

* FREEFIX 6470-W-2

Date revised: 17.03.2015

6956470

Version: 7 / GB

Master No. M-401

Print date: 18.03.15

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

1.1. Product identifier

Trade name

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

Use of the substance/mixture

Purpose of use: Raw substance formulas for manufacturing shaped parts from unsaturated polyester / vinyl ester resins.

1.3. Details of the supplier of the safety data sheet

Address

BÜFA Composite Systems
GmbH & Co. KG
Hohe Looge 2-8
26180 Rastede

Telephone no. +49 4402 975-0

Fax no. +49 4402 975-400

Information provided by / telephone Department product safety / +49 4402 975-415

E-Mail produktsicherheit-compositesystems@buefa.de

1.4. Emergency telephone number

Giftzentrale Goettingen: +49 551 19240

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (Regulation (EC) No. 1272/2008)

Flam. Liq. 3 H226

Skin Irrit. 2 H315

Eye Irrit. 2 H319

Repr. 2 H361d

STOT RE 1 H372 Ear; Route of exposure: inhalative

Classification in accordance with EC directives 1999/45/EC and 67/548/EEC

R10

Xn, R20-R48/20

Xi, R36/37/38

2.2. Label elements

Labelling according to regulation (EC) No 1272/2008

Hazard pictograms



Signal word

Danger

Hazard statements

H226 Flammable liquid and vapour.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

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H361d Suspected of damaging the unborn child.
 H372 Causes damage to organs through prolonged or repeated exposure:
 Ear
 Route of exposure: inhalative

Precautionary statements

P201 Obtain special instructions before use.
 P210.9 Keep away from sparks, open flames and other ignition sources. No smoking.
 P260.8 Do not breathe vapours/spray.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P308+P313 IF exposed or concerned: Get medical advice/attention.

Hazardous component(s) to be indicated on label (Regulation (EC) No. 1272/2008)

contains Styrene

Labelling in accordance with EC directives 1999/45/EC and 67/548/EEC**Hazard symbols**

Harmful

R phrases

10 Flammable.
 20 Harmful by inhalation.
 36/37/38 Irritating to eyes, respiratory system and skin.
 48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.

S phrases

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 37 Wear suitable gloves.
 51 Use only in well-ventilated areas.
 60 This material and its container must be disposed of as hazardous waste.

Hazardous component(s) to be indicated on label

contains Styrene

2.3. Other hazards

The product does not contain PBT/vPvB-substances.

SECTION 3: Composition/information on ingredients *****3.2. Mixtures****Hazardous ingredients *******Styrene**

CAS No. 100-42-5
 EINECS no. 202-851-5
 Registration no. 01-2119457861-32-XXXX
 Concentration >= 10 < 20 %
 Xn, R20-R48/20-R65
 Xi, R36/37/38
 R10

Flam. Liq. 3 H226
 Skin Irrit. 2 H315
 Acute Tox. 4 H332

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Eye Irrit. 2	H319	
STOT SE 3	H335	
STOT RE 1	H372	Ear; Route of exposure: inhalative
Asp. Tox. 1	H304	
Repr. 2	H361d	

1,4-Dihydroxybenzene

CAS No.	123-31-9	
EINECS no.	204-617-8	
Registration no.	01-2119524016-51-XXXX	
Concentration	>= 0,01	< 0,1 %
Muta.Cat.3, R68		
Carc.Cat.3, R40		
Xn, R22		
Xi, R41		
N, R50		
R43		

Aquatic Acute 1	H400
Skin Sens. 1	H317
Eye Dam. 1	H318
Carc. 2	H351
Acute Tox. 4	H302
Muta. 2	H341

Complete text of R/H-phrases in Chapter 16.

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

Adhere to personal protective measures when giving first aid. Remove soiled or soaked clothing immediately, do not allow to dry.

After inhalation

Remove the casualty into fresh air and keep him calm. Irregular breathing/no breathing: artificial respiration. In the event of symptoms take medical treatment.

After skin contact

Wash off immediately with soap and water.

After eye contact

In case of contact with the eyes, rinse immediately for at least 15 minutes with plenty of water. Seek medical advice immediately. Remove contact lenses

After ingestion

Rinse mouth thoroughly with water. Summon a doctor immediately. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. If individual is drowsy or unconscious place in recovery position (on left side, with head down).

4.2. Most important symptoms and effects, both acute and delayed

The following symptoms may occur: Headache, Dizziness, Nausea

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically

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

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Suitable extinguishing media

Alcohol-resistant foam, Dry powder, Carbon dioxide

Non suitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

In case of combustion evolution of dangerous gases possible. In the event of fire the following can be released: Carbon monoxide (CO); Nitrogen oxides (NOx); dense black smoke

5.3. Advice for firefighters

Use self-contained breathing apparatus.

Collect contaminated fire-fighting water separately, must not be discharged into the drains.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Avoid contact with skin, eyes and clothing. Use personal protective clothing. Keep away sources of ignition. Ensure adequate ventilation. Use breathing apparatus if exposed to vapours/dust/aerosol.

6.2. Environmental precautions

Do not allow to enter drains or waterways. Do not discharge into the subsoil/soil. Prevent spread over a wide area (e.g. by containment or oil barriers).

6.3. Methods and material for containment and cleaning up

Pick up with absorbent material (eg sand, kieselgur, acid binder, universal binder, sawdust). When picked up, treat material as prescribed under Section 13 "Disposal".

6.4. Reference to other sections

Information regarding Safe handling, see Section 7. Information regarding personal protective measures, see Section 8. Information regarding waste disposal, see Section 13.

SECTION 7: Handling and storage**7.1. Precautions for safe handling**

Provide good ventilation of working area (local exhaust ventilation if necessary). Observe the usual precautions for handling chemicals.

Keep away from sources of ignition - No smoking. Take precautionary measures against static discharge. Vapours can form an explosive mixture with air.

7.2. Conditions for safe storage, including any incompatibilities

Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Keep container tightly closed and dry in a cool, well-ventilated place. Protect from heat and direct sunlight.

7.3. Specific end use(s)

No information available

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Exposure limit values****Styrene**

List EH40

Type WEL

Value 430 mg/m³ 100 ppm(V)Short term exposure limit 1080 mg/m³ 250 ppm(V)

Maximum limit value; Skin resorption / sensibilisation: Pregnancy group: Status: 2011

Derived No/Minimal Effect Levels (DNEL/DMEL)

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Styrene

Reference substance	Styrene			
DNEL				
Conditions	Worker	Acute	inhalative	Systemic effects
Concentration	289	mg/m ³		
DNEL				
Conditions	Worker	Long term	inhalative	Systemic effects
Concentration	85	mg/m ³		
DNEL				
Conditions	Worker	Acute	inhalative	Local effects
Concentration	306	mg/m ³		
DNEL				
Conditions	Worker	Long term	dermal	Systemic effects
Concentration	406	mg/kg/d		

8.2. Exposure controls**Appropriate engineering controls**

Use only in well ventilated areas.

Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

General protective and hygiene measures

Provide good ventilation of working area (local exhaust ventilation if necessary). Avoid contact with skin and eyes. Do not inhale gases/vapours/aerosols.

Respiratory protection

If workplace limits are exceeded, a respiratory protection approved for this particular job must be worn.

Short term: filter apparatus, Filter A

Hand protection

Chemical resistant gloves

Appropriate Material	Butyl rubber		
Material thickness	0,7	mm	
Breakthrough time	= 30	min	

Eye protection

Tightly fitting safety glasses

Body protection

Clothing as usual in the chemical industry.

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

Form	Pasty		
Colour	Various, depending on coloration		
Odour	of styrene		
Flash point			
Value	32		°C
Efflux time			
Value	> 61		s
Method	DIN EN ISO 2431 - 6 mm		
Density			
Value	1,65		g/cm ³
Temperature	20	°C	

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9.2. Other information

No information available.

SECTION 10: Stability and reactivity**10.1. Reactivity**

No hazardous reactions when stored and handled according to prescribed instructions.

10.2. Chemical stability

The product is stable.

10.3. Possibility of hazardous reactions

Under normal conditions of storage and use, hazardous reactions will not occur.

10.4. Conditions to avoid

Protect from heat and direct sunlight.

10.5. Incompatible materials

Reactions with peroxides and other radical components.

10.6. Hazardous decomposition products

No hazardous decomposition products known.

SECTION 11: Toxicological information**11.1. Information on toxicological effects****Acute oral toxicity (Components)****Styrene**

Species	rat		
LD50	>	5000	mg/kg

Acute dermal toxicity (Components)**Styrene**

Species	rat		
LD50	>	5000	mg/kg

Acute inhalational toxicity

ATE		74,6845	mg/l
Administration/Form	Vapors		
Method	calculated value		
ATE		9,4938	mg/l
Administration/Form	Dust/Mist		
Method	calculated value		

Acute inhalative toxicity (Components)**Styrene**

Species	rat		
LC50		11,8	mg/l
Duration of exposure	4	h	
Administration/Form	Vapors		

Skin corrosion/irritation

Irritating effects on the skin and mucous membrane.

Serious eye damage/irritation

Eye contact with the product may lead to irritation.

Sensitization (Components)**Styrene**

evaluation	non-sensitizing
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Mutagenicity

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Based on available data, the classification criteria are not met.

Carcinogenicity

Based on available data, the classification criteria are not met.

Reproductive toxicity

Based on available data, the classification criteria are not met.

Specific Target Organ Toxicity (STOT)**Repeated exposure**

Reference substance Styrene
Route of exposure inhalative
Organs: Ear

Other information

Inhalation of the vapours causes irritation of the respiratory tract and mucous membrane, headaches, nausea, giddiness, vomiting.

SECTION 12: Ecological information**12.1. Toxicity****Fish toxicity****Styrene**

LC/EC/IC50 > 1,0 to 10 mg/l

Daphnia toxicity**Styrene**

Species Daphnia magna
LC/EC/IC50 > 1,0 to 10 mg/l

Algae toxicity**Styrene**

LC/EC/IC50 > 1,0 to 10 mg/l

Bacteria toxicity

No toxicological data are available.

12.2. Persistence and degradability

For this subsection there is no ecotoxicological data available on the product as such.

Biodegradability**Styrene**

evaluation Readily biodegradable (according to OECD criteria)

12.3. Bioaccumulative potential

For this subsection there is no ecotoxicological data available on the product as such.

12.4. Mobility in soil

For this subsection there is no ecotoxicological data available on the product as such.

12.5. Results of PBT and vPvB assessment

The product does not contain PBT/vPvB-substances.

12.6. Other adverse effects

For this subsection there is no ecotoxicological data available on the product as such.

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Disposal recommendations for the product**

EWC waste code 07 02 08* other still bottoms and reaction residues
The listed waste code numbers, according to the European Waste Catalogue (EWC), are to be understood as a recommendation. A final decision must be made in agreement with the regional waste

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disposal company.

Disposal recommendations for packaging

Packaging that cannot be cleaned should be disposed off as product waste.

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

UN number	1866
Technical name	RESIN SOLUTION
Class	3
Packing group	III
Special provision	640E
Remarks	Viscous product: Transport according to paragraph 2.2.3.1.5 ADR/RID
Tunnel restriction code	D/E

Marine transport IMDG/GGVSee

UN number	1866
Technical name	RESIN SOLUTION
Class	3
Packing group	III
Remarks	Transport according to 2.3.2.5 of the IMDG Code
EmS	F-E, S-E

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

VOC (EU) 0,78 %

15.2. Chemical safety assessment

No information available

SECTION 16: Other information**R-phrases listed in Chapter 3**

10	Flammable.
20	Harmful by inhalation.
22	Harmful if swallowed.
36/37/38	Irritating to eyes, respiratory system and skin.
40	Limited evidence of a carcinogenic effect.
41	Risk of serious damage to eyes.
43	May cause sensitization by skin contact.
48/20	Harmful: danger of serious damage to health by prolonged exposure through inhalation.
50	Very toxic to aquatic organisms.
65	Harmful: may cause lung damage if swallowed.
68	Possible risk of irreversible effects.

Hazard statements listed in Chapter 3

H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H341	Suspected of causing genetic defects.
H351	Suspected of causing cancer.

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H361d Suspected of damaging the unborn child.
 H372 Causes damage to organs through prolonged or repeated exposure:
 H400 Very toxic to aquatic life.

Abbreviations

CAS: Chemical Abstracts Service
 EAK: Europäischer Abfallkatalog
 EINECS: European Inventory of Existing Commercial Chemical Substances
 PBT: Persistent, Bioaccumulative and Toxic
 vPvB: Very persistent and very bioaccumulative
 VOC: Volatile Organic Compound

CLP categories listed in Chapter 3

Acute Tox. 4	Acute toxicity, Category 4
Aquatic Acute 1	Hazardous to the aquatic environment, acute, Category 1
Asp. Tox. 1	Aspiration hazard, Category 1
Carc. 2	Carcinogenicity, Category 2
Eye Dam. 1	Serious eye damage, Category 1
Eye Irrit. 2	Eye irritation, Category 2
Flam. Liq. 3	Flammable liquid, Category 3
Muta. 2	Germ cell mutagenicity, Category 2
Repr. 2	Reproductive toxicity, Category 2
Skin Irrit. 2	Skin irritation, Category 2
Skin Sens. 1	Skin sensitization, Category 1
STOT RE 1	Specific target organ toxicity - repeated exposure, Category 1
STOT SE 3	Specific target organ toxicity - single exposure, Category 3

Supplemental information

Relevant changes compared with the previous version of the safety data sheet are marked with: ***
 This information is based on our present state of knowledge. However, it should not constitute a guarantee for any specific product properties and shall not establish a legally valid relationship.

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