

Material Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 08.08.2007

Revision: 12.12.2006

1 Identification of substance

- **Product details**
- **Trade name** Injection ResinEP, component A
Viscacid Epoxy Injection Resin, component A
- **Article number:** 0945
- **Application of the substance / the preparation** Epoxy resin
- **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: 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	60-<80%
CAS: 26761-45-5 EINECS: 247-979-2	Glycidylester of neodecan acid Xi, N; R 43-51/53	10-<20%
CAS: 16096-31-4	hexandiol diglycidylether Xi; R 36/38-43-52/53	5-<10%

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

4 First aid measures

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

5 Fire fighting measures

- **Suitable extinguishing agents**
Water spray jet
Carbon dioxide
Foam
Fire-extinguishing powder
- **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)
Carbon dioxide
carbon monoxides
Under certain fire conditions, traces of other toxic gases cannot be excluded, e.g.:
Hydrogen chloride (HCl)
further harmful conflagration gases and fumes
- **Protective equipment:**
Wear self-contained breathing apparatus.
Wear chemical protective clothing.
- **Additional information**
Cool endangered containers with water spray jet.
Collect contaminated fire fighting water separately. It must not enter drains.
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.

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Ensure adequate ventilation.

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7 Handling and storage

- **Handling**
- **Information for safe handling:**
Use only in well ventilated areas.
Open and handle container with care.
- **Information about protection against explosions and fires:** Keep ignition sources away - Do not smoke.
- **Storage**
- **Requirements to be met by storerooms and containers:** Prevent any penetration into the ground.
- **Information on storage in a common storage facility:** Store away from food.
- **Further information about storage conditions:**
Store cool and dry in tightly closed containers.
Store container in a well ventilated position.
Protect from frost.
Protect from heat and direct sunlight.

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:**
The product does not contain any relevant quantities of materials with limit values that have to be monitored at the workplace.
- **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.
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:**
In case of insufficient ventilation, use respiratory protection:
Filter A (brown)
Only use ambient air independent respiratory equipment in pits, shafts and silos!
- **Protection of hands:**
Impervious gloves
Long cuffed gloves
- **Material of gloves** Nitrile rubber, NBR
- **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:** Tightly sealed safety glasses.
- **Body protection:** Protective work clothing.

9 Physical and chemical properties:

· General Information

Form:

Fluid

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GB

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Colour:	clear
Odour:	Weak, characteristic
· Change in condition	
Melting point/Melting range:	Not determined
Boiling point/Boiling range:	> 200°C
· Flash point:	105°C (Setaflash e des Herstel)
· Ignition temperature:	
· Decomposition temperature:	> 200°C
· Danger of explosion:	Product is not explosive.
· Density at 20°C	1.1 g/cm ³
· Solubility in / Miscibility with Water:	Insoluble
· Distribution coefficient (n-octanol/water):	> 3 log POW pure epoxide resin
· Viscosity:	
dynamic at 23°C:	720 mPas
· Solvent content:	
Organic solvents:	0.0 %

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.

· Materials to be avoided: Strong acids, strong bases and strong oxidising agents.

· Dangerous reactions

May produce violent reactions with bases and numerous organic substances including alcohols and amines
 Strong exothermic reaction with amines and thiols (mercaptans).

Exothermic polymerisation

· Dangerous decomposition products:

None if used properly.

None if stored properly.

May be released in fire:

Carbon monoxide and carbon dioxide

Hydrogen chloride (HCl)

Irritating gases/vapours

as well as other toxic gases and 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)
Dermal	LD50	> 2000 mg/kg (Ratte)

26761-45-5 Glycidylester of neodecan acid

Oral	LD50	> 2000 mg/kg (Ratte)
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Dermal	LD50	> 2000 mg/kg (Kaninchen)
Inhalative	LC50/4 h	> 5 mg/l (Ratte)
16096-31-4 hexandiol diglycidylether		
Oral	LD50	2900 mg/kg (Ratte)
Dermal	LD50	> 4900 mg/kg (Ratte)

- **Primary irritant effect:**

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

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

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

- **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 hexandiol diglycidylether:

Not readily biodegradable.

Closed bottle test: 47% degradation/28d

- **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 glycidylester of neodecan acid:

Fish: LC-50, 96 h = 5.0 mg/l

Daphnia magna : EC-50, 48 h = 4.8 mg/l

algas: EC-50, 96 h = 3.5 mg/l

Data for hexandiol diglycidylether

Acute toxicity to fish:

Rainbow trout LC-50: 17 - 31 mg/l/96 h

Acute toxicity to daphnia:

Daphnia magna EC-50: 47 mg/l/48 h

- **General notes:**

Water hazard class 2 : hazardous to water.

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.

- **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
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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
- **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
- **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

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- **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:**

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight = 700)
Glycidylester of neodecan acid
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.

- **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.

- **National regulations**

- **Water hazard class:**

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"

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**

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