

* **BÜFA®-Resin VE 6520 RTM** Date revised: 01.10,2021

7006520 Version: 8 / DK Master No. M-401 Print date: 02.08,2022

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

1.1. Product identifier

Trade name

BÜFA®-Resin VE 6520 RTM

UFI

UFI: 7UY7-J0CK-300Q-SW8W

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.

Uses advised against

SU21 Consumer uses: Private households (= general public = consumers)

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

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Flam. Liq. 3 H226
Acute Tox. 4 H332
Skin Irrit. 2 H315
Eye Irrit. 2 H319
Skin Sens. 1 H317
Repr. 2 H361d
STOT SE 3 H335

STOT RE 1 H372 Organs: Ear; Route of exposure: inhalative

Aquatic Chronic 3 H412

The product is classified and labelled in accordance with Regulation (EC) No 1272/2008

For explanation of abbreviations see section 16.

2.2. Label elements

Labelling according to regulation (EC) No 1272/2008

Hazard pictograms



* BÜFA®-Resin VE 6520 RTM

Date revised: 01.10.2021

7006520 Version: 8 / DK Master No. M-401 Print date: 02.08.2022



Signal word

Danger

Hazard statements

H226 Flammable liquid and vapour.
H332 Harmful if inhaled.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
H361d Suspected of damaging the unborn child.

H335 May cause respiratory irritation.

H372 Causes damage to organs through prolonged or repeated exposure.

Ear; Route of exposure: inhalative

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

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.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact

lenses, if present and easy to do. Continue rinsing.

IF exposed or concerned: Get medical advice/ attention.

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

contains styrene; methyl methacrylate; Fatty acids, C14-18 and C16-18-unsaturated,

maleated; cobalt bis(2-ethylhexanoate)

2.3. Other hazards

P308+P313

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 >= 30 < 50

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

STOT RE 1 H372 Organs: Ear; Route of exposure: inhalative

Asp. Tox. 1 H304 Repr. 2 H361d Aquatic Chronic 3 H412

methyl methacrylate

CAS No. 80-62-6 EINECS no. 201-297-1

Page 2(13)

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JFA®-Resin VE 6520 RTM					Date revised: 01.10.2021
006520	Version: 8 / DK	Master	No. M-40	1 P	rint date: 02.08.2022
Registration no. Concentration Flam. Liq. 2 STOT SE 3 Skin Irrit. 2 Skin Sens. 1	01-2119452498-28- >= 1 H225 H335 H315 H317	XXXX <	10	%	
Fatty acids, C14-18 a CAS No. EINECS no. Registration no. Concentration Skin Sens. 1 Skin Irrit. 2	85711-46-2 288-306-2 01-2119976378-19- >= 0,1 H317 H315		ed 1	%	
cobalt bis(2-ethylhe) CAS No. EINECS no. Registration no. Concentration Repr. 1B Skin Sens. 1 Eye Irrit. 2 Aquatic Acute 1 Aquatic Chronic 3	xanoate) 136-52-7 205-250-6 01-2119524678-29 >= 0,1 H360F H317 H319 H400 H412	<	0,3	%	
1,4-dihydroxybenzer CAS No. EINECS no. Registration no. Concentration Aquatic Acute 1 Skin Sens. 1 Eye Dam. 1 Carc. 2 Acute Tox. 4 Muta. 2	•		0,30 %	%	
	Aquatic Acute 1	N	= 10		
Further ingredients					
silicon dioxide CAS No. Registration no.	7631-86-9 01-2119379499-16-		EINEC		231-545-4
Concentration	>= 1	<	10	%	[3]

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



* BÜFA®-Resin VE 6520 RTM Date revised: 01.10,2021

7006520 Version: 8 / DK Master No. M-401 Print date: 02,08,2022

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 eve 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

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.



* BÜFA®-Resin VE 6520 RTM Date revised: 01.10,2021
7006520 Version: 8 / DK Master No. M-401 Print date: 02.08,2022

Keep away from sources of ignition - No smoking. Take action to prevent static discharges. 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

methyl methacrylate

List GV

Value 102 mg/m³ 25 ppm(V)

Maximum limit value; Skin resorption / sensibilisation: H; Pregnancy group; Status; Remarks: EH

methyl methacrylate

List IOELV

Type IOELV

 Value
 50
 ppm(V)

 Short term exposure limit
 100
 ppm(V)

styrene

List GV

Value 105 mg/m³ 25 ppm(V)

Maximum limit value; Skin resorption / sensibilisation: H; Pregnancy group; Status; Remarks: LHK

Derived No/Minimal Effect Levels (DNEL/DMEL)

methyl methacrylate

Reference substance methyl methacrylate

DNEL

Conditions Worker Long term inhalative

Concentration 210 mg/m³

DNEL

Conditions Worker Long term dermal

Concentration 74,3 mg/m³

styrene DNEL

Conditions Worker Acute inhalative Systemic effects
Concentration 289 mg/m³

DNEL

Conditions Worker Long term inhalative Systemic effects

Concentration 85 mg/m³

DNEL
Conditions Worker Acute inhalative Local effects

Concentration 306 mg/m³

DNEL

Conditions Worker Long term dermal Systemic effects

Concentration 406 mg/kg/d



* BÜFA®-Resin VE 6520 RTM Date revised: 01.10,2021

7006520 Version: 8 / DK Master No. M-401 Print date: 02.08.2022

cobalt bis(2-ethylhexanoate)

DNEL

Conditions Worker Long term inhalative Local effects

Concentration 235,1 µg/m³

Predicted No Effect Concentration (PNEC)

cobalt bis(2-ethylhexanoate)

Type of value PNEC

Type Sewage treatment plant (STP)
Concentration 1,08 mg/l

Type freshwater

Concentration 0,00149 mg/l

Type marine water

Concentration 0,0069 mg/l

Type freshwater sediment

Concentration 27,8 mg/kg

Type marine sediment

Concentration 17,8 mg/kg

Гуре Soi**l**

Concentration 23,1 mg/kg

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 recommendedor 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. Personal protective equipment must comply with the Regulation (EC) No 2016/425 and the resulting CEN standards.

Respiratory protection

If workplace limits are exceeded, a respiratory protection approved for this particular job must be worn. Short term: filter apparatus, Filter A; Self-contained breathing apparatus. Respiratory protection must comply with DIN EN 136 / DIN EN 140 / DIN EN 143 / DIN EN 149.

Hand protection

Chemical resistant gloves

Appropriate Material Butyl rubber

Material thickness 0,7 mm Breakthrough time = 30 min

Hand protection must comply with EN 374.

Eye protection

Tightly fitting safety glasses; Eye protection must comply with EN 166.

Body protection

Clothing as usual in the chemical industry. Wear protective clothing according to EN 13034: 2005 + A1: 2009

SECTION 9: Physical and chemical properties



* BÜFA®-Resin VE 6520 RTM Date revised: 01.10.2021 # 7006520 Version: 8 / DK Master No. M-401 Print date: 02.08,2022

9.1. Information on basic physical and chemical properties

Form liquid
Colour light blue
Odour of styrene

Odour threshold

Remarks No data available

pH value

Remarks No data available

Melting point

Remarks No data available

Freezing point

Remarks No data available

Boiling point

Remarks No data available

Flash point

Value 33,5 °C

Method ISO 3679-B

Evaporation rate

Remarks No data available

Efflux time

Value 33 s Temperature 23 °C

Method DIN EN ISO 2431 - 6 mm

Flammability

No data available

Explosion limits

Remarks No data available

Vapour pressure

Remarks No data available

Vapour density

Remarks No data available

Density

Value 1,31 g/cm³

Temperature 20 °C

Solubility in water

Remarks No data available

Solubility in other solvents

Remarks No data available
Octanol/water partition coefficient (log Pow)

Remarks No data available

Ignition temperature

Remarks No data available

Auto-ignition temperature

Remarks No data available

Thermal decomposition

Remarks No data available

Explosive properties

Page 7(13)

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* BÜFA®-Resin VE 6520 RTM Date revised: 01.10,2021 # 7006520 Version: 8 / DK Master No. M-401 Print date: 02.08,2022

evaluation no data

Oxidising properties

Remarks No data available

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

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

Acute oral toxicity (Components)

methyl methacrylate

Species rat

LD50 > 5000 mg/kg

Method OECD 401

styrene

Species rat

LD50 > 5000 mg/kg

Acute dermal toxicity

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

Acute dermal toxicity (Components)

methyl methacrylate

Species rabbit

LD50 > 5000 mg/kg

styrene

Species rat

LD50 > 5000 mg/kg

Acute inhalational toxicity

ATE 34,75 mg/l

Administration/Form Vapors
Method calculated value (Regulation (EC) No. 1272/2008)
ATE 4,42 mg/l

Administration/Form Dust/Mist

Method calculated value (Regulation (EC) No. 1272/2008)

Page 8(13)

BÜFA Composite Systems GmbH & Co. KG



* BÜFA®-Resin VE 6520 RTM Date revised: 01.10,2021 # 7006520 Version: 8 / DK Master No. M-401 Print date: 02.08,2022

The classification criteria are met.

Acute inhalative toxicity (Components)

methyl methacrylate

Species rat

LC50 29,8 mg/l

styrene

Species rat

LC50 11,8 mg/l

Duration of exposure 4 h Administration/Form Vapors

Skin corrosion/irritation

evaluation irritant The classification criteria are met.

Serious eye damage/irritation

evaluation irritant

The classification criteria are met.

Sensitization

evaluation May cause sensitization by skin contact.

The classification criteria are met.

Sensitization (Components)

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

evaluation Suspected of damaging the unborn child.

The classification criteria are met.

Specific Target Organ Toxicity (STOT)

Single exposure

The classification criteria are met.

evaluation May cause respiratory irritation.

Repeated exposure

The classification criteria are met.

evaluation Causes damage to organs through prolonged or repeated exposure

Aspiration hazard

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

Other information

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

SECTION 12: Ecological information

12.1. Toxicity

Fish toxicity

methyl methacrylate

Species rainbow trout (Oncorhynchus mykiss)

LC50 > 79 mg/l

Duration of exposure 96

Method OECD 203

Page 9(13)

BÜFA Composite Systems GmbH & Co. KG



BÜFA®-Resin VE 6520 RTM						Date revised	01.10.2021
7006520	Version:	8 / DK		Master N	o. M- 401	Print date: 02	.08.2022
Species NOEC Method		zebra fi OECD	ish (Brach 9,4 210	ydanio rei	io)	mg/l	
styrene LC/EC/IC50 Daphnia toxicity		>	1,0	to	10	mg/l	
methyl methacrylate Species EC50 Duration of exposure Method Species NOEC Duration of exposure Method Durchfluss		OECD Daphni	a magna 69 48 202 a magna 37 21 202 Part 2	h Days		mg/l	
styrene Species LC/EC/IC50		Daphni >	a magna 1,0	to	10	mg/l	
Algae toxicity							
methyl methacrylate Species EC50 Duration of exposure Method	;	Selena > OECD	strum cap 110 72 201	ricornutur h	า	mg/l	
styrene LC/EC/IC50		>	1,0	to	10	mg/l	
Bacteria toxicity							
methyl methacrylate Species EC3 Duration of exposure	:	Pseudo	omonas pu 100 16	ıtida h		mg/l	

Biodegradability

methyl methacrylate

Value 94 % Duration of test 14 Days readily degradable OECD 301 C eva**l**uation

Method

styrene

Readily biodegradable (according to OECD criteria) evaluation

12.3. Bioaccumulative potential

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

Octanol/water partition coefficient (log Pow)

Remarks No data available

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.

Page 10(13)

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* BÜFA®-Resin VE 6520 RTM Date revised: 01.10.2021

7006520 Version: 8 / DK Master No. M-401 Print date: 02.08.2022

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
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	Marine transport IMDG/GGVSee
Tunnel restriction code	D/E	
14.1. UN number	1866	1866
14.2. UN proper shipping name	RESIN SOLUTION	RESIN SOLUTION
14.3. Transport hazard class(es)	3	3
Label	***	***
14.4. Packing group	III	III
Limited Quantity	5 I	
Transport category	3	

Information for all modes of transport

14.6. Special precautions for user

Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code
Not applicable

SECTION 15: Regulatory information

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

VOC

VOC (EU) 2,22

Major-accident categories acc. 2012/18/EU

Category P5c FLAMMABLE LIQUID

Page 11(13)

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* **BÜFA®-Resin VE 6520 RTM** Date revised: 01,10,2021

7006520 Version: 8 / DK Master No. M-401 Print date: 02.08.2022

National regulations

Observe employment restrictions for young people.

Observe employment restrictions for child bearing mothers and nursing mothers.

Users must have undergone special training course approved by the labor inspectorate for work with products containing styrene.

Other information

The product does not contain substances of very high concern (SVHC).

15.2. Chemical safety assessment

No information available

SECTION 16: Other information

Hazard statements listed in Chapter 3

H225	Highly flammable liquid and vapour.
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.
H360F	May damage fertility.
H361d	Suspected of damaging the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H412	Harmful to aquatic life with long lasting effects.

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

LE categories listed in C	napter 5
Acute Tox. 4	Acute toxicity, Category 4
Aquatic Acute 1	Hazardous to the aquatic environment, acute, Category 1
Aquatic Chronic 3	Hazardous to the aquatic environment, chronic, Category 3
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. 2	Flammable liquid, Category 2
Flam Liq 3	Flammable liquid, Category 3
Muta 2	Germ cell mutagenicity, Category 2
Repr. 1B	Reproductive toxicity, Category 1B
Repr. 2	Reproductive toxicity, Category 2
Skin Irrit. 2	Skin irritation, Category 2
Skin Sens. 1	Skin sensitization, Category 1
OTOT DE 4	On a life to make a man to list to make a to decrease of the control of the contr

STOT RE 1 Specific target organ toxicity - repeated exposure, Category 1 STOT SE 3 Specific target organ toxicity - single exposure, Category 3

Supplemental information



* BÜFA®-Resin VE 6520 RTM Date revised: 01.10.2021 # 7006520 Print date: 02.08.2022 Version: 8 / DK Master No. M-401

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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