

Safety Data Sheet

according to Regulation (EC) No. 1907/2006

PUR Hardener (1000)

Print date: 05.08.2011

Product code: 170105-2011

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

Identification of the substance or mixture

PUR Hardener (1000)

Use of the substance/mixture

Di-/Poly-Isocyanat component for the production of polyurethane

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

R-phrases:
Harmful by inhalation.
Irritating to eyes, respiratory system and skin.
May cause sensitization by inhalation.

3. Composition/information on ingredients

Chemical characterization (substance)

Diphenylmethandiisocyanat, Isomere und Homologe

Hazardous components

EC No.	CAS No.	Chemical name	Quantity
		Classification	
		GHS classification	
	9016-87-9	(veraltet) Diphenylmethandiisocyanat, Isomeren und Homologen	100 %
		R20-36/37/38-42	

Full text of R- and H-phrases: see section 16.

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4. First aid measures

After inhalation

Following inhalation: Move victim to fresh air. Consult physician.

After contact with skin

Take off immediately all contaminated clothing After contact with skin, wash immediately with soap and plenty of water.

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After contact with eyes

If the product comes into contact with the eyes, immediately rinse the open eyes with copious amounts of water for at least ten minutes. Afterwards consult an eye specialist.

After ingestion

Immediately get medical attention. Do not induce vomiting. Keep the patient calm.

5. Fire-fighting measures

Suitable extinguishing media

Foam.
Carbon dioxide (CO₂).
Extinguishing powder.
Fight a major fire with water spray jet.

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 (NO_x).
Carbon monoxide.
Hydrocyanic acid.

Special protective equipment for fire-fighters

Wear breathing apparatus with own air supply.

Additional information

Contaminated fire-fighting water must not get into the sewerage network.
Cool affected receptacles with water.

6. Accidental release measures

Personal precautions

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

Environmental precautions

Do not empty into drains or the aquatic environment. Do not allow to enter groundwater. Notify the responsible authority when the substance enters open water, the soil, or sewerage system.

Methods for cleaning up/taking up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).
Collect in suitable receptacles. Clear contaminated area thoroughly.
Leave spilled product residue in unsealed receptacles for a number of days until there is no longer any reaction. Afterwards seal receptacle firmly and dispose of in accordance with the local provisions.

7. Handling and storage

Handling

Advice on safe handling

Provide adequate ventilation/vapour extraction at the workplace. Wear respiratory equipment when transferring large quantities without vapour extraction. Caution when re-opening already opened containers. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin and eyes.

Storage

Requirements for storage rooms and vessels

Employ reliable measures to prevent the product from entering the soil. Suitable material for receptacles and pipelines: Steel. / Stainless steel. Protect against the effects of heat and direct sunlight. Protect against moisture and water. Storage temperature: max. 40°C

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Advice on storage compatibility

Store separately from foodstuffs.

8. Exposure controls/personal protection

Exposure limit values

Exposure controls

Protective and hygiene measures

Provide adequate ventilation.

Respiratory protection

When risk of spraying: respiratory equipment with own air supply.

In well ventilated rooms filter equipment with combination filter: particle/gas filter (A2-P2)

Hand protection

Wear protective gloves.

CR (polychloroprenes, Chloroprene rubber). glove thickness: $\geq 0,50\text{mm}$ Breakthrough time: $\geq 480\text{min}$

NBR (Nitrile rubber). glove thickness: $\geq 0,35\text{mm}$ Breakthrough time: $\geq 480\text{min}$

Butyl rubber. glove thickness: $\geq 0,50\text{mm}$ Breakthrough time: $\geq 480\text{min}$

FKM (Fluoroelastomer). glove thickness: $\geq 0,40\text{mm}$ Breakthrough time: $\geq 480\text{min}$

PVC (Polyvinyl chloride). glove thickness: $\geq 0,50\text{mm}$ Breakthrough time: $\geq 480\text{min}$

Gloves only to be worn once.

Eye protection

Tightly sealed safety glasses.

Skin protection

Wear protective clothing.

9. Physical and chemical properties

General information

Physical state:	liquid
Colour:	brown
Odour:	odourless

Important health, safety and environmental information

Test method

Changes in the physical state

Flash point: $> 100\text{ }^{\circ}\text{C}$

Vapour pressure:
(at $20\text{ }^{\circ}\text{C}$) $< 0,01\text{ hPa}$

Density (at $20\text{ }^{\circ}\text{C}$): $1,1 - 1,3\text{ g/cm}^3$

Water solubility: insoluble

10. Stability and reactivity

Materials to avoid

Exothermic reactions with: amines. alcohols.

Reacts with: Water. -> Carbon dioxide. Danger of bursting container.

Hazardous decomposition products

High temperatures can give rise to hazardous decomposition products. Carbon dioxide. Carbon monoxide. nitrogen oxides (NOx). amines. Water. hydrocyanic acid.

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Further information

Polymerisation >200°C

11. Toxicological information

Irritation and corrosivity

This product may cause acute irritation and/or sensitisation in the respiratory tract leading to a cramped feeling in the chest, shortness of breath, and asthmatic complaints. Sprays may cause irritation to the eye and reversible damage.

Sensitizing effects

After sensitisation, even concentrations below the industrial limits can cause signs of asthma.

Severe effects after repeated or prolonged exposure

Repeated inhalation can lead to permanent disease of the respiratory tract. Signs and symptoms: headaches, dizziness, fatigue, breathing problems, muscle weakness, numbness, and in exceptional cases unconsciousness.

12. Ecological information

Ecotoxicity

immiscible with water Combines with water at the boundary layer to form a solid, high-melting, and insoluble reaction product (polyurea), releasing carbon dioxide in the process. This reaction is greatly accelerated by surface-active substances (e.g. liquid soaps) and water-soluble solvents. According to our knowledge to date polyurea is inert and not degradable.

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

070208 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of plastics, synthetic rubber and man-made fibres; other still bottoms and reaction residues
Classified as hazardous waste.

Waste disposal number of used product

070208 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of plastics, synthetic rubber and man-made fibres; other still bottoms and reaction residues
Classified as hazardous waste.

Waste disposal number of contaminated packaging

070208 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of plastics, synthetic rubber and man-made fibres; other still bottoms and reaction residues
Classified as hazardous waste.

Contaminated packaging

Dispose of waste according to applicable local, state, and federal regulations. Contaminated packing must be completely emptied and can be re-used following appropriate cleaning.

14. Transport information

Land transport (ADR/RID)

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Description of the goods

National und International: Not a hazardous material with respect to transportation regulations.

Other applicable information (land transport)

Not restricted

Marine transport

Marine pollutant: no

Other applicable information (marine transport)

Not restricted

Air transport

Other applicable information (air transport)

Not restricted

15. Regulatory information

Labelling

Danger symbols: Xn - Harmful



Xn - Harmful

Hazardous components which must be listed on the label

4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate

R phrases

- 20 Harmful by inhalation.
- 36/37/38 Irritating to eyes, respiratory system and skin.
- 40 Limited evidence of a carcinogenic effect.
- 42/43 May cause sensitization by inhalation and skin contact.
- 48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.

S phrases

- 23 Do not breathe Dampf.
- 24 Avoid contact with skin.
- 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- 37 Wear suitable gloves.
- 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).

GHS labelling

Signal word: Danger
Pictograms: exclamation mark; health hazard



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Hazard statements

H315	Causes skin irritation.
H319	Causes serious eye irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317	May cause an allergic skin reaction.
H351	Suspected of causing cancer.
H335	May cause respiratory irritation.
H373	May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P264	Wash ... thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P285	In case of inadequate ventilation wear respiratory protection.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P321	Specific treatment (see ... on this label).
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P362	Take off contaminated clothing and wash before reuse.
P363	Wash contaminated clothing before reuse.
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/container to

EU regulatory information

Additional information

Contains isocyanates. See information supplied by the manufacturer.

National regulatory information

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

16. Other information

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

20	Harmful by inhalation.
36/37/38	Irritating to eyes, respiratory system and skin.
40	Limited evidence of a carcinogenic effect.
42	May cause sensitization by inhalation.
42/43	May cause sensitization by inhalation and skin contact.
48/20	Harmful: danger of serious damage to health by prolonged exposure through inhalation.

Full text of H-Statements referred to under sections 2 and 3

H315	Causes skin irritation.
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- H335 May cause respiratory irritation.
- H351 Suspected of causing cancer.
- H373 May cause damage to organs through prolonged or repeated exposure.

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.