

* BÜFA®-UP HARZ 65 T (MINKE I)

Date revised: 14.06.13

7000165/ 7000165

Version: 5 / GB

Master No. M-401

Print date: 04.09.13

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

1.1. Product identifier

Trade name

BÜFA®-UP HARZ 65 T (MINKE I)

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

Hohe Looge 2-8

26180 Rastede

Telephone no. +49 4402 975-0

Fax no. +49 4402 975-400

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

by / telephone

E-Mail produktsicherheit-compositesystems@buefa.de

1.4. Emergency telephone number

Giftzentrale Goettingen: +49 551 19240

2. Hazards identification

2.1. Classification of the substance or mixture

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

R10

Xn, R20-R48/20

Xi, R36/37/38

R43

2.2. Label elements

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.

43

May cause sensitization by skin contact.

48/20

Harmful: danger of serious damage to health by prolonged exposure through inhalation.

S phrases

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.

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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-(N-ethylanilino)ethanol

2.3. Other hazards

The product does not contain PBT/vPvB-substances.

3. Composition/information on ingredients**Hazardous ingredients****Styrene**

CAS No.	100-42-5	EINECS no.	202-851-5
Registration no.	01-2119457861-32-XXXX		
Concentration	>= 25	< 50	%
Xn, R20-R48/20-R65			
Xi, R36/37/38			
R10			

Flam. Liq. 3	H226
Skin Irrit. 2	H315
Acute Tox. 4	H332
Eye Irrit. 2	H319
STOT SE 3	H335
STOT RE 1	H372
Asp. Tox. 1	H304

Xylene

CAS No.	1330-20-7	EINECS no.	215-535-7
Concentration	>= 1	< 10	%
Xn, R20/21-R65			
Xi, R36/37/38			
R10			

Skin Irrit. 2	H315
Flam. Liq. 3	H226
Acute Tox. 4	H332
Acute Tox. 4	H312
Eye Irrit. 2	H319
STOT SE 3	H335
STOT RE 2	H373
Asp. Tox. 1	H304

2-(N-ethylanilino)ethanol

CAS No.	92-50-2	EINECS no.	202-160-9
Concentration	>= 1	< 10	%
Xn, R22			
Xi, R41-R43			

Acute Tox. 4	H302
Eye Dam. 1	H318
Skin Sens. 1	H317

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

4. First aid measures

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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

5. Firefighting measures

5.1. Extinguishing media

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.

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.

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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

8. Exposure controls/personal protection ***

8.1. Control parameters

Exposure limit values ***

Styrene

List	EH40			
Type	WEL			
Value	430	mg/m ³	100	ppm(V)
Short term exposure limit	1080	mg/m ³	250	ppm(V)
Maximum limit value; Skin resorption / sensibilisation: Pregnancy group: Status: 2011				

Xylene

List	EH40			
Type	WEL			
Value	220	mg/m ³	50	ppm(V)
Short term exposure limit	441	mg/m ³	100	ppm(V)
Maximum limit value; Skin resorption / sensibilisation: Sk; Pregnancy group; Status: 2005				

Derived No/Minimal Effect Levels (DNEL/DMEL)

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		
DNEL				
Conditions	General Population	Acute	inhalative	Local effects
Concentration	182,7	mg/m ³		
DNEL				

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Conditions	General Population	Acute	inhalative	Systemic effects
Concentration	174,2	mg/m ³		
DNEL				
Conditions	General Population	Long term	inhalative	Systemic effects
Concentration	10,2	mg/m ³		
DNEL				
Conditions	General Population	Long term	dermal	Systemic effects
Concentration	343	g/m ³		
DNEL				
Conditions	General Population	Long term	oral	Systemic effects
Concentration	2,1			
Xylene				
DNEL				
Conditions	Worker	Short term	inhalative	Systemic effects
Concentration	289	mg/m ³		
DNEL				
Conditions	Worker	Short term	inhalative	Local effects
Concentration	289	mg/m ³		
DNEL				
Conditions	Worker	Lifetime	dermal	Systemic effects
Concentration	180	mg/kg		
DNEL				
Conditions	Worker	Lifetime	inhalative	Systemic effects
Concentration	77	mg/m ³		

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.

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9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Form	liquid		
Colour	transparent		
Odour	of styrene		
Flash point			
Value	32		°C
Efflux time			
Value	> 61		s
Method	DIN EN ISO 2431 - 6 mm		
Density			
Value	1,2		g/cm ³
Temperature	20	°C	

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.

11. Toxicological information

11.1. Information on toxicological effects

Acute oral toxicity

Styrene

Species	rat		
LD50	>	5000	mg/kg

Acute dermal toxicity

Styrene

Species	rat		
LD50	>	5000	mg/kg

Acute inhalational toxicity

Styrene

Species	rat		
LC50	>	10	to 20 mg/l

Skin corrosion/irritation

Irritating effects on the skin and mucous membrane.

Serious eye damage/irritation

Eye contact with the product may lead to irritation.

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Sensitization**Styrene**

evaluation non-sensitizing

Mutagenicity

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.

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.

13. Disposal considerations**13.1. Waste treatment methods**

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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 disposal company.

Disposal recommendations for packaging

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

14. Transport information**Land transport ADR/RID**

UN number	1866
Technical name	RESIN SOLUTION
Class	3
Label	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

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

The product is classified and labelled in accordance with EC directives/the relevant national laws.

VOC

VOC (EU)	1,2	%
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15.2. Chemical safety assessment

No information available

16. Other information**R-phrases listed in Chapter 3**

10	Flammable.
20	Harmful by inhalation.
20/21	Harmful by inhalation and in contact with skin.
22	Harmful if swallowed.
36/37/38	Irritating to eyes, respiratory system and skin.
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.
65	Harmful: may cause lung damage if swallowed.

Hazard statements listed in Chapter 3

H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.

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H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H372	Causes damage to organs through prolonged or repeated exposure:
H373	May cause damage to organs through prolonged or repeated exposure:

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

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.