

# Safety Data Sheet

according to Regulation (EC) No 1907/2006

## Epoxy Resin HT 2

Print date: 26.01.2015

Product code: 105105

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### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Epoxy Resin HT 2

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

##### Use of the substance/mixture

Epoxy resin products, solvent-free, sensitising

#### 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-Informationen-Zentrale Freiburg  
Tel: +49 (0)761 19240

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification according to Directive 67/548/EEC or 1999/45/EC

Indications of danger: Xi - Irritant, N - Dangerous for the environment

R phrases:

Irritating to eyes and skin.

May cause sensitisation by skin contact.

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

##### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Hazard categories:

Skin corrosion/irritation: Skin Irrit. 2

Serious eye damage/eye irritation: Eye Irrit. 2

Respiratory/skin sensitization: Skin Sens. 1

Hazardous to the aquatic environment: Aquatic Chronic 2

Hazard Statements:

Causes skin irritation.

May cause an allergic skin reaction.

Causes serious eye irritation.

Toxic to aquatic life with long lasting effects.

#### 2.2. Label elements

##### Hazardous components which must be listed on the label

epoxy resin (number average molecular weight  $\leq$  700), reaction product: bisphenol-A-(epichlorhydrin)epoxy resin (number average molecular weight  $\leq$  700), reaction product: bisphenol-F-(epichlorhydrin)

1,6-Bis(2,3-epoxypropoxy)hexane

Signal word: Warning

Pictograms: GHS07-GHS09

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**Hazard statements**

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H411	Toxic to aquatic life with long lasting effects.

**Precautionary statements**

P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P321	Specific treatment (see Hazard statements on this label).
P362	Take off contaminated clothing.
P501	Dispose of waste according to applicable legislation.

**2.3. Other hazards**

No information available.

**SECTION 3: Composition/information on ingredients****3.2. Mixtures****Hazardous components**

EC No	Chemical name	Quantity
CAS No	Classification according to Directive 67/548/EEC	
Index No	Classification according to Regulation (EC) No. 1272/2008 [CLP]	
REACH No		
500-033-5	epoxy resin (number average molecular weight <= 700), reaction product: bisphenol-A-(epichlorhydrin)	25-50%
25068-38-6	Xi - Irritant, N - Dangerous for the environment R36/38-43-51-53	
603-074-00-8	Eye Irrit. 2, Skin Irrit. 2, Skin Sens. 1, Aquatic Chronic 2; H319 H315 H317 H411	
500-006-8	epoxy resin (number average molecular weight <= 700), reaction product: bisphenol-F-(epichlorhydrin)	25-50%
9003-36-5	Xi - Irritant, N - Dangerous for the environment R36/38-43-51-53	
603-074-00-8	Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1, Aquatic Chronic 2; H315 H319 H317 H411	
01-2119454392-40		
240-260-4	1,6-Bis(2,3-epoxypropoxy)hexane	10-25%
16096-31-4	Xi - Irritant R36/38-43-52-53	
	Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1, Aquatic Chronic 3; H315 H319 H317 H412	
01-2119463471-41		

Full text of R-, H- and EUH-phrases: see section 16.

**SECTION 4: First aid measures****4.1. Description of first aid measures****General information**

Remove contaminated clothing immediately.

**After inhalation**

Remove to fresh air consult a doctor.

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### After contact with skin

Immediately with water and soap and rinse thoroughly. If skin irritation occurs.

### 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

Seek medical advice immediately.

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

No information available.

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

No information available.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

#### Suitable extinguishing media

Carbon dioxide (CO<sub>2</sub>), Extinguishing powder, Water spray jet.

#### Unsuitable extinguishing media

High power water jet.

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

When heating up or in the fire case formation of poisonous gasses possible.

### 5.3. Advice for firefighters

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

### Additional information

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

Use personal protection equipment.

### 6.2. Environmental precautions

Do not allow to enter into surface water or drains.

Do not allow to enter the soil or subsoil.

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

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.

### 6.4. Reference to other sections

Carefully cleaning scene of an accident.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

#### Advice on safe handling

The usual precautions when handling chemicals must be observed. Provide adequate room ventilation, if necessary with vapour extraction at the workplace.

#### Advice on protection against fire and explosion

No special fire protection measures are necessary.

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

#### Requirements for storage rooms and vessels

Keep/Store only in original container. Provide for retaining containers, eg. floor pan without outflow.

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### Advice on storage compatibility

Store separately from foodstuffs.

### Further information on storage conditions

Keep receptacles tightly sealed.

### 7.3. Specific end use(s)

No further relevant information

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

### 8.2. Exposure controls



#### Protective and hygiene measures

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

#### Eye/face protection

Suitable eye protection: goggles.

#### Hand protection

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.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state:	liquid
Colour:	light yellow
Odour:	characteristic

pH-Value:	not determined	<b>Test method</b>
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#### Changes in the physical state

Melting point:	not determined
Initial boiling point and boiling range:	200 °C DIN 53171
Flash point:	100 °C DIN EN ISO 2719

#### Flammability

Solid:	not applicable
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Gas:	not applicable
Lower explosion limits:	not determined
Upper explosion limits:	not determined
Ignition temperature:	300 °C
<b>Auto-ignition temperature</b>	DIN 51794
Gas:	not applicable
Decomposition temperature:	not determined
<b>Oxidizing properties</b>	
Not oxidizing.	
Vapour pressure: (at 20 °C)	1 hPa
Density:	1,137 g/cm <sup>3</sup> ISO 2811-2
Water solubility:	insoluble
<b>Solubility in other solvents</b>	
not determined	
Partition coefficient:	not determined
Viscosity / dynamic: (at 25 °C)	380 mPa·s ISO 3219
Vapour density:	not determined
Evaporation rate:	not determined
<b>9.2. Other information</b>	
Solid content:	not determined

**SECTION 10: Stability and reactivity****10.1. Reactivity**

No hazardous reaction when handled and stored according to provisions.

**10.2. Chemical stability**

no decomposition when stored and handled properly

**10.3. Possibility of hazardous reactions**

alkaline substances (e.g. ammoniac, amines, etc.), oxidising agents, strong acids

**10.4. Conditions to avoid**

No further relevant information

**10.5. Incompatible materials**

Strong oxidizing agents.

**10.6. Hazardous decomposition products**

No dangerous products of decomposition at a proper storage and handling. When heating up or in the fire case formation of poisonous gasses possible.

**SECTION 11: Toxicological information****11.1. Information on toxicological effects**

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#### Acute toxicity

CAS No	Chemical name				
	Exposure routes	Method	Dose	Species	Source
25068-38-6	epoxy resin (number average molecular weight <= 700), reaction product: bisphenol-A-(epichlorhydrin)				
	oral	LD50	11400 mg/kg	Rat	GESTIS
	dermal	LD50	> 22800 mg/kg	Rabbit	GESTIS
9003-36-5	epoxy resin (number average molecular weight <= 700), reaction product: bisphenol-F-(epichlorhydrin)				
	oral	LD50	> 2000 mg/kg	Rat	
	dermal	LD50	> 2000 mg/kg	Rabbit	
16096-31-4	1,6-Bis(2,3-epoxypropoxy)hexane				
	oral	LD50	3010 mg/kg	Rat	OECD 401
	dermal	LD50	> 2000 mg/kg	Rat	OECD 402

#### Additional information on tests

This mixture is classified as hazardous according to regulation (EC) No. 1272/2008 [CLP].

### SECTION 12: Ecological information

#### 12.1. Toxicity

CAS No	Chemical name					
	Aquatic toxicity	Method	Dose	[h]   [d]	Species	Source
25068-38-6	epoxy resin (number average molecular weight <= 700), reaction product: bisphenol-A-(epichlorhydrin)					
	Acute fish toxicity	LC50	4,4 mg/l	96 h	Oncorhynchus mykiss (Rainbow trout)	EPA-660/3-75-009
	Acute algae toxicity	ErC50	9,4 mg/l	72 h	Scenedesmus capricornutum	EPA-660/3-75-009
	Acute crustacea toxicity	EC50	2,8 mg/l	48 h	Daphnia magna	OECD 202
	Acute bacteria toxicity		(> 100 mg/l)	3 h	Activated sludge	
9003-36-5	epoxy resin (number average molecular weight <= 700), reaction product: bisphenol-F-(epichlorhydrin)					
	Acute fish toxicity	LC50	2,54 mg/l	96 h		
16096-31-4	1,6-Bis(2,3-epoxypropoxy)hexane					
	Acute fish toxicity	LC50	30 mg/l	96 h	Oncorhynchus mykiss (Rainbow trout)	OECD 203
	Acute crustacea toxicity	EC50	39 - 57 mg/l	48 h	Daphnia magna	OECD 202

#### 12.2. Persistence and degradability

No further relevant information

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CAS No	Chemical name	Method	Value	d	Source
		Evaluation			
25068-38-6	epoxy resin (number average molecular weight <= 700), reaction product: bisphenol-A-(epichlorhydrin)				
	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)				
9003-36-5	epoxy resin (number average molecular weight <= 700), reaction product: bisphenol-F-(epichlorhydrin)				
	OECD 301B		16%	28	Manufacturer
	Not readily biodegradable (according to OECD criteria)				
16096-31-4	1,6-Bis(2,3-epoxypropoxy)hexane				
	OECD 301D		47%	28	Manufacturer
	Readily biodegradable (according to OECD criteria).				

**12.3. Bioaccumulative potential**

No further relevant information

**Partition coefficient n-octanol/water**

CAS No	Chemical name	Log Pow
25068-38-6	epoxy resin (number average molecular weight <= 700), reaction product: bisphenol-A-(epichlorhydrin)	3,24

**BCF**

CAS No	Chemical name	BCF	Species	Source
25068-38-6	epoxy resin (number average molecular weight <= 700), reaction product: bisphenol-A-(epichlorhydrin)	31		Quantitative structure-activity relationship (QSAR)
16096-31-4	1,6-Bis(2,3-epoxypropoxy)hexane	3,57		

**12.4. Mobility in soil**

No further relevant information

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

The product has not been tested.

**12.6. Other adverse effects**

No further relevant information

**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****Advice on disposal**

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**

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

**SECTION 14: Transport information****Land transport (ADR/RID)****14.1. UN number:**

UN 3082

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**14.2. UN proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(Epoxydharz)

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

**14.4. Packing group:** III

Hazard label: 9



Classification code: M6  
 Special Provisions: 274 335 601  
 Limited quantity: 5 L  
 Transport category: 3  
 Hazard No: 90  
 Tunnel restriction code: E

**Other applicable information (land transport)**

E1

**Inland waterways transport (ADN)**

**14.1. UN number:** UN 3082

**14.2. UN proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(Epoxydharz)

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

**14.4. Packing group:** III

Hazard label: 9



Classification code: M6  
 Special Provisions: 274 335 601  
 Limited quantity: 5 L

**Other applicable information (inland waterways transport)**

E1

**Marine transport (IMDG)**

**14.1. UN number:** UN 3082

**14.2. UN proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(epoxy resin)

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

**14.4. Packing group:** III

Hazard label: 9



Marine pollutant: Ja  
 Special Provisions: 274, 335  
 Limited quantity: 5 L  
 EmS: F-A, S-F

**Other applicable information (marine transport)**

E1



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**Air transport (ICAO)**

<b>14.1. UN number:</b>	UN 3082
<b>14.2. UN proper shipping name:</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (epoxyd resin)
<b>14.3. Transport hazard class(es):</b>	9
<b>14.4. Packing group:</b>	III
Hazard label:	9



Special Provisions:	A97 A158
Limited quantity Passenger:	30 kg G
IATA-packing instructions - Passenger:	964
IATA-max. quantity - Passenger:	450 L
IATA-packing instructions - Cargo:	964
IATA-max. quantity - Cargo:	450 L

**Other applicable information (air transport)**

E1  
Passenger-LQ: Y964

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: yes



Danger releasing substance: epoxy resin (number average molecular weight  $\leq$  700), reaction product:  
bisphenol-A-(epichlorhydrin)

**14.6. Special precautions for user**

No information available.

**14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

not applicable

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulatory information**

Employment restrictions:	Observe employment restrictions for young people.
Water contaminating class (D):	2 - water contaminating
Skin resorption/Sensitization:	Causes allergic hypersensitivity reactions.

**15.2. Chemical safety assessment**

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

**SECTION 16: Other information****Abbreviations and acronyms**

ADR: Accord européen sur le transport des marchandises dangereuses par Route  
(European Agreement concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
EINECS: European Inventory of Existing Commercial Chemical Substances

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ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

**Relevant R-phrases (Number and full text)**

- |       |                                                                 |
|-------|-----------------------------------------------------------------|
| 36/38 | Irritating to eyes and skin.                                    |
| 43    | May cause sensitisation by skin contact.                        |
| 51    | Toxic to aquatic organisms.                                     |
| 52    | Harmful to aquatic organisms.                                   |
| 53    | May cause long-term adverse effects in the aquatic environment. |

**Relevant H- and EUH-phrases (Number and full text)**

- |      |                                                    |
|------|----------------------------------------------------|
| H315 | Causes skin irritation.                            |
| H317 | May cause an allergic skin reaction.               |
| H319 | Causes serious eye irritation.                     |
| H411 | Toxic to aquatic life with long lasting effects.   |
| H412 | Harmful to aquatic life with long lasting effects. |

**Further Information**

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

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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.)*