according to Regulation (EC) No 1907/2006

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1. Identification of the substance/mixture and of the company/undertaking

Identification of the substance or mixture

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Use of the substance/mixture

laminating 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	Telefax: +49-7157-530470
e-mail:	info@r-g.de	
Internet:	www.r-g.de	
Responsible Department:	Management	
1.4. Emergency telephone number:	poison information centre	

2. Hazards identification

Classification

Indications of danger: Harmful, Dangerous for the environment R phrases: Irritating to eyes. Irritating to skin. May cause sensitisation 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

Constituents contain epoxy. Observe the manufacturer's instructions.

3. Composition/information on ingredients

Chemical characterization (Mixture)

epoxy resin systems

Hazardous components

EC No	CAS No	Chemical name	Quantity	Classification
500-033-5	25068-38-6	epoxy resin (number average molecular weight <= 700), reaction product: bisphenol-A-(epichlorhydrin)	50 - 70 %	Xi - Irritant, N - Dangerous for the environment R36/38-43-51-53
292-011-4	90529-77-4	Glycerin glycidyl ether	50 - 70 %	Xn - Harmful R36-38-40

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

4. First aid measures

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General information

Take off immediately all contaminated clothing

After inhalation

fresh air or oxygen supply Consult physician. If victim is at risk of losing consciousness, position and transport on their side. First Aid for the person providing it can be dangerous to give mouth-to-mouth resuscitation.

After contact with skin

After contact with skin, wash immediately with soap and plenty of water. If skin becomes irritated, seek medical treatment. Change contaminated clothing. Wash contaminated clothing prior to re-use.

After contact with eyes

If the product comes into contact with the eyes, immediately rinse the open eyes with copious amounts of water for at least ten minutes. Afterwards consult an eye specialist.

After ingestion

Rinse mouth immediately and drink large quantities of water. Consult physician if problems persist. Summon a doctor immediately. Do not induce vomiting. If swallowed give water to drink. Never give anything by mouth to an unconscious person. Move a vomiting patient lying on his back into a stable position on his side.

5. Fire-fighting measures

Suitable extinguishing media

Carbon dioxide (CO2). 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 mixture 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 (HCI).

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.

6.2. 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. Keep sources of ignition and hot metal surfaces isolated from spill. Persons involved in clean-up should wear personal protection equipment. Stop spill at source and prevent from spreading. If spilled as a solid, scrape and then sweep up spilled material. If spilled as a free-flowing liquid, confine spill and allow liquid to solidify prior to clean-up. If run-off occurs, notify proper authorities as required. Place chemical waste contaner and dispose of in accordance with local, state, and federal regulations.

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7. Handling and storage

Handling

Advice on safe handling

Provide adequate ventilation/vapour extraction at the workplace. Wear suitable protective clothing. The usual precautionary measures for handling chemicals should be followed. Keep away from food, beverages and feed. Remove contaminated clothing immediately. Wash hands before breaks and after work. Store protective clothing. Avoid contact with eyes and skin. When using do not eat, drink, smoke or take drugs. Use barrier skin cream.

Storage

Requirements for storage rooms and vessels

Employ reliable measures to prevent the product from entering the soil. In the original container at room temperature. Warning: contents under pressure. Protect from direct exposure to sunlight and temperatures exceeding 50°C. Do not open containers with force. Do not incinerate, even when empty. Keep away from food, drink and animal feeding stuffs.

Further information on storage conditions

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

Storageclass (D):

10

8. Exposure controls/personal protection

Exposure limit values

8.2. Exposure controls

Protective and hygiene measures

Immediately take off soiled, impregnated clothing. Wash hands before breaks and after work. Avoid contact with skin and eyes.

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:	liquid
Colour:	light yellow
Odour:	weak characteristic

Important health, safety and environmental information

Changes in the physical state

Boiling point:

Flash point:

not distillable, decomposition

> 100 °C

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Density (at 20 °C):	1,10 - 1,18 g/cm³	DIN 53217	
Water solubility:	not miscible / slightly soluble		
Viscosity / dynamic: (at 25 °C)	600 - 900 mPa·s	ISO 9371	
9.2. Other information			
Ignition temperature:	> 300 °C	DIN 51794	
10. Stability and reactivity			

10.4. Conditions to avoid

no decomposition when stored and handled properly

Materials to avoid

in some cases very violent reactions with: alkalis and numerous organic substance categories like alcohols and amines

polymerisation under the action of heat

10.6. Hazardous decomposition products

Gas / vapours, irritant.

11. Toxicological information

Acute toxicity

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

Irritation and corrosivity

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

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)

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14.1. UN number:	3082	
ADR/RID class:	9	
Classification code:	M6	
Warning plate		
Hazard No:	90	
Hazard label:	9	
ADR/RID packing group:		
Limited quantity: Tunnel restriction code:	LQ7 E	
	E	
Description of the goods ENVIRONMENTALLY HAZA	RDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxydderivate)	
Other applicable information (land trans : 274 - 601 : 3 : E Special provisions: 274 335 6 E1		
Marine transport (IMDG)		
14.1. UN number:	3082	
IMDG code:	9	
Marine pollutant:	yes	
Hazard label:	9	
IMDG packing group:	III	
EmS:	F-A, S-F	
Limited quantity:	5 L	
Description of the goods ENVIRONMENTALLY HAZA	RDOUS SUBSTANCE, LIQUID, N.O.S.(Epoxidderivate)	
Other applicable information (marine tra : 274, 909, 944 Special provisions: 179, 274, E1		
<u>Air transport (ICAO)</u>		
UN/ID number:	3082	
ICAO/IATA-DGR:	9	
Hazard label:	9	
ICAO packing group:	III	
Limited quantity Passenger:	30 kg G	

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914	
450 L	
914	
450 L	
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ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxidderivate)

Other applicable information (air transport)

: Y914 : A97 E1

Special provisions: A97 A158

15. Regulatory information

<u>Labelling</u>

Danger symbols:





Xn - Harmful; N - Dangerous for the environment

Xn - Harmful

N - Dangerous for the environment

Hazardous components which must be listed on the label

Bisphenol A-epichlorohydrin resin mw<= 700

Glycerin glycidyl ether

R phrases

36	Irritating to eyes.
38	Irritating to skin.
43	May cause sensitisation by skin contact.
51	Toxic to aquatic organisms.
53	May cause long-term adverse effects in the aquatic environment.
S phrases	
23	Do not breathe Do not breathe gas/fumes/vapour/spray
24	Avoid contact with skin.
26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
37	Wear suitable gloves.
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.
Additional	advice on labelling
	The product is classified and labelled under the EC Directives/hazardous substances laws (GefStoffV).

EU regulatory information

Additional information

Contains epoxy constituents. See information supplied by the manufacturer.

National regulatory information

Water contaminating class (D): 2 - water contaminating

16. Other information

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Full text of R phrases referred to under Sections 2 and 3

- 36 Irritating to eyes.
- 36/38 Irritating to eyes and skin.
- 38 Irritating to skin.
- 40 Limited evidence of a carcinogenic effect.
- 43 May cause sensitisation by skin contact.
- 51 Toxic 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.

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