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Hardener (water-clear)

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1. Identification of the substance/mixture and of the company/undertaking

Identification of the substance or mixture

Hardener (water-clear)

Use of the substance/mixture

epoxy resin systems

Company/undertaking identification

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

poison information centre

number:

2. Hazards identification

Classification

Indications of danger: Corrosive

R phrases: Causes burns.

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

3. Composition/information on ingredients

Chemical characterization (substance)

epoxy resin hardener

Hazardous components

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

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

4. 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.

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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 opthalmologist.

After ingestion

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

5. Fire-fighting measures

Suitable extinguishing media

Carbon dioxide (CO2).

Extinguishing powder.

Water fog.

Fight major fires with a water spray jet or alcohol-resistant foam.

Extinguishing media which must not be used for safety reasons

High power water jet.

Special exposure hazards arising from substance or mixture itself, combustion products, resulting gases

In case of fire may form:

Nitrogen oxides (NOx).

Carbon monoxide.

Ammonia.

Special protective equipment for fire-fighters

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

6. Accidental release measures

Personal precautions

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.

Methods for cleaning up/taking up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Dispose of contaminated material as § 13 waste.

7. Handling and storage

Handling

Advice on safe handling

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

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Advice on protection against fire and explosion

No special measures are necessary.

Storage

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.

Storageclass (D):

8. Exposure controls/personal protection

Exposure limit values

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.

Respiratory protection

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

Hand protection

Wear protective gloves. (EN 374)

Material: NBR (Nitrile rubber). Butyl rubber.

Breakthrough time: See information supplied by the manufacturer.

Eye protection

Tightly sealed safety glasses. (EN 166)

Skin protection

Wear protective clothing. (EN 368/9)

9. Physical and chemical properties

General information

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

Important health, safety and environmental information

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. %
Vapour pressure: 5 hPa

Density (at 23 °C): 0,95 g/cm³ DIN 53217

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Viscosity / dynamic: 10 mPa·s ISO 9371

(at 20 °C)

9.2. Other information

Ignition temperature: 240 °C

10. Stability and reactivity

10.4. Conditions to avoid

no decomposition when stored and handled properly

Materials to avoid

strong acid and alikalis

10.6. Hazardous decomposition products

High temperatures cangive rise to hazardous decomposition products. Carbon dioxide. Carbon monoxide. smoke. nitrogen oxides (NOx).

11. Toxicological information

Specific effects in experiment on an animal

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

Irritation and corrosivity

Caustic effect on eyes, skin, and mucous membranes.

12. Ecological information

Further information

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

13. Disposal considerations

Advice on disposal

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

14. Transport information

Land transport (ADR/RID)

14.1. UN number:2735ADR/RID class:8Classification code:C7

Warning plate

Hazard No: 80

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Hazard label: 8



ADR/RID packing group: II
Limited quantity: LQ22
Tunnel restriction code: E

Description of the goods

AMINES, LIQUID, CORROSIVE, N.O.S. (Polyoxypropylendiamin)

Other applicable information (land transport)

: 274 : 2 E2

Marine transport (IMDG)

14.1. UN number:2735IMDG code:8Marine pollutant:noHazard label:8



IMDG packing group:

EmS: F-A, S-B Limited quantity: 1 L

Description of the goods

AMINES, LIQUID, CORROSIVE, N.O.S. (Polyoxypropylendiamin)

Other applicable information (marine transport)

: 274, 944 E2

Air transport (ICAO)

UN/ID number: 2735
ICAO/IATA-DGR: 8
Hazard label: 8



ICAO packing group: II
Limited quantity Passenger: 0.5 L

IATA-packing instructions - Passenger:808IATA-max. quantity - Passenger:1 LIATA-packing instructions - Cargo:812IATA-max. quantity - Cargo:30 L

Description of the goods

AMINES, LIQUID, CORROSIVE, N.O.S. (Polyoxypropylendiamin)

according to Regulation (EC) No 1907/2006

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Other applicable information (air transport)

: Y808 : A3 E2 : Y808

15. Regulatory information

Labelling

Danger symbols: C - Corrosive



C - Corrosive

Hazardous components which must be listed on the label

Alkyletheramine piperazine

R phrases

Harmful if swallowed.
Causes burns.

S phrases

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

After contact with skin, wash immediately with plenty of water and soap. .

45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where

possible).

This material and its container must be disposed of as hazardous waste.

36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

Additional advice on labelling

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

GHS labelling

Special labelling of certain mixtures

Contains epoxy constituents. May produce an allergic reaction.

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)

16. Other information

Full text of R phrases referred to under Sections 2 and 3

Harmful if swallowed.
Causes burns.

according to Regulation (EC) No 1907/2006

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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.