direct sunlight.  
Protect from frost.  
Protect from humidity and keep away from water.

## 8 Exposure controls and personal protection

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

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

### 111-76-2 2-butoxyethanol

OES	Long-term value: 123 mg/m <sup>3</sup> , 25 ppm
	Sk, Bmgv

- **Additional information:** The lists that were valid during compilation were used as a basis.
- **Personal protective equipment**
- **General protective and hygienic measures**  
Immediately remove soiled, saturated clothing.  
Keep away from food, beverages and animal feed.  
Do not eat, drink or smoke while working.

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Use skin protection cream for preventive skin protection.

Wash hands before pauses and after work.

Avoid contact with eyes and skin.

Do not inhale gases / vapours / aerosols.

· **Respiratory equipment:**

Not necessary if room is well-ventilated.

In case of insufficient ventilation, use respiratory protection:

Short term filter device:

Filter ABEK

· **Protection of hands:** Impervious gloves

· **Material of gloves** Nitrile rubber, NBR

· **Penetration time of glove material**

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

Break through time: max. 240 min (DIN EN 374).

· **Eye protection:** Tightly sealed safety glasses.

· **Body protection:** Protective work clothing.

## 9 Physical and chemical properties:

· **General Information**

<b>Form:</b>	Fluid
<b>Colour:</b>	clear
<b>Odour:</b>	Weak, characteristic

· **Change in condition**

**Melting point/Melting range:** Not determined

**Boiling point/Boiling range:** Not determined

· **Flash point:** 66°C (Setaflash 20 ml/)

· **Self-inflammability:** Product is not self-igniting.

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

· **Explosive Limits:**

<b>Lower:</b>	1.1 Vol % 2-butoxyethanol
<b>Upper:</b>	10.6 Vol % 2-butoxyethanol

· **Density at 20°C** ca. 1.12 g/cm<sup>3</sup>

· **Solubility in / Miscibility with**

**Water:** miscible

· **Viscosity:**

**dynamic at 23°C:** ca. 600 mPas

· **Solvent content:**

**Organic solvents:** 10.0 %

## 10 Stability and reactivity

· **Thermal decomposition / conditions to be avoided:**

No decomposition if used according to specifications.

No decomposition if handled and stored according to specifications.

Avoid: heat, flames, sparks

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- **Materials to be avoided:** Strong oxidising agents
- **Dangerous reactions**  
May produce violent reactions with bases and numerous organic substances including alcohols and amines  
Exothermic polymerisation  
Prevent the entrance of air/oxygen.  
Possible formation of peroxide  
Reacts with strong oxidising agents  
Reacts with metals forming hydrogen
- **Dangerous decomposition products:**  
May be released in fire:  
Carbon monoxide and carbon dioxide  
Hydrogen chloride (HCl)  
Irritating gases/vapours

## 11 Toxicological information

- **Acute toxicity:**

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

**25068-38-6 reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight = 700)**

Oral	LD50	> 10000 mg/kg (Ratte)
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Dermal	LD50	> 2000 mg/kg (Ratte)
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**16096-31-4 hexandiol diglycidylether**

Oral	LD50	2900 mg/kg (Ratte)
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Dermal	LD50	> 4900 mg/kg (Ratte)
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**111-76-2 2-butoxyethanol**

Oral	LD50	1480 mg/kg (Ratte)
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Dermal	LD50	400 mg/kg (rab)
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- **Primary irritant effect:**

- **on the skin:** Irritates skin and mucous membranes.

- **on the eye:** Irritating effect.

- **Sensitisation:** Sensitisation possible by skin contact.

- **Experience with humans:**

Frequent or longer lasting skin contact may degrease and dry out skin which may lead to skin irritation and inflammation (dermatitis).

- **Additional toxicological information:**

The product shows the following dangers based on the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:

Irritant

- **Sensitisation** May cause sensitisation by skin contact.

## 12 Ecological information:

- **Information on elimination (persistence and degradability):**

- **Other information:**

Data for 2-butoxyethanol:

Biodegradability:

95% (DOC; modif. OECD Screening Test / OECD 301 E)

> 99% (DOC; Zahn-Wellens-Test / OECD 302 B)

readily biodegradable

- **Behaviour in environmental systems:**

- **Other information** Data for 2-butoxyethanol: no bioaccumulation

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- **Ecotoxicological effects:**
- **Acquatic toxicity:**
- **Type of test Effective concentration Method Assessment**  
 Data for bisphenol A-epichlorhydrin resin (molecular weight < 700):  
 Acute toxicity to fish: 1 < LC/EC/IC-50 < 10 mg/l, toxic  
 Acute toxicity : 1 < LC/EC/IC-50 < 10 mg/l, toxic  
 (invertebrates)  
 Acute toxicity (alga): 1 < LC/EC/IC-50 < 10 mg/l, toxic  
 Data for 2-butoxyethanol:  
 Acute toxicity for fish:  
 Ide LC-50 = 1995 mg/l/48 h  
 Leuciscus idus LC-50 : 1800 mg/l/48 h (DIN 38412, part 15)  
 Acute toxicity for daphnia:  
 Daphnia magna EC-50 : 5000 mg/l/24 h (DIN 38412, part 11)
- **General notes:**  
 Water hazard class 2 : hazardous to water.  
 according to appendix 4 VwVwS  
 Do not allow product to reach ground water, bodies of water or sewage system.

## 13 Notes on disposal:

- **Product:**
- **Recommendation**  
 Not hardened material must be disposed of as hazardous waste according to official regulations. Hardened product remains may be disposed of as building rubble or put into household garbage.  
 The given refuse codes are recommendations based upon the intended use of the product. Because of special use and disposal conditions at the user's, other codes may apply under other conditions.

- **European waste catalogue**

08 00 00	WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS
08 01 00	wastes from MFSU and removal of paint and varnish
08 01 11	waste paint and varnish containing organic solvents or other dangerous substances
20 00 00	MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS
20 01 00	separately collected fractions (except 15 01)
20 01 28	paint, inks, adhesives and resins other than those mentioned in 20 01 27

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

## 14 Transport information

- **Land transport ADR/RID and GGVS/GGVE (cross-border/domestic)**



- **ADR/RID-GGVS/E Class:** 9 (M6) Miscellaneous hazardous substances and articles.
- **Kemler Number:** 90
- **UN-Number:** 3082
- **Packaging group:** III

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- **Danger sign:** 9
- **Designation of goods:** 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight = 700))
- **Limited quantities (LQ)** LQ7
- **Tunnel restriction code** E
- **Remarks:** TREM-Card No.93

- **Maritime transport IMDG/GGVSea:**



- **IMDG/GGVSea Class:** 9
- **UN Number:** 3082
- **Label** 9
- **Packaging group:** III
- **EMS Number:** F-A,S-F
- **Marine pollutant:** -
- **Correct technical name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight = 700))

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



- **ICAO/IATA Class:** 9
- **UN/ID Number:** 3082
- **Label** 9
- **Packaging group:** III
- **Correct technical name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight = 700))

## 15 Regulatory information

- **Designation according to EC guidelines:**

The product has been classified and labelled in accordance with EC Guidelines / Ordinance on Hazardous Materials (GefStoffV)

- **Code letter and hazard designation of product:**



Xi Irritant  
N Dangerous for the environment

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

Bisphenol-F-Epichlorhydrin-Harze MG < 700  
reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight = 700)  
hexandiol diglycidylether

- **Risk phrases:**

36/38 Irritating to eyes and skin.  
43 May cause sensitisation by skin contact.  
51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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- **Safety phrases:**

- 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 soap and water.
- 37/39 Wear suitable gloves and eye/face protection.
- 46 If swallowed, seek medical advice immediately and show this container or label.
- 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

- **Special labelling of certain preparations:**

Contains epoxy constituents. See information supplied by the manufacturer.

- **Product Code:** RE 2

- **National regulations**

- **Water hazard class:**

German Water hazard class 2: hazardous to water.  
according to appendix 4 VwVwS

- **Other regulations, limitations and prohibition ordinances**

APME document: "Epoxy resins and hardener: Toxicology, working safety, environment."

- **Professional Association (BG) Code of Practice:**

BGR 227 - "Epoxy Resins"  
M 004 "Irritating substances/corrosive substances"  
M 017 "Solvents"

## 16 Other information:

This data is based on our present state of knowledge. However, it does not constitute a guarantee for any specific product features and does not establish a legally valid contractual relationship.  
Delivery specifications are found in the respective Technical Information Sheets.

- **Relevant R-phrases**

- 20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
- 36/38 Irritating to eyes and skin.
- 43 May cause sensitisation by skin contact.
- 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- 52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

- **Department issuing data specification sheet:** Product Safety department

GB