

Safety Data Sheet

according to Regulation (EU) No. 1907/2006

Hardener C

Print date: 12.02.2010

Product code: 120310-2010

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1. Identification of the substance/preparation and of the company/undertaking**Identification of the substance or preparation**

Hardener C

Use of the substance/preparation

epoxy resin hardener

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
Emergency telephone: poison information centre

2. Hazards identification**Classification**

Indications of danger : Corrosive
R-phrases:
Harmful by inhalation, in contact with skin and if swallowed.
Causes burns.
May cause sensitization by skin contact.
Harmful to aquatic organisms.
May cause long-term adverse effects in the aquatic environment.

3. Composition/information on ingredients**Chemical characterization (Mixture)**

epoxy resin hardener

Hazardous components

EC-No.	CAS-No.	Chemical name	Quantity	Classification
202-859-9	100-51-6	benzyl alcohol	34 - 42%	Xn R20/22
220-666-8	2855-13-2	3-aminomethyl-3,5,5-trimethylcyclohexylamine	22 - 30%	Xn, C R21/22-34-43-52-53
246-672-0	25154-52-3	nonylphenol	1 - 7 %	Xn, Xn, Xn, C, N R62-63-22-34-50-53

Full text of each relevant R phrase can be found in heading 16.

4. First aid measures**General information**

Change contaminated clothing.

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After inhalation

Provide fresh air. Consult physician.

After contact with skin

Immediately rinse with copious amounts of water. Consult a doctor when irritation persists.

After contact with eyes

Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart.

After ingestion

Have victim drink large quantities of water, with active charcoal if possible. Move a vomiting patient lying on his back into a stable position on his side. Do not induce vomiting.

Artificial respiration on respiratory arrest.

5. Fire-fighting measures

Suitable extinguishing mediaCarbon 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 preparation itself, combustion products, resulting gases

In case of fire may form:

Nitrogen oxides (NO_x).Carbon dioxide (CO₂). Carbon monoxide.

6. Accidental release measures

Personal precautions

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

Remove from all sources of ignition. Avoid contact with skin, eyes, and clothing. Do not breathe in vapours.

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

Provide adequate ventilation. 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 adequate ventilation/vapour extraction at the workplace. Handle open container with care.

Keep away from sources of ignition. No smoking. Avoid the formation of aerosol.

Storage**Requirements for storage rooms and vessels**

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

Advice on storage compatibility

Keep away from food, drink and animal feeding stuffs.

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Further information on storage conditions

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

Storageclass (VCI): 8

8. Exposure controls/personal protection

Exposure limit values

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. Respiratory equipment for high concentrations.
Typ:AX-P2

Hand protection

Wear protective gloves. (EN 374)
Material: NBR (Nitrile rubber). Butyl rubber.
Breakthrough time: (BTT > 480 min.) 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: light yellow

Important health, safety and environmental information

Test method

Changes in the physical state

Boiling point:	200 °C
thermische Zersetzung:	250 °C
Flash point:	131 °C DIN 51758
Lower explosion limits:	
Upper explosion limits:	
Vapour pressure: (at 20 °C)	0,4 hPa
Density (at 20 °C):	1,02 g/cm ³ DIN 51757
Water solubility: (at 20 °C)	slightly soluble
Viscosity / dynamic: (at 25 °C)	290 - 450 mPa·s

10. Stability and reactivity

Conditions to avoid

Take precautionary measures against static discharges.

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Materials to avoid

strong acid and alkalis Oxidizing agents.

Hazardous decomposition products

nitrogen oxides (NOx). Carbon dioxide. Carbon monoxide. smoke

11. Toxicological information

Specific effects in experiment on an animal

2.400 mg/kg (rat) LD50

Corrosive and irritant effects

Irritant effect on the eye, mild irritation to the skin (rabbit).

Sensitising effects

Contact may cause skin sensitisation. (Guinea-pig.)

12. Ecological information

Further information

Do not let the product enter the groundwater, open water, or the sewerage system.

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 waste from residues/unused products

070204 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of plastics, synthetic rubber and man-made fibres; other organic solvents, washing liquids and mother liquors
Classified as hazardous waste.

Waste disposal number of used product

070204 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of plastics, synthetic rubber and man-made fibres; other organic solvents, washing liquids and mother liquors
Classified as hazardous waste.

Contaminated packaging

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

14. Transport information

Land transport (ADR/RID)

UN number:	1760
ADR/RID class:	8
Classification code:	C9
Warning plate	
Hazard-no.:	88
Hazard label:	8



ADR/RID packing group:	I
Limited quantity:	LQ0

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Tunnel restriction code: E

Description of the goods

CORROSIVE LIQUID, N.O.S. (Isophorone Diamine 4-Nonyl Phenol)

Other applicable information (land transport)

: 274

: 3

: E

E0

: 1

Marine transport

UN number: 1760

IMDG code: 8

Marine pollutant: •

Hazard label: 8



IMDG packing group: I

EmS: F-A, S-B

Limited quantity: None

Description of the goods

CORROSIVE LIQUID, N.O.S. (Isophorone Diamine 4-Nonyl Phenol)

Other applicable information (marine transport)

: 223, 274, 944

Special provisions: 274

E0

Air transport

UN/ID number: 1760

ICAO/IATA-DGR: 8

Hazard label: 8



ICAO packing group: I

Limited quantity Passenger: -

IATA-packing instructions - Passenger: 807

IATA-max. quantity - Passenger: 0.5 L

IATA-packing instructions - Cargo: 809

IATA-max. quantity - Cargo: 2.5 L

Description of the goods

CORROSIVE LIQUID, N.O.S. (Isophorone Diamine 4-Nonyl Phenol)

Other applicable information (air transport)

: Y818

E0

: -

Special provisions: A3

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15. Regulatory information

Labelling

Danger symbols: C - Corrosive



C - Corrosive

Hazardous components which must be listed on the label

Isophorondiamin
Benzylalkohol

R phrases

20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
34 Causes burns.
43 May cause sensitization by skin contact.
52 Harmful to aquatic organisms.
53 May cause long-term adverse effects in the aquatic environment.

S phrases

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
36 Wear suitable protective clothing.
37 Wear suitable gloves.
39 Wear eye/face protection.
45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Additional advice on labelling

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

EU regulatory information

Additional information

EC-identification.

National regulatory information

Water contaminating class (D): 2 - water contaminating

16. Other information

Full text of R-phrases referred to under sections 2 and 3

20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
20/22 Harmful by inhalation and if swallowed.
21/22 Harmful in contact with skin and if swallowed.
22 Harmful if swallowed.
34 Causes burns.
43 May cause sensitization by skin contact.
50 Very toxic to aquatic organisms.
52 Harmful to aquatic organisms.
53 May cause long-term adverse effects in the aquatic environment.
62 Possible risk of impaired fertility.
63 Possible risk of harm to the unborn child.

Further Information

All information, recommendations, and advice on the part of R&G Faserverbundwerkstoffe GmbH are

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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.

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