

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Epoxy Resin L 285**

Revision date: 22.05.2020

Product code: 110115

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Epoxy Resin L 285

**1.2. Relevant identified uses of the substance or mixture and uses advised against****Use of the substance/mixture**

resin. Binding agent

**1.3. Details of the supplier of the safety data sheet**

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 (0)7157 5304-60	Telefax: +49 (0)7157 5304-70
e-mail:	info@r-g.de	
Internet:	www.r-g.de	
Responsible Department:	Management	

**1.4. Emergency telephone number:** Vergiftungs-Informations-Zentrale Freiburg  
Tel: +49 (0)761 19240

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Regulation (EC) No. 1272/2008**

Hazard categories:

Skin corrosion/irritation: Skin Irrit. 2

Serious eye damage/eye irritation: Eye Irrit. 2

Respiratory or skin sensitisation: Skin Sens. 1

Germ cell mutagenicity: Muta. 2

Reproductive toxicity: Repr. 2

Hazardous to the aquatic environment: Aquatic Chronic 2

Hazard Statements:

Causes skin irritation.

Causes serious eye irritation.

May cause an allergic skin reaction.

Suspected of causing genetic defects.

Suspected of damaging fertility. Suspected of damaging the unborn child.

Toxic to aquatic life with long lasting effects.

**2.2. Label elements****Regulation (EC) No. 1272/2008****Hazard components for labelling**

1,2,3-Propantriol, Glycidylether

bis-[4-(2,3-epoxipropoxy)phenyl]propane

**Signal word:** Warning**Pictograms:**

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### Hazard statements

H315	Causes skin irritation.
H319	Causes serious eye irritation.
H317	May cause an allergic skin reaction.
H341	Suspected of causing genetic defects.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
H411	Toxic to aquatic life with long lasting effects.

### Precautionary statements

P103	Read label before use.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P273	Avoid release to the environment.
P308+P311	IF exposed or concerned: Call a doctor.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P405	Store locked up.
P501	Dispose of waste according to applicable legislation.

### 2.3. Other hazards

Results of PBT and vPvB assessment: not applicable

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

#### Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
90529-77-4	1,2,3-Propantriol, Glycidylether			50 - 75 %
	292-011-4		01-2119978955-13	
	Muta. 2, Repr. 2, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2; H341 H361fd H302 H315 H319			
1675-54-3	bis-[4-(2,3-epoxipropoxy)phenyl]propane			50 - 75 %
	216-823-5	603-073-00-2	01-2119456619-26	
	Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1, Aquatic Chronic 2; H315 H319 H317 H411			

Full text of H and EUH statements: see section 16.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### After inhalation

If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If breathing is irregular or stopped, administer artificial respiration. Where appropriate artificial ventilation. No mouth-to-mouth or mouth-to-nose resuscitation. Use Ambu bag or ventilator. Call a physician immediately.

#### After contact with skin

After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. In case of skin irritation, seek medical treatment.

#### After contact with eyes

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

#### After ingestion

Rinse mouth immediately and drink plenty of water. Observe risk of aspiration if vomiting occurs. Never give anything by mouth to an unconscious person or a person with cramps. Call a physician immediately.

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### **4.2. Most important symptoms and effects, both acute and delayed**

Following eye contact: Headache, Causes tears. Conjunctival redness.

Following inhalation: Suspected of damaging fertility. Suspected of damaging the unborn child.

After skin contact: Irritant, erythema (redness), Suspected of damaging fertility. Suspected of damaging the unborn child.

after ingestion: Suspected of damaging fertility. Suspected of damaging the unborn child.

### **4.3. Indication of any immediate medical attention and special treatment needed**

Treat symptomatically.

## **SECTION 5: Firefighting measures**

### **5.1. Extinguishing media**

#### **Suitable extinguishing media**

Co-ordinate fire-fighting measures to the fire surroundings.

### **5.2. Special hazards arising from the substance or mixture**

Heating causes rise in pressure with risk of bursting. Non-flammable. In case of fire may be liberated: Carbon monoxide, Carbon dioxide (CO<sub>2</sub>), Hydrogen halide

### **5.3. Advice for firefighters**

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

#### **Additional information**

Use water spray jet to protect personnel and to cool endangered containers. Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

## **SECTION 6: Accidental release measures**

### **6.1. Personal precautions, protective equipment and emergency procedures**

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

### **6.2. Environmental precautions**

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities. Collect spillage.

### **6.3. Methods and material for containment and cleaning up**

Stop leak if safe to do so. Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal. Clear contaminated areas thoroughly.

### **6.4. Reference to other sections**

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

## **SECTION 7: Handling and storage**

### **7.1. Precautions for safe handling**

#### **Advice on safe handling**

Provide adequate ventilation. Avoid contact with skin, eyes and clothes. Do not breathe gas/fumes/vapour/spray. Use personal protection equipment. People who suffer from skin sensitization problems, asthma, allergies, chronic or recurring respiratory illnesses should not be deployed in any process using this preparation. Avoid contact during pregnancy and while nursing. Avoid release to the environment.

#### **Advice on protection against fire and explosion**

No special fire protection measures are necessary.

### **7.2. Conditions for safe storage, including any incompatibilities**

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### Requirements for storage rooms and vessels

Keep container tightly closed in a cool, well-ventilated place. Keep locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaustion at critical locations.

### Hints on joint storage

Keep away from food, drink and animal feedingstuffs.

### Further information on storage conditions

Protect against direct sunlight.

### 7.3. Specific end use(s)

resin. Binding agent

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
1675-54-3	bis-[4-(2,3-epoxipropoxy)phenyl]propane			
Worker DNEL, acute		dermal	systemic	8,3 mg/kg bw/day
Worker DNEL, acute		inhalation	systemic	12,3 mg/m <sup>3</sup>
Worker DNEL, long-term		dermal	systemic	8,3 mg/kg bw/day
Worker DNEL, long-term		inhalation	systemic	12,3 mg/m <sup>3</sup>
Consumer DNEL, acute		dermal	systemic	3,6 mg/kg bw/day
Consumer DNEL, acute		inhalation	systemic	0,75 mg/m <sup>3</sup>
Consumer DNEL, acute		oral	systemic	0,75 mg/kg bw/day
Consumer DNEL, long-term		dermal	systemic	3,6 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	0,75 mg/m <sup>3</sup>
Consumer DNEL, long-term		oral	systemic	0,75 mg/kg bw/day

#### PNEC values

CAS No	Substance	Value
1675-54-3	bis-[4-(2,3-epoxipropoxy)phenyl]propane	
Freshwater		0,003 mg/l
Freshwater (intermittent releases)		0,013 mg/l
Marine water		0,0003 mg/kg
Marine water (intermittent releases)		0,013 mg/l
Freshwater sediment		0,5 mg/kg
Marine sediment		0,5 mg/kg
Micro-organisms in sewage treatment plants (STP)		10 mg/l

### 8.2. Exposure controls



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**Appropriate engineering controls**

Provide adequate ventilation as well as local exhaust at critical locations.

**Protective and hygiene measures**

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme.  
When using do not eat, drink or smoke. When using do not eat or drink. Avoid contact with eyes and skin. Do not breathe gas/fumes/vapour/spray. Keep away from food, drink and animal feedingstuffs.

**Eye/face protection**

Tightly sealed safety glasses.

**Hand protection**

Wear suitable gloves.

Suitable material:

NBR (Nitrile rubber) (730 Camatril), Butyl caoutchouc (butyl rubber) (898 Butoject)

Breakthrough time (maximum wearing time):  $\geq 480$  min

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

**Skin protection**

Wear suitable protective clothing.

**Respiratory protection**

In case of inadequate ventilation wear respiratory protection.

**Environmental exposure controls**

Avoid release to the environment.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

Physical state:	Liquid
Colour:	light yellow
Odour:	characteristic

**Test method**

pH-Value: not determined

**Changes in the physical state**

Melting point: not determined

Initial boiling point and boiling range: not determined

Flash point:  $> 100$  °C**Flammability**

Solid: not applicable

Gas: not applicable

**Explosive properties**

The product is not: Explosive.

Lower explosion limits: not determined

Upper explosion limits: not determined

Ignition temperature: not determined

**Auto-ignition temperature**

Solid: not applicable

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Gas: not applicable

Decomposition temperature: not determined

**Oxidizing properties**

Not oxidising.

Vapour pressure: not determined

Density: 1,140 g/cm<sup>3</sup>

Water solubility: practically insoluble

**Solubility in other solvents**

not determined

Partition coefficient: not determined

Viscosity / dynamic:  
(at 25 °C) 600-900 mPa·s ISO 9371

Viscosity / kinematic: not determined

Vapour density: not determined

Evaporation rate: not determined

**9.2. Other information**

Odour threshold: not determined

## SECTION 10: Stability and reactivity

**10.1. Reactivity**

No hazardous reaction when handled and stored according to provisions.

**10.2. Chemical stability**

The product is stable under storage at normal ambient temperatures.

**10.3. Possibility of hazardous reactions**

No known hazardous reactions.

**10.4. Conditions to avoid**

Protect against direct sunlight.

**10.5. Incompatible materials**

No information available.

**10.6. Hazardous decomposition products**In case of fire may be liberated: Carbon monoxide, Carbon dioxide (CO<sub>2</sub>), Hydrogen halide

## SECTION 11: Toxicological information

**11.1. Information on toxicological effects****Acute toxicity**

Based on available data, the classification criteria are not met.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
90529-77-4	1,2,3-Propantriol, Glycidylether				
	oral	LD50 mg/kg	2000	Rat	Manufacturer
1675-54-3	bis-[4-(2,3-epoxipropoxy)phenyl]propane				
	oral	LD50 mg/kg	11400	Rat	Manufacturer

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**Irritation and corrosivity**

Causes skin irritation.  
Causes serious eye irritation.

**Sensitising effects**

May cause an allergic skin reaction. (bis-[4-(2,3-epoxipropoxi)phenyl]propane)

**Carcinogenic/mutagenic/toxic effects for reproduction**

Suspected of causing genetic defects. (1,2,3-Propantriol, Glycidylether)  
Suspected of damaging fertility. Suspected of damaging the unborn child. (1,2,3-Propantriol, Glycidylether)  
Carcinogenicity: Based on available data, the classification criteria are not met.

**STOT-single exposure**

Based on available data, the classification criteria are not met.

**STOT-repeated exposure**

Based on available data, the classification criteria are not met.

**Aspiration hazard**

Based on available data, the classification criteria are not met.

## SECTION 12: Ecological information

**12.1. Toxicity**

Toxic to aquatic life with long lasting effects.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
1675-54-3	bis-[4-(2,3-epoxipropoxi)phenyl]propane					
	Acute fish toxicity	LC50	1,3 mg/l	96 h	fish	Manufacturer OECD 203
	Acute crustacea toxicity	EC50	2,1 mg/l	48 h	Daphnia	Manufacturer OECD 202
	Crustacea toxicity	NOEC	0,3 mg/l	21 d	Daphnia magna	Manufacturer OECD 211

**12.2. Persistence and degradability**

No information available.

CAS No	Chemical name				
	Method	Value	d	Source	
	Evaluation				
1675-54-3	bis-[4-(2,3-epoxipropoxi)phenyl]propane				
	OECD 301F	5 %	28	Manufacturer	
	Not readily biodegradable (according to OECD criteria)				
	OECD 301B	6 - 12 %	28	Manufacturer	
	Not readily biodegradable (according to OECD criteria)				

**12.3. Bioaccumulative potential**

No information available.

**Partition coefficient n-octanol/water**

CAS No	Chemical name	Log Pow
1675-54-3	bis-[4-(2,3-epoxipropoxi)phenyl]propane	2,64 - 3,78

**BCF**

CAS No	Chemical name	BCF	Species	Source
1675-54-3	bis-[4-(2,3-epoxipropoxi)phenyl]propane	3 - 31		

**12.4. Mobility in soil**

No information available.

**12.5. Results of PBT and vPvB assessment**

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not applicable

**12.6. Other adverse effects**

No information available.

**Further information**

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

## SECTION 13: Disposal considerations

**13.1. Waste treatment methods****Disposal recommendations**

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation.

**Contaminated packaging**

Dispose of waste according to applicable legislation.

## SECTION 14: Transport information

**Land transport (ADR/RID)****14.1. UN number:**

UN 3082

**14.2. UN proper shipping name:**

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (bis-[4-(2,3-epoxipropoxy)phenyl]propane)

**14.3. Transport hazard class(es):**

9

**14.4. Packing group:**

III

Hazard label:

9



Classification code:

M6

Special Provisions:

274 335 375 601

Limited quantity:

5 L

Excepted quantity:

E1

Transport category:

3

Hazard No:

90

Tunnel restriction code:

-

**Inland waterways transport (ADN)****14.1. UN number:**

UN 3082

**14.2. UN proper shipping name:**

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (bis-[4-(2,3-epoxipropoxy)phenyl]propane)

**14.3. Transport hazard class(es):**

9

**14.4. Packing group:**

III

Hazard label:

9



Classification code:

M6

Special Provisions:

274 335 375 601

Limited quantity:

5 L

Excepted quantity:

E1

**Marine transport (IMDG)****14.1. UN number:**

UN 3082



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**14.2. UN proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (bis-[4-(2,3-epoxipropoxy)phenyl]propane)

**14.3. Transport hazard class(es):** 9

**14.4. Packing group:** III

Hazard label: 9



Special Provisions: 274, 335, 969

Limited quantity: 5 L

Excepted quantity: E1

EmS: F-A, S-F

#### Air transport (ICAO-TI/IATA-DGR)


**14.1. UN number:** UN 3082

**14.2. UN proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (bis-[4-(2,3-epoxipropoxy)phenyl]propane)

**14.3. Transport hazard class(es):** 9

**14.4. Packing group:** III

Hazard label: 9



Special Provisions: A97 A158 A197

Limited quantity Passenger: 30 kg G

Passenger LQ: Y964

Excepted quantity: E1

IATA-packing instructions - Passenger: 964

IATA-max. quantity - Passenger: 450 L

IATA-packing instructions - Cargo: 964

IATA-max. quantity - Cargo: 450 L

#### 14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: yes



Danger releasing substance: bis-[4-(2,3-epoxipropoxy)phenyl]propane

#### 14.6. Special precautions for user

No information available.

#### 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

not applicable

### SECTION 15: Regulatory information

#### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

##### EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3: 1,2,3-Propantriol, Glycidylether; bis-[4-(2,3-epoxipropoxy)phenyl]propane

Information according to 2012/18/EU (SEVESO III): E2 Hazardous to the Aquatic Environment

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#### National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water hazard class (D): 2 - obviously hazardous to water

#### 15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

### SECTION 16: Other information

#### Abbreviations and acronyms

CLP: Classification, labelling and Packaging  
 REACH: Registration, Evaluation and Authorization of Chemicals  
 GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals  
 UN: United Nations  
 CAS: Chemical Abstracts Service  
 DNEL: Derived No Effect Level  
 DMEL: Derived Minimal Effect Level  
 PNEC: Predicted No Effect Concentration  
 ATE: Acute toxicity estimate  
 LC50: Lethal concentration, 50%  
 LD50: Lethal dose, 50%  
 LL50: Lethal loading, 50%  
 EL50: Effect loading, 50%  
 EC50: Effective Concentration 50%  
 ErC50: Effective Concentration 50%, growth rate  
 NOEC: No Observed Effect Concentration  
 BCF: Bio-concentration factor  
 PBT: persistent, bioaccumulative, toxic  
 vPvB: very persistent, very bioaccumulative  
 MARPOL: International Convention for the Prevention of Marine Pollution from Ships  
 IBC: Intermediate Bulk Container  
 SVHC: Substance of Very High Concern  
 For abbreviations and acronyms, see table at <http://abbrev.esdscom.eu>

#### Classification for mixtures and used evaluation method according to Regulation (EC) No. 1272/2008 [CLP]

Classification	Classification procedure
Skin Irrit. 2; H315	Calculation method
Eye Irrit. 2; H319	Calculation method
Skin Sens. 1; H317	Calculation method
Muta. 2; H341	Calculation method
Repr. 2; H361fd	
Aquatic Chronic 2; H411	Calculation method

#### Relevant H and EUH statements (number and full text)

H302 Harmful if swallowed.  
 H315 Causes skin irritation.  
 H317 May cause an allergic skin reaction.  
 H319 Causes serious eye irritation.  
 H341 Suspected of causing genetic defects.  
 H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.  
 H411 Toxic to aquatic life with long lasting effects.

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**Further Information**

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

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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.)*