

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Hardener "water-clear"

Revision date: 13.04.2018

Product code: 107111

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

Hardener "water-clear"

REACH Registration Number: 01-2119557899-12-
CAS No: 9046-10-0

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:
Skin corrosion/irritation: Skin Corr. 1B
Serious eye damage/eye irritation: Eye Dam. 1
Hazard Statements:
Causes severe skin burns and eye damage.
Causes serious eye damage.

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

Reaktionsprodukte von Propan-1,2-diol, propoxyliert durch Aminierung der terminalen Hydroxylgruppen

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

H314 Causes severe skin burns and eye damage.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

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P310 Immediately call a POISON CENTER/doctor.
P405 Store locked up.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients**3.1. Substances****Hazardous components**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
9046-10-0	Polyoxyalkylenediamine			100 %
	618-561-0		01-2119557899-12	
	Skin Corr. 1B, Eye Dam. 1; H314 H318			

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

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

Take off immediately all contaminated clothing.

After inhalation

consult a doctor.

After contact with skin

Immediately wash off with copious amounts of water. If skin irritation occurs.

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

Drink plenty of water and fresh air. Call a doctor 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

Treat symptomatically.

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**Carbon dioxide (CO₂), 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.

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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. Provide adequate ventilation.

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. Keep receptacles tightly sealed. Provide adequate ventilation/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.

Advice on storage compatibility

Store separately from foodstuffs.

Further information on storage conditions

Keep receptacles tightly sealed.

7.3. Specific end use(s)

The product does not contain any relevant quantities of substances with workplace-related limit values to be monitored.

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.

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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.

Recommended material: FKM (fluoro rubber), @0802.B008198

Thickness of glove material: > 0,5mm

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:	colourless
Odour:	like: Amines.

Test method

pH-Value:	not determined
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Changes in the physical state

Melting point:	< -60 °C
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Initial boiling point and boiling range:	> 200 °C
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Flash point:	> 100 °C
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Flammability

Solid:	not applicable
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Gas:	not applicable
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Lower explosion limits:	0,7 vol. %
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Upper explosion limits:	5,0 vol. %
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Ignition temperature:	240 °C
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Auto-ignition temperature

Solid:	not applicable
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Gas:	not applicable
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Decomposition temperature:	not determined
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Oxidizing properties

Not oxidising.

Vapour pressure:	not determined
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Density (at 20 °C):	0,948 g/cm³	ISO 2811
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Water solubility:	miscible
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Solubility in other solvents

not determined

Partition coefficient:	not determined
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Viscosity / kinematic: (at 23 °C)	10 mm²/s
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Vapour density:	not determined
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Evaporation rate:	not determined
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9.2. Other information

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

Exothermic reaction with: Acid.

10.4. Conditions to avoid

none

10.5. Incompatible materials

Acid

10.6. Hazardous decomposition products

In case of fire may be liberated: toxic and caustic gases and vapours

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

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
9046-10-0	Polyoxyalkylenediamine				
	oral	LD50 mg/kg	2885	Rat	IUCLID
	dermal	LD50 mg/kg	2980	Rabbit	IUCLID

Irritation and corrosivity

Caustic effect on skin and mucous membranes.

Sensitising effects

no danger of sensitization.

Additional information on tests

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

SECTION 12: Ecological information**12.1. Toxicity**

Harmful 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
9046-10-0	Polyoxyalkylenediamine					
	Acute fish toxicity	LC50	772 mg/l	96 h	Leuciscus idus (golden orfe)	OECD 203
	Acute algae toxicity	ErC50	15 mg/l	72 h	Pseudokirchneriella subcapitata	OECD 201
	Acute crustacea toxicity	EC50	80 mg/l	48 h	Daphnia magna (Big water flea)	OECD 202
	Acute bacteria toxicity	(750 mg/l)		3 h	Activated sludge	OECD 209

12.2. Persistence and degradability

The product has not been tested.

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
9046-10-0	Polyoxyalkylenediamine			
	OECD 301B/ ISO 9439/ EEC 92/69/V, C.4-C	0%	28	
	Not readily biodegradable (according to OECD criteria)			

12.3. Bioaccumulative potential

The product has not been tested.

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

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

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 used product

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

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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

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 2735
14.2. UN proper shipping name: AMINES, LIQUID, CORROSIVE, N.O.S. (polypropylenediamine)
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
 Transport category: 3
 Hazard No: 80
 Tunnel restriction code: E

Other applicable information (land transport)

E2

Inland waterways transport (ADN)

14.1. UN number: UN 2735
14.2. UN proper shipping name: AMINES, LIQUID, CORROSIVE, N.O.S. (Polyoxyalkylenediamine)
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)

E1

Marine transport (IMDG)

14.1. UN number: UN 2735
14.2. UN proper shipping name: AMINES, LIQUID, CORROSIVE, N.O.S. (polypropylenediamine)
14.3. Transport hazard class(es): 8
14.4. Packing group: III
 Hazard label: 8

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Marine pollutant: ja
 Special Provisions: 274
 Limited quantity: 5 L
 EmS: F-A, S-B
 Segregation group: alkalis

Other applicable information (marine transport)

E1

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: UN 2735
14.2. UN proper shipping name: AMINES, LIQUID, CORROSIVE, N.O.S. (polypropylenediamine)
14.3. Transport hazard class(es): 8
14.4. Packing group: III
 Hazard label: 8



Special Provisions: A3 A803
 Limited quantity Passenger: 0.5 L
 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)

E1

Passenger-LQ: Y840

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: yes

**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

National regulatory information

Employment restrictions: Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).
 Water contaminating class (D): 1 - slightly water contaminating

15.2. Chemical safety assessment

For this substance a chemical safety assessment has not been carried out.

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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%

Relevant H and EUH statements (number and full text)

H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
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.