

Safety Data Sheet

according to Regulation (EC) No 1907/2006

10 Min.-Epoxy (hardener)

Revision date: 19.03.2018

Product code: 155114-GHS-2014

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

10 Min.-Epoxy (hardener)

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

Hardener (Crosslinker)

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****Regulation (EC) No. 1272/2008**

Hazard categories:

Acute toxicity: Acute Tox. 4

Skin corrosion/irritation: Skin Corr. 1B

Serious eye damage/eye irritation: Eye Dam. 1

Respiratory or skin sensitisation: Skin Sens. 1

Hazardous to the aquatic environment: Aquatic Chronic 2

Hazard Statements:

Harmful if swallowed.

Harmful in contact with skin.

Causes severe skin burns and eye damage.

May cause an allergic skin reaction.

Toxic to aquatic life with long lasting effects.

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

Phenol, styrenated

2-piperazin-1-ylethylamine

benzyl alcohol

Signal word: Danger**Pictograms:****Hazard statements**

H302

Harmful if swallowed.

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H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor.
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

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
61788-44-1	Phenol, styrenated			50 - 100 %
	262-975-0		01-2119979575-18	
	Skin Irrit. 2, Skin Sens. 1, Aquatic Chronic 2; H315 H317 H411			
140-31-8	2-piperazin-1-ylethylamine			10 - 25 %
	205-411-0	612-105-00-4		
	Acute Tox. 4, Acute Tox. 4, Skin Corr. 1B, Skin Sens. 1, Aquatic Chronic 3; H312 H302 H314 H317 H412			
100-51-6	benzyl alcohol			25 - 10 %
	202-859-9	603-057-00-5	01-2119492630-38	
	Acute Tox. 4, Acute Tox. 4, Eye Irrit. 2; H332 H302 H319			

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

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

First aider: Pay attention to self-protection! Remove affected person from the danger area and lay down.

After inhalation

Provide fresh air. When in doubt or if symptoms are observed, get medical advice.

After contact with skin

After contact with skin, wash immediately with polyethylene glycol, followed by plenty of water. Take off immediately all contaminated clothing and wash it before reuse. Medical treatment necessary.

After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

After ingestion

Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting. Adverse human health effects and symptoms: Gastric perforation. Call a physician immediately. Do not allow a neutralisation agent to be

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drunk.

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

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

Non-flammable. In case of fire: Formation of: Gases/vapours, toxic.

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**

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.

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

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**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

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

Advice on storage compatibility

No special measures are necessary.

7.3. Specific end use(s)

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.2. Exposure controls



Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

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.

Suitable material: NBR (Nitrile rubber), FKM (fluoro rubber)

Thickness of the glove material: > 0,5 mm

Skin protection

Wear suitable protective clothing.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Combination filtering device (EN 14387): A-P2

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	light yellow
Odour:	like: Amines

pH-Value:	not determined
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Changes in the physical state

Melting point:	not determined
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Initial boiling point and boiling range:	> 200 °C
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Flash point:	88 °C
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Flammability

Solid:	not applicable
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Gas:	not applicable
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Lower explosion limits:	2,1 vol. %
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Upper explosion limits:	10,5 vol. %
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Test method

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Ignition temperature:	315 °C
Auto-ignition temperature	
Solid:	not applicable
Gas:	not applicable
Decomposition temperature:	not determined
Oxidizing properties	
Not oxidising.	
Vapour pressure:	0 hPa
Density (at 23 °C):	1,07 g/cm ³ ISO 2811
Water solubility:	The study does not need to be conducted because the substance is known to be insoluble in water.
Solubility in other solvents	
not determined	
Partition coefficient:	not determined
Viscosity / dynamic: (at 25 °C)	7600 mPa·s ISO 3219
Vapour density:	not determined
Evaporation rate:	not determined
<u>9.2. Other information</u>	
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

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

none

10.5. Incompatible materials

Oxidising agent, Alkali (lye), Acid

10.6. Hazardous decomposition products

No known hazardous decomposition products.

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

ATE (oral) 1780,2 mg/kg

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Acute toxicity

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
61788-44-1	Phenol, styrenated				
	oral	LD50 mg/kg	2197	Rat	Quantitative structure-activity relationship (QSAR)
	dermal	LD50 mg/kg	3166	Rat	Quantitative structure-activity relationship (QSAR)
140-31-8	2-piperazin-1-ylethylamine				
	oral	ATE mg/kg	500		
	dermal	LD50 mg/kg	866	Rabbit	IUCLID
100-51-6	benzyl alcohol				
	oral	LD50 mg/kg	1620	Rat	IUCLID
	inhalative vapour	ATE	11 mg/l		
	inhalative (4 h) aerosol	LC50 mg/l	> 4,178	Rat	OECD 403

Additional information on tests

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP]. Special hazards arising from the substance or mixture!

SECTION 12: Ecological information

12.1. Toxicity

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

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CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
61788-44-1	Phenol, styrenated					
	Acute fish toxicity	LC50 4 mg/l	96 h	Pimephales promelas (fathead minnow)	Quantitative structure-activity relationship (QSAR)	
	Acute algae toxicity	ErC50 mg/l 1,637	72 h	Pseudokirchneriella subcapitata	Quantitative structure-activity relationship (QSAR)	
	Acute crustacea toxicity	EC50 mg/l 1,878	48 h	Daphnia magna	Quantitative structure-activity relationship (QSAR)	
140-31-8	2-piperazin-1-ylethylamine					
	Acute fish toxicity	LC50 mg/l 2190	96 h	Pimephales promelas (fathead minnow)	OECD 203	
	Acute algae toxicity	ErC50 495 mg/l	72 h	Selenastrum capricornutum	OECD 201	
	Acute crustacea toxicity	EC50 58 mg/l	48 h	Daphnia magna (Big water flea)	OECD 202	
100-51-6	benzyl alcohol					
	Acute fish toxicity	LC50 460 mg/l	96 h	Pimephales promelas (fathead minnow)	EPA OPP 72-1	
	Acute algae toxicity	ErC50 770 mg/l	72 h	Pseudokirchneriella subcapitata	OECD 201	
	Acute crustacea toxicity	EC50 253 mg/l	48 h	Daphnia magna (Big water flea)	OECD 202	
	Algae toxicity	NOEC mg/l 3140	3 d	Pseudokirchneriella subcapitata	OECD 201	

12.2. Persistence and degradability

The product has not been tested.

CAS No	Chemical name				
	Method	Value	d	Source	
	Evaluation				
61788-44-1	Phenol, styrenated				
	OECD 301C/ ISO 9408/ EEC 92/69/V, C.4-F	73 %	14		
	Readily biodegradable (according to OECD criteria).				
140-31-8	2-piperazin-1-ylethylamine				
	OECD 301F/ ISO 9408/ EEC 92/69/V, C.4-D	0%	28		
	Not readily biodegradable (according to OECD criteria)				
100-51-6	benzyl alcohol				
	OECD 301C/ ISO 9408/ EEC 92/69/V, C.4-F	92-96 %	14		
	Readily biodegradable (according to OECD criteria).				

12.3. Bioaccumulative potential

The product has not been tested.

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Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
140-31-8	2-piperazin-1-ylethylamine	-1,48
100-51-6	benzyl alcohol	1,05

BCF

CAS No	Chemical name	BCF	Species	Source
61788-44-1	Phenol, styrenated	26,5	Carassius auratus (goldfish)	Quantitative structure-activity relationship (QSAR)

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

The product has not been tested.

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

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.

Waste disposal number of waste from residues/unused products

080299 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS; wastes from MFSU of other coatings (including ceramic materials); wastes not otherwise specified

Waste disposal number of contaminated packaging

080299 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS; wastes from MFSU of other coatings (including ceramic materials); wastes not otherwise specified

Contaminated packaging

This material and its container must be disposed of as hazardous waste. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number:

UN 2735

14.2. UN proper shipping name:

AMINES, LIQUID, CORROSIVE, N.O.S. (N-AMINOETHYLPIPERAZINE, Phenol, styrolisiert),

14.3. Transport hazard class(es):

8

14.4. Packing group:

III

Hazard label:

8



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Classification code: C7
 Special Provisions: 274
 Limited quantity: 5 L
 Transport category: 3
 Hazard No: 80
 Tunnel restriction code: E

Other applicable information (land transport)

E1

Inland waterways transport (ADN)

14.1. UN number: UN 2735

14.3. Transport hazard class(es): 8

14.4. Packing group: III

Hazard label: 8



Classification code: C7
 Special Provisions: 274
 Limited quantity: 5 L

Other applicable information (inland waterways transport)

E2

Marine transport (IMDG)

14.1. UN number: UN 2735

14.2. UN proper shipping name: AMINES, LIQUID, CORROSIVE, N.O.S. (N-AMINOETHYLPIPERAZINE, Phenol, styrolisiert),

14.3. Transport hazard class(es): 8

14.4. Packing group: III

Hazard label: 8



Special Provisions: 274
 Limited quantity: 5 L
 EmS: F-A, S-B

Other applicable information (marine transport)

E2

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: UN 2735

14.2. UN proper shipping name: AMINES, LIQUID, CORROSIVE, N.O.S. (2-piperazin-1-ylethylamine, nonylphenol)

14.3. Transport hazard class(es): 8

14.4. Packing group: II

Hazard label: 8



Special Provisions: A3 A803
 Limited quantity Passenger: 0.5 L

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IATA-packing instructions - Passenger:	851
IATA-max. quantity - Passenger:	1 L
IATA-packing instructions - Cargo:	855
IATA-max. quantity - Cargo:	30 L

Other applicable information (air transport)

E2

Passenger-LQ: Y840

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: yes



Danger releasing substance: nonylphenol

14.6. Special precautions for user

Warning: strongly corrosive.

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**

2004/42/EC (VOC): 75-100 %

Additional information

To follow: 850/2004/EC , 79/117/EEC , 689/2008/EC

Regulation (EC) No. 2037/2000 concerning materials, which cause damage to the ozone layer.

Regulation (EC) No. 648/2004 (Detergents regulation)

National regulatory information

Employment restrictions: Observe restrictions to employment for juvenils 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 contaminating class (D): 3 - highly 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

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

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Relevant H and EUH statements (number and full text)

H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
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.

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