

Material Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 28.01.2009

Revision: 13.12.2007

1 Identification of substance

- **Product details**
- **Trade name** Injection Resin EP 100, Comp. B
Viscacid Epoxy Injection Resin 100, Comp. B
- **Article number:** 0944
- **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:**



C Corrosive

- **Information pertaining to particular dangers for man and environment**
R 22 Harmful if swallowed.
R 34 Causes burns.
R 43 May cause sensitisation by skin contact.
R 52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- **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:**
- **CAS No. Designation:**
25620-58-0 trimethylhexane-1,6-diamine
- **Identification number(s):**
- **EINECS Number:** 247-134-8
- **Chemical characterization**

- **Dangerous components:**

CAS: 25620-58-0	trimethylhexane-1,6-diamine	C, Xn; R 22-34-43-52/53	80-<100%
EINECS: 247-134-8			

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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.
In case of irregular breathing or respiratory arrest, provide artificial respiration.

· **After inhalation**

Take affected persons into the open air and position comfortably
In case of respiratory tract or mucous membrane irritation (e.g. tussive irritation), if you feel unwell or prolonged exposure, seek medical attention.
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.
Call a doctor immediately.

· **After swallowing**

Rinse out mouth immediately with plenty of water and administer plenty of water in small swallows (diluting effect).
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 monoxides
Nitrogen oxides (NOx)
further harmful conflagration gases and fumes

· **Protective equipment:**

Wear self-contained breathing apparatus.
Wear chemical protective clothing.

· **Additional information**

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.
Ensure adequate means of retaining the water used for extinguishing

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.

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· **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.

7 Handling and storage

· **Handling**

· **Information for safe handling:**

Use only in well ventilated areas.
Open and handle container with care.
Avoid the formation of aerosols.

· **Information about protection against explosions and fires:**

Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.

· **Storage**

· **Requirements to be met by storerooms and containers:** Store only in unopened original containers.

· **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.
Store at temperatures < 40°C.

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:** Long cuffed gloves

· **Material of gloves**

Nitrile rubber, NBR
Butyl rubber, BR

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

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

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· **Body protection:** Closed work clothing

9 Physical and chemical properties:

· General Information

Form:	Fluid
Colour:	clear
Odour:	Amine-like

· Change in condition

Melting point/Melting range: Not determined
Boiling point/Boiling range: > 200°C

· **Flash point:** 108°C (DIN 51758)

· **Ignition temperature:**

· **Decomposition temperature:** > 200°C

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

· **Danger of explosion:** Product is not explosive.

· **Vapour pressure at 20°C:** ca. 6 Pa

· **Density at 20°C** ca. 0.86 - 0.87 g/cm³

· Solubility in / Miscibility with

Water: miscible

· **pH-value at 20°C:** 11.3
1:1 in water

· **Viscosity:**
dynamic at 25°C: ca. 5 mPas

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.
 > 200 °C / electrostatic charges.

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

· Dangerous decomposition products:

May be released in fire:
 Carbon monoxide and carbon dioxide
 Nitrogen oxides (NO_x)
 as well as other toxic gases and vapours.

11 Toxicological information

· Acute toxicity:

· LD/LC50 values that are relevant for classification:

Oral	LD50	910 mg/kg (Ratte)
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25620-58-0 trimethylhexane-1,6-diamine

Oral	LD50	910 mg/kg (Ratte)
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- **Primary irritant effect:**
- **on the skin:** Caustic effect on skin and mucous membranes.
- **on the eye:** Caustic 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:
 Corrosive
 harmful
 Swallowing leads to a strong caustic effect in the mouth and throat and to the danger of perforation of oesophagus and stomach.
- **Sensitisation** May cause sensitisation by skin contact.

12 Ecological information:

- **Information on elimination (persistence and degradability):**
- **Other information:** Data for trimethylhexamethylenediamine: not readily biodegradable.
- **Ecotoxicological effects:**
- **Acquatic toxicity:**
- **Type of test Effective concentration Method Assessment**
 Data for trimethyl hexamethylene diamine
 Acute toxicity to fish: Zebra barbel LC-50 : 1000 mg/l (96 h)
 Acute toxicity to daphnia: Daphnia magna Straus 1820 EC-50 : 31,5 mg/l (24 h)
 Acute toxicity to alga: Scenedesmus subspicatus EC-50 : 29,5 mg/l (72 h)
- **Behaviour in sewage processing plants:**
- **Type of test Effective concentration Method Assessment**
 Data for trimethylhexamethylenediamine: Acute toxicity for bacteria: IC-50 : 100 mg/l (3 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
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.

GB

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14 Transport information

· Land transport ADR/RID and GGVs/GGVE (cross-border/domestic)



- ADR/RID-GGVs/E Class: 8 (C7) Corrosive substances.
- Kemler Number: 80
- UN-Number: 2735
- Packaging group: III
- Danger sign: 8
- Designation of goods: 2735 POLYAMINES, LIQUID, CORROSIVE, N.O.S.
(TRIMETHYLHEXAMETHYLENEDIAMINES)
- Limited quantities (LQ) LQ7
- Tunnel restriction code E
- Remarks: TREM-Card No. 83

· Maritime transport IMDG/GGVSea:



- IMDG/GGVSea Class: 8
- UN Number: 2735
- Label: 8
- Packaging group: III
- EMS Number: F-A,S-B
- Marine pollutant: -
- Correct technical name: POLYAMINES, LIQUID, CORROSIVE, N.O.S.
(TRIMETHYLHEXAMETHYLENEDIAMINES)

· Air transport ICAO-TI and IATA-DGR:



- ICAO/IATA Class: 8
- UN/ID Number: 2735
- Label: 8
- Packaging group: III
- Correct technical name: POLYAMINES, LIQUID, CORROSIVE, N.O.S.
(TRIMETHYLHEXAMETHYLENEDIAMINES)

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)

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



C Corrosive

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

Trimethylhexamethyldiamin

· **Risk phrases:**

22 Harmful if swallowed.

34 Causes burns.

43 May cause sensitisation by skin contact.

52/53 Harmful 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.

36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

· **National regulations**

· **Ordinance on hazardous incidents (StFV):** Ordinance on hazardous incidents, appendix: not named

· **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"

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**

22 Harmful if swallowed.

34 Causes burns.

43 May cause sensitisation by skin contact.

52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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