

Safety Data Sheet

according to Regulation (EU) No. 1907/2006

Styrene (145140-X)

Print date: 24.11.2010

Product code: 145140-X

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

Identification of the substance or preparation

Styrene (145140-X)

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 : Harmful

R-phrases:

Flammable.

Harmful by inhalation.

Irritating to eyes and skin.

GHS: Hazard categories:
 Flammable liquid: Flam. Liq. 3
 Acute toxicity: Acute Tox. 4
 Skin corrosion/irritation: Skin Irrit. 2
 Serious eye damage/eye irritation: Eye Irrit. 2
 Hazard Statements:
 Flammable liquid and vapour.
 Harmful if inhaled.
 Causes skin irritation.
 Causes serious eye irritation.

3. Composition/information on ingredients

Chemical characterization (Mixture)

Hazardous components

EC-No.	Chemical name	Quantity
CAS-No.	Classification	
Index No.	GHS classification	
REACH-No.		
202-851-5	styrene	%
100-42-5	Xn, Xi R10-20-36/38	
601-026-00-0	Flam. Liq. 3, Acute Tox. 4, Eye Irrit. 2, Skin Irrit. 2; H226 H332 H319 H315	

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

4. First aid measures

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General information

Take off immediately all contaminated clothing Symptoms of poisoning may develop several hours following exposure. Victim should be under medical observation for at least 48 hours after exposure.

After inhalation

Following inhalation: Move victim to fresh air. Instruct person to keep calm and warm. Consult a doctor when complaints persist. 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.

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

Do not induce vomiting. Consult physician.

5. Fire-fighting measures

Suitable extinguishing media

Carbon dioxide (CO₂).
Extinguishing powder.
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:
Carbon monoxide.
Nitrogen oxides (NO_x).

Special protective equipment for fire-fighters

Wear breathing apparatus with own air supply.

Additional information

Temperature class T1

6. Accidental release measures

Personal precautions

Provide adequate ventilation. Do not breathe in vapours. Wear personal protection equipment.

Environmental precautions

Do not empty into drains or the aquatic environment. 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).
Dispose of contaminated material as § 13 waste.

7. Handling and storage

Handling

Advice on safe handling

Provide adequate ventilation/vapour extraction at the workplace. Avoid the formation of aerosol.

Advice on protection against fire and explosion

Keep away from sources of ignition. No smoking. Take precautionary measures against static discharges.

Storage

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Requirements for storage rooms and vessels

Employ reliable measures to prevent the product from entering the soil.

Advice on storage compatibility

Store separately from foodstuffs.

Further information on storage conditions

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

Storageclass (VCI):

A II

8. Exposure controls/personal protection**Exposure limit values****Exposure limits (EH40)**

CAS-No.	Chemical name	ml/m ³	mg/m ³	F/ml	Category	Origin
100-42-5	Styrene	100	430		TWA (8 h)	WEL
		250	1080		STEL (15 min)	WEL

Exposure controls**Protective and hygiene measures**

Keep away from foodstuffs and fodder. Immediately take off soiled, impregnated clothing. Wash hands before breaks and after work. Avoid contact with skin and eyes.

Respiratory protection

short-term or low exposure: Filtergerät A

long and intensive exposure: Protective respiration apparatus not using surrounding air (breathing apparatus) (DIN EN 133).

Hand protection

protective gloves with CE symbol: Kategorie III

Material: Butyl rubber.

Breakthrough time: See information supplied by the manufacturer.

permeation: level 2 (30 minutes)

Eye protection

Tightly sealed safety glasses.

Skin protection

Wear protective clothing.

9. Physical and chemical properties**General information**

Physical state: liquid viscous

Colour: beige

Odour: of styrene

Important health, safety and environmental information

pH-Value: neutral

Test method

Changes in the physical state

Melting point: - 30,7 °C

Boiling point: 145,2 °C

Flash point: 31 °C

Lower explosion limits: 1,2 vol. %

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Upper explosion limits:	8,9 vol. %
Ignition temperature:	480 °C
Vapour pressure: (at 50 °C)	32,9 hPa
Density (at 20 °C):	0,906 g/cm ³
Water solubility: (at 20 °C)	0,24 g/L
Viscosity / dynamic: (at 25 °C)	0,73 mPa·s

10. Stability and reactivity

11. Toxicological information

Acute toxicity

LD50 (oral, rat): 5.000 mg/kg

LC50 (inhalativ, rat): 11,8 mg/l / 4h

Corrosive and irritant effects

Irritation to skin, eyes, and mucous membranes.

Additional information on tests

Inhaling styrene above 50 ppm can cause damage to health like irritation to the mucous membranes and respiratory organs and disruption to the central nervous system like dizziness, headaches, and failing concentration.

12. Ecological information

Ecotoxicity

Leuciscus idus: 10 - 100 mg/l (LC50 96h)

Daphnia magna: 182 mg/l (LC50 24h)

Further information

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

13. Disposal considerations

Advice on disposal

Carry out a burning of hazardous waste according to official regulations. Do not allow to enter the sewerage system.

Waste disposal number of used product

55373

Contaminated packaging

Noncleanable packaging must be disposed of like the substance.

14. Transport information

Land transport (ADR/RID)

UN number:	2055
ADR/RID class:	3
Classification code:	F1
Warning plate	
Hazard-no.:	39

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Hazard label: 3



ADR/RID packing group: III

Limited quantity: LQ7

Description of the goods

STYRENE MONOMER, STABILIZED

Other applicable information (land transport)

Bei Gefäßen mit einem Fassungsraum von höchstens 450 Litern Angabe im Beförderungspapier.

Beförderung nach Absatz 2.2.3.1.5 (ADR/RID)

: 3

Marine transport

UN number: 2055

IMDG code: 3

Marine pollutant: no

Hazard label: 3



IMDG packing group: III

EmS: F-E, S-D

Limited quantity: 5 L

Description of the goods

STYRENE MONOMER, STABILIZED

Other applicable information (marine transport)

: -

Air transport

UN/ID number: 2055

ICAO/IATA-DGR: 3

Hazard label: 3



ICAO packing group: III

Limited quantity Passenger: 10 L

IATA-packing instructions - Passenger: 309

IATA-max. quantity - Passenger: 60 L

IATA-packing instructions - Cargo: 310

IATA-max. quantity - Cargo: 220 L

Description of the goods

STYRENE MONOMER, STABILIZED

Other applicable information (air transport)

Bei Gefäßen mit einem Fassungsraum von höchstens 30 Litern Angabe im Beförderungspapier.

Beförderung nach Absatz 2.3.2.5 (IMDG)

: Y309

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15. Regulatory information**Labelling**

Danger symbols: Xn - Harmful



Xn - Harmful

R phrases

10 Flammable.
 20 Harmful by inhalation.
 36/38 Irritating to eyes and skin.

S phrases

23 Do not breathe Dampf.

Additional advice on labelling

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

GHS labelling

Signal word: Warning
 Pictograms: flame; exclamation mark

**Hazard statements**

H226 Flammable liquid and vapour.
 H332 Harmful if inhaled.
 H315 Causes skin irritation.
 H319 Causes serious eye irritation.

Precautionary statements

P101 If medical advice is needed, have product container or label at hand.
 P102 Keep out of reach of children.
 P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
 P233 Keep container tightly closed.
 P240 Ground/bond container and receiving equipment.
 P241 Use explosion-proof electrical/ventilating/lighting equipment.
 P242 Use only non-sparking tools.
 P243 Take precautionary measures against static discharge.
 P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
 P264 Wash ... thoroughly after handling.
 P271 Use only outdoors or in a well-ventilated area.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
 P321 Specific treatment (see ... on this label).
 P332+P313 If skin irritation occurs: Get medical advice/attention.
 P352 Wash with plenty of soap and water.
 P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for

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	breathing.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
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.
P370+P378	In case of fire: Use ... for extinction.
P403+P235	Store in a well-ventilated place. Keep cool.
P501	Dispose of contents/container to

Special labelling for certain preparations

Contains epoxy constituents. May produce an allergic reaction.

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**

10	Flammable.
20	Harmful by inhalation.
36/38	Irritating to eyes and skin.

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

H226	Flammable liquid and vapour.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.

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.

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