

**Safety Data Sheet**

according to Regulation (EU) No. 1907/2006

**Epoxy resin L 20 (112113-X, 112114-X, 112115-X)**

Print date : 15.05.2009

Product code : 112113-X

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**1. Identification of the substance/preparation and of the company/undertaking****Identification of the substance or preparation**

Epoxy resin L 20 (112113-X, 112114-X, 112115-X)

**Use of the substance/preparation**

epoxy resin systems

**Company/undertaking identification**

Company name : R&G Faserverbundwerkstoffe GmbH  
 Composite Technology  
 Street : Im Meißel 7 - 13  
 Place : D-71111 Waldenbuch  
 Post-office box : 1145  
 D-71107 Waldenbuch  
 Telephone : +49-7157-530460  
 e-mail : info@r-g.de  
 Internet : www.r-g.de  
 Inquiry office : Management  
 Emergency telephone : poison information centre

Telefax : +49-7157-530470

**2. Hazards identification****Classification**

Indications of danger : Irritant, Dangerous for the environment

R-phrases :

Irritating to eyes.

Irritating to skin.

May cause sensitization by skin contact.

Toxic to aquatic organisms.

May cause long-term adverse effects in the aquatic environment.

**Explication of special hazards for human health and environment**

The residual content of epichlorohydrin complies with the APME recommendations for modified epoxy resins. &lt; 10ppm (0,001%).

**3. Composition/information on ingredients****Chemical characterization ( Mixture )**

Modifiziertes Epoxidharz

**Hazardous components**

EC-No.	CAS-No.	Chemical name GHS classification	Quantity	Classification
500-033-5	25068-38-6	epoxy resin (number average molecular weight <= 700), reaction product: bisphenol-A-(epichlorhydrin) Eye Irrit. 2, Skin Irrit. 2, Skin Sens. 1, Aquatic Chronic 2; H319 H315 H317 H411	> 50%	Xi, N R36/38-43-51-53
500-006-8	9003-36-5	epoxy resin (number average molecular weight <= 700), reaction product: bisphenol-F-(epichlorhydrin) Eye Irrit. 2, Skin Irrit. 2, Skin Sens. 1, Aquatic Chronic 2; H319 H315 H317 H411	< 25%	Xi, N R36/38-43-51-53
		Epoxide derivatives mw <=700	< 25%	Xi R36-38-43-52-53

Full text of each relevant R phrase can be found in heading 16.

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**4. First aid measures****General information**

Change contaminated clothing.

**After inhalation**

Following inhalation: Move victim to fresh air. Consult physician. If victim is at risk of losing consciousness, position and transport on their side.

**After contact with skin**

After contact with skin, wash immediately with soap and plenty of water. If skin becomes irritated, seek medical treatment.

**After contact with eyes**

After contact with eye rinse immediately with lot of water at least 5 minutes with open eyelid. Subsequently consult an ophthalmologist.

**After ingestion**

Rinse mouth immediately and drink large quantities of water. Consult physician.

**5. Fire-fighting measures****Suitable extinguishing media**

Carbon dioxide (CO<sub>2</sub>).  
Extinguishing powder.  
Water fog.  
Fight major fires with a water spray jet or alcohol-resistant foam.

**Extinguishing media which must not be used for safety reasons**

High power water jet.

**Special exposure hazards arising from substance or preparation itself, combustion products, resulting gases**

In case of fire may form: Carbon monoxide. Under certain conditions traces of toxic substances cannot be ruled out, e.g.: Chlorhydric gas (HCl).

**Special protective equipment for fire-fighters**

Wear a protective full body suit. Wear breathing apparatus with own air supply.

**Additional information**

Contaminated fire-fighting water must be collected separately. Contaminated fire-fighting water must not get into the sewerage network. Fire residue and contaminated firefighting water must be disposed of in accordance with government regulations.

**6. Accidental release measures****Personal precautions**

Wear personal protection equipment. Keep unprotected persons at a safe distance.

**Environmental precautions**

Do not empty into drains or the aquatic environment. Do not allow to enter the soil or subsoil.

**Methods for cleaning up/taking up**

Absorb with liquid-binding material ( e.g. sand, diatomaceous earth, acid- or universal binding agents).  
Dispose of contaminated material as § 13 waste.

**7. Handling and storage****Handling****Advice on safe handling**

Provide for sufficient ventilation and punctiform suction at critical points.

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### Advice on protection against fire and explosion

No special measures are necessary.

### Storage

#### Requirements for storage rooms and vessels

Employ reliable measures to prevent the product from entering the soil.

#### Further information on storage conditions

Keep in well sealed receptacles at a cool, dry location.

Storageclass (VCI) : 10

## 8. Exposure controls/personal protection

### Exposure limit values

### Exposure controls

#### Protective and hygiene measures

Take off immediately all contaminated clothing. Avoid contact with skin and eyes. "Wash hands when done working with material; at breaks, lunch, shift changes, etc." Do not breathe in gases/vapours/aerosols.

#### Respiratory protection

Not necessary when the room is well ventilated.

#### Hand protection

Wear protective gloves. (EN 374)  
Material: NBR (Nitrile rubber). Butyl rubber.  
Breakthrough time: See information supplied by the manufacturer.

#### Eye protection

Tightly sealed safety glasses. (EN 166)

#### Skin protection

Wear protective clothing. (EN 340)

## 9. Physical and chemical properties

### General information

Physical state : viscous, liquid  
Colour : light yellow  
Odour : weak, characteristic

### Important health, safety and environmental information

#### Changes in the physical state

	Test method
Boiling point :	> 200 °C DIN 53171
Flash point :	> 250 °C ISO 2719
Vapour pressure : (at 20 °C)	< 0,1 hPa
Density (at 20 °C) :	1,14-1,16 g/cm <sup>3</sup> DIN 53217
Water solubility :	not miscible / slightly soluble
Viscosity / dynamic : (at 25 °C)	750-1050 mPa·s ISO 9371

### Other information

Ignition temperature : 460 °C

## 10. Stability and reactivity

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### Conditions to avoid

no decomposition when stored and handled properly

### Hazardous decomposition products

Violent reaction with: alkalis and numerous organic substance categories like alcohols and amines  
polymerisation under the action of heat Thermal decomposition can lead to the escape of irritating  
gases and vapors.

## 11. Toxicological information

### Specific effects in experiment on an animal

25068-38-6 Bisphenol A-epichlorohydrin resin mw<= 700  
oral: 11.400 mg/kg (rat) LD50  
dermal: >2.000 mg/kg (rabbit) LD50

### Corrosive and irritant effects

Irritation to skin, eyes, and mucous membranes.

### Sensitising effects

Contact may cause skin sensitisation.

## 12. Ecological information

### Ecotoxicity

Bisphenol A-epichlorohydrin resin mw<= 700  
Oncorhynchus mykiss: LC50 (96h) 1,5-7,7 mg/l  
Daphnia magna: EC50 (24h) 1,1-3,6 mg/l  
Green algae: EC50 (96h) 220 mg/l

### Persistence and degradability

Product is biodegradable with difficulty.

### Further information

Do not let the product enter the groundwater, open water, or the sewerage system.

## 13. Disposal considerations

### Advice on disposal

Dispose of waste according to applicable local, state, and federal regulations. e.g. transfer to a  
suitable incineration plant Waste key numbers are assigned according to the European Waste  
Catalogue (EWC) depending on the sector and process type.

### Contaminated packaging

Dispose of waste according to applicable local, state, and federal regulations.

## 14. Transport information

### Land transport (ADR/RID)

UN number :	3082
ADR/RID class :	9
Warning plate	
Hazard-no. :	90
Hazard label :	9
ADR/RID packing group :	III

### Description of the goods

UMWELTGEFÄHRDENDER STOFF, FLÜSSIG, N.A.G. (EPOXIDDERIVATE)

### Marine transport

UN number :	3082
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IMDG code : 9  
 Marine pollutant : yes  
 Hazard label : 9 + MP  
 IMDG packing group : III  
 EmS : F-A, S-F

### Description of the goods

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxide derivatives)

### Air transport

UN/ID number : 3082  
 ICAO/IATA-DGR : 9  
 Hazard label : 9  
 ICAO packing group : III

### Description of the goods

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxide derivatives)

## 15. Regulatory information

### Labelling

Danger symbols : Xi - Irritant; N - Dangerous for the environment

### Hazardous component(s) to be indicated on label

Bisphenol A-epichlorohydrin resin mw<= 700  
 Bisphenol F-epichlorohydrin resin mw<= 700  
 Epoxide derivatives mw <=700

### R phrases

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

### S phrases

24 Avoid contact with skin.  
 28 After contact with skin, wash immediately with plenty of Wasser und Seife.  
 37 Wear suitable gloves.  
 39 Wear eye/face protection.  
 60 This material and its container must be disposed of as hazardous waste.  
 61 Avoid release to the environment. Refer to special instructions / Safety data sheets.

### Special labelling for certain preparations

Contains epoxy constituents. See information supplied by the manufacturer.

### Additional advice on labelling

The product is classified and labelled under the EC Directives/hazardous substances laws (GefStoffV).

### National regulatory information

Water contaminating class (D) : 2 - water contaminating

### Additional information

APME document: "Epoxidharze und Härter (Toxikologie, Arbeitssicherheit, Umwelt)" ("Epoxy resins and hardeners (toxicology, work safety, environment)")  
 BG code of practice: M023 ("Polyester and epoxy resins") (ZH 1/301)

## 16. Other information

### Full text of R-phrases referred to under sections 2 and 3

36 Irritating to eyes.  
 36/38 Irritating to eyes and skin.

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- 38 Irritating to skin.
- 43 May cause sensitization by skin contact.
- 51 Toxic to aquatic organisms.
- 52 Harmful to aquatic organisms.
- 53 May cause long-term adverse effects in the aquatic environment.

#### Further Information

All information, recommendations, and advice on the part of R&G Faserverbundwerkstoffe GmbH are published to the best of our knowledge and belief. They are noncommittal and contain neither explicit nor tacit assurance or warranty of particular properties. The values specified for properties are typical figures. Recommendations or advice serve to describe our products and possible applications in a general or exemplary, but not specifically individual manner. In the course of the constant technical advancement and improvement of our products there may be changes to the characteristic values, copy, and diagrams; no specific reference is made to any such change. Owing to our products' wide and highly diverse range of potential applications far beyond any of our attempts to analyse, the customer alone is responsible for examining our products' suitability for the respective processes and purposes and their respective processibility. All and any protective rights and the applicable laws, terms, and conditions must be observed by the buyer or user of our products at their own responsibility. Publication is not a licence and does not intend the violation of any patents.

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*(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*