

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Hardener G

Print date: 11.07.2013

Product code: 115180-GHS-2013

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

1.1. Product identifier

Hardener G

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

Use of the substance/mixture

epoxy resin systems

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:	+49-7157-530460	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

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Indications of danger: C - Corrosive

R phrases:

Causes burns.

GHS classification

This substance is not classified as dangerous according to Regulation (EC) No. 1272/2008.

2.2. Label elements

Special labelling of certain mixtures

EUH205 Contains epoxy constituents. May produce an allergic reaction.

Additional advice on labelling

The product is classified and labelled under the EC Directives/hazardous substances laws (GefStoffV).

SECTION 3: Composition/information on ingredients

3.1. Substances

Chemical characterization

epoxy resin hardener

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Hazardous components

EC No	Chemical name	Quantity
CAS No	Classification	
Index No	GHS classification	
REACH No		
	Polyoxyalkylenediamine	100 %
9046-10-0	C - Corrosive R34	

Full text of R and H phrases: see Section 16.

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

Take the injured person out of the danger area and lay him/her down. Take off immediately all contaminated clothing

After inhalation

Provide fresh air. Consult physician. If victim is at risk of losing consciousness, position and transport on their side.

After contact with skin

After contact with skin, wash immediately with soap and plenty of water. Cover wound with sterile dressing. Consult physician. Immediate medical treatment required because injuries that are not treated are hard to cure.

After contact with eyes

After contact with eye rinse immediately with lot of water at least 5 minutes with open eyelid. Subsequently consult an ophthalmologist.

After ingestion

Rinse mouth immediately and drink large quantities of water. Immediately get medical attention. Do not induce vomiting.

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**

Carbon dioxide (CO₂).
Extinguishing powder.
Water fog.
Fight major fires with a water spray jet or alcohol-resistant foam.

Unsuitable extinguishing media

High power water jet.

5.2. Special hazards arising from the substance or mixture

In case of fire may form:
Nitrogen oxides (NO_x).
Carbon monoxide.
Ammonia.

5.3. Advice for firefighters

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

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not get into the sewerage network. Fire residue and contaminated firefighting water must be disposed of in accordance with government regulations.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment. Keep unprotected persons at a safe distance. Use appropriate respiratory protection.

6.2. Environmental precautions

Do not empty into drains or the aquatic environment. Do not allow to enter the soil or subsoil. Do not allow to enter groundwater.

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). Dispose of contaminated material as § 13 waste.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Provide for sufficient ventilation and punctiform suction at critical points. Handle open container with care.

Advice on protection against fire and explosion

No special measures are necessary.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Ventilate adequately storage and work rooms. Employ reliable measures to prevent the product from entering the soil.

Further information on storage conditions

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

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.2. Exposure controls

Protective and hygiene measures

Take off immediately all contaminated clothing. Avoid contact with skin and eyes. "Wash hands when done working with material; at breaks, lunch, shift changes, etc." Do not breathe in gases/vapours/aerosols.

Eye/face protection

Tightly sealed safety glasses. (EN 166)

Hand protection

Wear protective gloves. (EN 374)

Material: NBR (Nitrile rubber). Butyl rubber.

Breakthrough time: See information supplied by the manufacturer.

Skin protection

Wear protective clothing. (EN 368/9)

Respiratory protection

Not necessary when the room is well ventilated. During spraying: Filter A/P2

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

Physical state: liquid
 Colour: colourless
 Odour: amine-like

Test method

pH-Value (at 20 °C): 8,5 - 11 ISO 8975

Changes in the physical state

Boiling point: 200 °C DIN 53171
 Flash point: 100 °C ISO 2719
 Lower explosion limits: 0.7 vol. %
 Upper explosion limits: 5.0 vol. %
 Ignition temperature: 240 °C
 Vapour pressure: 5 hPa
 Density (at 23 °C): 0,95 g/cm³ DIN 53217
 Viscosity / dynamic:
 (at 20 °C) 10 mPa·s ISO 9371

SECTION 10: Stability and reactivity**10.4. Conditions to avoid**

no decomposition when stored and handled properly

10.5. Incompatible materials

strong acid and alkalis

10.6. Hazardous decomposition products

High temperatures can give rise to hazardous decomposition products.
 Carbon dioxide. Carbon monoxide. smoke. nitrogen oxides (NO_x).

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

Caustic effect on eyes, skin, and mucous membranes.

Specific effects in experiment on an animal

oral: 2.880 mg/kg (rat) LD50
 dermal: 2.980 mg/kg (rabbit) LD50

SECTION 12: Ecological information**Further information**

Do not let the product enter the groundwater, open water, or the sewerage system. Not even small quantities!

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Advice on disposal**

Dispose of waste according to applicable local, state, and federal regulations. e.g. transfer to a suitable

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incineration plant Waste key numbers are assigned according to the European Waste Catalogue (EWC) depending on the sector and process type.

Waste disposal number of used product

080111 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS; wastes from MFSU and removal of paint and varnish; waste paint and varnish containing organic solvents or other dangerous substances
Classified as hazardous waste.

Contaminated packaging

Dispose of waste according to applicable local, state, and federal regulations.

SECTION 14: Transport information**Land transport (ADR/RID)**

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



Classification code: C7
 Limited quantity: LQ22
 Hazard No: 80
 Tunnel restriction code: E

Other applicable information (land transport)

: 274
 : 2
 E2

Marine transport (IMDG)

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



Marine pollutant: no
 Limited quantity: 1 L
 EmS: F-A, S-B

Other applicable information (marine transport)

: 274, 944
 E2

Air transport (ICAO)

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

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14.3. Transport hazard class(es): 8**14.4. Packing group:** II

Hazard label: 8



Limited quantity Passenger: 0.5 L

IATA-packing instructions - Passenger: 808

IATA-max. quantity - Passenger: 1 L

IATA-packing instructions - Cargo: 812

IATA-max. quantity - Cargo: 30 L

Other applicable information (air transport)

: Y808

: A3

E2

: Y808

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

EC-identification.

National regulatory information

Water contaminating class (D): 1 - slightly water contaminating

Additional information

APME document: "Epoxidharze und Härter (Toxikologie, Arbeitssicherheit, Umwelt)" ("Epoxy resins and hardeners (toxicology, work safety, environment)")

BG code of practice: M004 ("Irritant substances / caustic substances") (ZH 1/229)

BG code of practice: M023 ("Polyester and epoxy resins") (ZH 1/301)

SECTION 16: Other information**Full text of R phrases referred to under Sections 2 and 3**

22 Harmful if swallowed.

34 Causes burns.

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.