according to Regulation (EC) No. 1907/2006



Commercial Product Name: ALEXSEAL A5023-Flattening Additive Quality No.: 4995000000000 Revision Date 15.06.2023 Print Date 15.06.2023 Version 4

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

1.1 Product identifier

Trade name

: ALEXSEAL A5023-Flattening Additive farblos / transparent

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

Use of the Substance/Mixture : Industrial serial painting

1.3 Details of the supplier of the safety data sheet

Producer

: Mankiewicz Gebr. & Co. (GmbH & Co. KG) Georg-Wilhelm-Strasse 189 21107 Hamburg Germany

Only for UK: Supplied by Mankiewicz UK LLP 26 Ashville Way, Whetstone, Leicester LE8 6NU United Kingdom

Telephone	:	+49 (0) 40 75103 0
Telefax	:	+49 (0) 40 75103 375
E-mail address of person	:	sdb_info@umco.de
responsible for the SDS		

1.4 Emergency telephone number

Emergency telephone num- : +44 1865 407333 (NCEC) ber

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Flammable liquids, Category 3	H226: Flammable liquid and vapour.
Skin sensitisation, Category 1	H317: May cause an allergic skin reaction.
Specific target organ toxicity - single ex- posure, Category 3, Central nervous system	H336: May cause drowsiness or dizziness.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

	Deutsche Bank HypoVereinsbank	Hamburg	600227300 59273300	200 300 00	HYVEDEMM300	DE58 2007 0000 0600 2273 00 DE34 2003 0000 0059 2733 00		Bureau Veritas Certification: ISO 9001, TS 16949,	
Fax: +49 (0) 40 / 75 10 33 75 www.mankiewicz.de							Geschäftsführender Gesellschafter: Michael O. Grau	EN 9100	1828

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Hazard pictograms	:	
Signal word	:	Warning
Hazard statements	:	H226 Flammable liquid and vapour.H317 May cause an allergic skin reaction.H336 May cause drowsiness or dizziness.
Precautionary statements	:	 Prevention: P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P261 Avoid breathing mist or vapours. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.
		Response:P303 + P361 + P353IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.P304 + P340 + P312IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISONCENTER/ doctor if you feel unwell.P370 + P378In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Hazardous components which must be listed on the label:

2-methoxy-1-methylethyl acetate Fatty acids, C16-18 and C18-unsatd., Me esters, epoxidized, reaction products with ethylene glycol n-butyl acetate

4-morpholinecarbaldehyde

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

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according to Regulation (EC) No. 1907/2006



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SECTION 3: Composition/information on ingredients

3.2 Mixtures

Paint auxiliary agent in a mixture of organic solvents Chemical nature :

Components			
Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
2-methoxy-1-methylethyl acetate	108-65-6 203-603-9 607-195-00-7 01-2119475791-29	Flam. Liq. 3; H226 STOT SE 3; H336 (Central nervous system)	>= 40 - <= 100
2-butoxyethyl acetate	112-07-2 203-933-3 607-038-00-2 01-2119475112-47	Acute Tox. 4; H302 Acute Tox. 4; H332 Acute Tox. 4; H312	>= 5 - < 12.5
Fatty acids, C16-18 and C18- unsatd., Me esters, epoxidized, reaction products with ethylene glycol	211450-54-3 01-2119980052-43	Skin Sens. 1B; H317	>= 5 - < 12.5
n-butyl acetate	123-86-4 204-658-1 607-025-00-1 01-2119485493-29	Flam. Liq. 3; H226 Flam. Liq. 3; H226 STOT SE 3; H336 (Central nervous system) STOT SE 3; H336 (Central nervous system) EUH066 EUH066	>= 5 - < 12.5
xylene	1330-20-7 215-535-7 601-022-00-9 01-2119488216-32	Flam. Liq. 3; H226 Flam. Liq. 3; H226 Acute Tox. 4; H332 Acute Tox. 4; H332 Acute Tox. 4; H312 Acute Tox. 4; H312 Acute Tox. 4; H312 Skin Irrit. 2; H315 Skin Irrit. 2; H315 Eye Irrit. 2; H315 Eye Irrit. 2; H319 STOT SE 3; H335 (Respiratory system) STOT RE 2; H373 Asp. Tox. 1; H304 Aquatic Chronic 3; H412	>= 1 - < 2.5
4-morpholinecarbaldehyde	4394-85-8 224-518-3 01-2119987993-12	Skin Sens. 1B; H317	>= 0.1 - < 0.25

For explanation of abbreviations see section 16.



according to Regulation (EC) No. 1907/2006



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SECTION 4: First aid measures

4.1 Description of first aid measures							
General advice :	In all cases of doubt, or when sickness symptoms persist, seek medica lattention. Never give anything by mouth to an unconscious person.						
If inhaled :	Remove to fresh air, keep patient warm and at rest. Irregular breathing/no breathing: artificial respiration. If unconscious place in recovery position and seek medical advice.						
In case of skin contact :	Take off all contaminated clothing immediately. Wash skin thoroughly with soap and water or use recognised skin cleanser. Do NOT use solvents or thinners !						
In case of eye contact :	Remove contact lenses, irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart and seek medical advice.						
If swallowed :	Do NOT induce vomiting. If accidentally swallowed obtain immediate medical attention. Never give anything by mouth to an unconscious person. Keep at rest.						

4.2 Most important symptoms and effects, both acute and delayed

Risks	:	May cause an allergic skin reaction.
		May cause drowsiness or dizziness.

4.3 Indication of any immediate medical attention and special treatment needed

SECTION 5: Firefighting measures

5.1 Extinguishing media		
Suitable extinguishing media	:	Alcohol resistant foam, CO2, powders
Unsuitable extinguishing media	:	High volume water jet
5.2 Special hazards arising from	the	e substance or mixture
Specific hazards during fire- fighting	:	Fire will produce dense black smoke. Exposure to decomposi- tion products may cause a health hazard.
5.3 Advice for firefighters		
Special protective equipment for firefighters	:	Appropriate breathing apparatus may be required.
Further information	:	Cool endangered containers with water in case of fire. DO NOT ALLOW RUN-OFF FROM FIRE FIGHTING TO
	592733	7300 200 700 00 DEUTDEHHXXX DE58 2007 0000 0600 2273 00 Persönlich haftende Gesellschafterin: Certification: 300 200 300 00 HYVEDEMM300 DE34 2003 0000 0059 2733 00 Grau Gebr. Beteiligungs-GmbH ISO 9001,

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ENTER DRAINS OR WATER COURSES!!

SECTION 6: Accidental release measures

6.1 Personal precautions, protectiv	e equipment and emergency procedures
Personal precautions :	Exclude sources of ignition and ventilate the area. Do not inhale vapours. Refer to protective measures listed in sections 7 and 8.
6.2 Environmental precautions	
Environmental precautions :	Do not let product enter drains. If the product contaminates lakes, rivers or sewage, inform appropriate authorities in accordance with local regulations.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up	:	Contain and collect spillage with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth and place in container for disposal according to local regula- tions (see chapter 13). Clean preferably with a detergent; avoid use of solvents.
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6.4 Reference to other sections

For personal protection see section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

•		
Advice on safe handling	:	Prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentrations higher than the occupational exposure limits. Comply with the health and safety at work laws. Smoking, eating and drinking should be prohibited in the ap- plication area. Observe specific national regulations for handling and use of paints.
Advice on protection against fire and explosion	:	The product should only be used in areas from which all na- ked lights and other sources of ignition have been excluded. Preparation may charge electrostatically: always use earthing leads whentransferring from one container to another. Opera- tors should wear anti-static footwear and clothing. No sparking tools should be used. Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage : Electrical equipment should be protected to the appropriate standard. Floors should be of the conducting type. Keep container tightly closed. Never use pressure to empty: container

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Georg-Wilhelm-Straße 189	Deutsche Bank	Hamburg	600227300	200 700 00	DEUTDEHHXXX	DE58 2007 0000 0600 2273 00	Persönlich haftende Gesellschafterin:	Certification:	EL SE
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Tel.: +49 (0) 40 / 75 10 30	Postbank	Hamburg	373205	200 100 20	PBNKDEFF200	DE85 2001 0020 0000 3732 05	Sitz/Registergericht Hamburg: HRB 17189	TS 16949,	\ 48/
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		isnot a pressure vessel. No smoking. Prevent unauthorized access. Containers which are opened must be carefully re- sealed and kept upright to prevent leakage.
Further information on stor- age conditions	:	Always keep in containers of same material as the original one. See also instructions on the label. Avoid heating and direct sunlight. Keep container dry in a cool, well-ventilated place.
Advice on common storage	:	Keep away from oxidizing agents and strongly acid or alkaline materials.
Recommended storage tem- perature	:	5 - 35 °C
7.3 Specific end use(s)		

Specific use(s) : This information is not av	Specific use(s)	: This information is not available.
----------------------------------------------	-----------------	--------------------------------------

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis	
2-methoxy-1- methylethyl ace- tate	108-65-6	STEL	100 ppm 550 mg/m3	2000/39/EC	
	Further inform skin, Indicativ		possibility of significant upt	ake through the	
		TWA	50 ppm 275 mg/m3	2000/39/EC	
	Further inform skin, Indicativ		possibility of significant upt	ake through the	
		TWA	50 ppm 274 mg/m3	GB EH40	
		hose for which there	bed through the skin. The a are concerns that dermal a		
		STEL	100 ppm 548 mg/m3	GB EH40	
	Further information: Can be absorbed through the skin. The assigned sub- stances are those for which there are concerns that dermal absorption will lead to systemic toxicity.				
2-butoxyethyl ace- tate	112-07-2	TWA	20 ppm 133 mg/m3	GB EH40	
		hose for which there	bed through the skin. The a are concerns that dermal a		
		STEL	50 ppm 332 mg/m3	GB EH40	
	Further inform	nation: Can be absor	rbed through the skin. The a	assigned sub-	
wicz Gebr. & Co. (GmbH & Co. KG) Bank N Vilheim-Straße 189 Deutsch amburg (Wilhelmsburg) HypoVe (0) 40 / 75 10 30 Postbar (0) 40 / 75 10 33 75 nolewicz, de	e Bank Hamburg 60022730 reinsbank Hamburg 59273300	200 300 00 HYVEDEMM300 DE34 2003	Sitz/Registergericht Hamburg: HRA 4 0000 0600 2273 00 Persönlich haftende Gasellschafterin: 0000 0059 2733 00 Grau Gebr. Beteiligungs-GmbH 0020 0000 3732 05 Sitz/Registergericht Hamburg: HRB 1 Geschäftsführender Gesellschafter: Michael O. Grau	Certification: ISO 9001,	
			 Interview Approximate Approximate Approximate 	Page 6/2	

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	stances are	those for which the	ere are concerns that derr	nal absorption will		
	lead to syste			·		
		TWA	20 ml/m3 133 mg/m3	List of ap- proved work- place expo- sure limits (WELs) / EH40		
	Further infor	mation: Sk				
			20 ml/m3 133 mg/m3	2000/39/EC		
	Further infor					
n-butyl acetate	123-86-4	TWA	150 ppm 724 mg/m3	GB EH40		
		STEL	200 ppm 966 mg/m3	GB EH40		
		STEL	150 ppm 723 mg/m3	2019/1831/E U		
	Further information: Indicative					
		TWA	50 ppm 241 mg/m3	2019/1831/E U		
	Further infor	mation: Indicative	· · · · · · · · · · · · · · · · · · ·			
xylene	1330-20-7	TWA	50 ppm 221 mg/m3	2000/39/EC		
	Further information: Identifies the possibility of significant uptake through the skin, Indicative					
		STEL	100 ppm 442 mg/m3	2000/39/EC		
	Further information: Identifies the possibility of significant uptake through the skin, Indicative					
		TWA	50 ppm 220 mg/m3	GB EH40		
	Further information: Can be absorbed through the skin. The assigned sub- stances are those for which there are concerns that dermal absorption will lead to systemic toxicity.					
		STEL	100 ppm 441 mg/m3	GB EH40		
	Further information: Can be absorbed through the skin. The assigned sub- stances are those for which there are concerns that dermal absorption will lead to systemic toxicity.					

Biological occupational exposure limits

Substance name	CAS-No.	Control parameters	Sampling time	Basis
xylene	1330-20-7	methyl hippuric acid: 650 Millimo- les per mole Creat- inine (Urine)	After shift	GB EH40 BAT

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health ef- fects	Value
2-methoxy-1- methylethyl acetate	Workers	Inhalation	Long-term systemic effects	275 mg/m3
wicz Gebr. & Co. (GmbH & Co. KG) Bank Name Nilhelm-Straße 189 Deutsche Bank	Ort KtoNr. BLZ Hamburg 600227300 200 700 00	BIC IBAN DEUTDEHHXXX DE58 2007 0000 0600	Sitz/Registergericht Hamburg: HRA 4244; 2273 00 Persönlich haftende Gesellschafterin:	2 Bureau Veritas Certification:



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	Workers	Dermal	Long-term systemic effects	796 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	33 mg/m3
	Consumers	Dermal	Long-term systemic effects	320 mg/kg bw/day
	Consumers	Oral	Long-term systemic effects	36 mg/kg bw/day
2-butoxyethyl acetate	Workers	Inhalation	Long-term systemic effects	133 mg/m3
	Workers	Dermal	Long-term systemic effects	169 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	80 mg/m3
	Consumers	Dermal	Long-term systemic effects	102 mg/kg bw/day
	Consumers	Oral	Long-term systemic effects	8.6 mg/kg bw/day
Fatty acids, C16-18 and C18-unsatd., Me esters, epoxidized, reaction products with ethylene glycol	Workers	Inhalation	Long-term systemic effects	4.69 mg/m3
	Workers	Dermal	Long-term systemic effects	6.67 mg/kg bw/day
n-butyl acetate	Workers	Inhalation	Long-term systemic effects	300 mg/m3
	Workers	Dermal	Long-term systemic effects	11 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	35.7 mg/m3
	Consumers	Dermal	Long-term systemic effects	6 mg/kg bw/day
	Consumers	Oral	Long-term systemic effects	2 mg/kg bw/day
xylene	Workers	Inhalation	Long-term systemic effects	221 mg/m3
	Workers	Dermal	Long-term systemic effects	212 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	65.3 mg/m3
	Consumers	Dermal	Long-term systemic effects	125 mg/kg bw/day
	Consumers	Oral	Long-term systemic effects	12.5 mg/kg bw/day
4- morpholinecarbalde- hyde	Workers	Inhalation	Long-term systemic effects	98 mg/m3
	Workers	Dermal	Long-term systemic effects	14 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	29 mg/m3
	Consumers	Dermal	Long-term systemic effects	8 mg/kg bw/day

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	Consumers	Oral	Long-term systemic effects	8 mg/kg bw/day
2-methoxy-1- methylethyl acetate	Workers	Inhalation	Long-term systemic effects	275 mg/m3
	Workers	Dermal	Long-term systemic effects	796 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	33 mg/m3
	Consumers	Dermal	Long-term systemic effects	320 mg/kg bw/day
	Consumers	Oral	Long-term systemic effects	36 mg/kg bw/day
2-butoxyethyl acetate	Workers	Inhalation	Long-term systemic effects	133 mg/m3
	Workers	Dermal	Long-term systemic effects	169 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	80 mg/m3
	Consumers	Dermal	Long-term systemic effects	102 mg/kg bw/day
	Consumers	Oral	Long-term systemic effects	8.6 mg/kg bw/day
Fatty acids, C16-18 and C18-unsatd., Me esters, epoxidized, reaction products with ethylene glycol	Workers	Inhalation	Long-term systemic effects	4.69 mg/m3
	Workers	Dermal	Long-term systemic effects	6.67 mg/kg bw/day
n-butyl acetate	Workers	Inhalation	Long-term systemic effects	300 mg/m3
	Workers	Dermal	Long-term systemic effects	11 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	35.7 mg/m3
	Consumers	Dermal	Long-term systemic effects	6 mg/kg bw/day
	Consumers	Oral	Long-term systemic effects	2 mg/kg bw/day
xylene	Workers	Inhalation	Long-term systemic effects	221 mg/m3
	Workers	Dermal	Long-term systemic effects	212 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	65.3 mg/m3
	Consumers	Dermal	Long-term systemic effects	125 mg/kg bw/day
	Consumers	Oral	Long-term systemic effects	12.5 mg/kg bw/day
4- morpholinecarbalde- hyde	Workers	Inhalation	Long-term systemic effects	98 mg/m3
	Workers	Dermal	Long-term systemic effects	14 mg/kg bw/day

 Mankiewicz Gebr. & Co. (GmbH & Co. KG)
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C	onsumers	Inhalation	Long-term systemic effects	29 mg/m3
C	consumers	Dermal	Long-term systemic effects	8 mg/kg bw/day
C	consumers	Oral	Long-term systemic effects	8 mg/kg bw/day

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
2-methoxy-1-methylethyl acetate	Fresh water	0.635 mg/l
	Marine water	0.064 mg/l
	Fresh water sediment	3.29 mg/kg dry
		weight (d.w.)
	Marine sediment	0.329 mg/kg dry
		weight (d.w.)
	Sewage treatment plant	100 mg/l
	Soil	0.29 mg/kg dry
		weight (d.w.)
2-butoxyethyl acetate	Fresh water	0.304 mg/l
	Marine water	0.03 mg/l
	Fresh water sediment	2.03 mg/kg dry
		weight (d.w.)
	Marine sediment	0.203 mg/kg dry
		weight (d.w.)
	Sewage treatment plant	90 mg/l
	Soil	0.415 mg/kg dry
		weight (d.w.)
Fatty acids, C16-18 and C18- unsatd., Me esters, epoxidized, reaction products with ethylene glycol	Fresh water	0.075 mg/l
	Marine water	0.007 mg/l
	Sewage treatment plant	1000 mg/l
	Fresh water sediment	2.11 mg/kg dry weight (d.w.)
	Marine sediment	0.211 mg/kg dry weight (d.w.)
	Soil	0.376 mg/kg dry weight (d.w.)
n-butyl acetate	Fresh water	0.18 mg/l
	Marine water	0.018 mg/l
	Fresh water sediment	0.981 mg/kg dry weight (d.w.)
	Marine sediment	0.098 mg/kg dry
	Sources treatment plant	weight (d.w.)
	Sewage treatment plant	35.6 mg/l
	Soil	0.09 mg/kg dry weight (d.w.)
xylene	Fresh water	0.327 mg/l
луюне	Marine water	0.327 mg/l
	Fresh water sediment	12.46 mg/kg dry
		weight (d.w.)
	Marine sediment	12.46 mg/kg dry

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	Sewage treatment plant	6.58 mg/l
	Soil	2.31 mg/kg dry
		weight (d.w.)
4-morpholinecarbaldehyde	Fresh water	0.5 mg/l
· · ·	Marine water	0.05 mg/l
	Sewage treatment plant	2000 mg/l
	Fresh water sediment	2.69 mg/kg dry
		weight (d.w.)
	Marine sediment	0.269 mg/kg dry
		weight (d.w.)
	Soil	0.244 mg/kg dry
		weight (d.w.)
2-methoxy-1-methylethyl acetate	Fresh water	0.635 mg/l
	Marine water	0.064 mg/l
	Fresh water sediment	3.29 mg/kg dry
		weight (d.w.)
	Marine sediment	0.329 mg/kg dry
		weight (d.w.)
	Sewage treatment plant	100 mg/l
	Soil	0.29 mg/kg dry
		weight (d.w.)
2-butoxyethyl acetate	Fresh water	0.304 mg/l
	Marine water	0.03 mg/l
	Fresh water sediment	2.03 mg/kg dry
		weight (d.w.)
	Marine sediment	0.203 mg/kg dry
		weight (d.w.)
	Sewage treatment plant	90 mg/l
	Soil	0.415 mg/kg dry
		weight (d.w.)
Fatty acids, C16-18 and C18- unsatd., Me esters, epoxidized, reaction products with ethylene	Fresh water	0.075 mg/l
glycol		
giyeei	Marine water	0.007 mg/l
	Sewage treatment plant	1000 mg/l
	Fresh water sediment	2.11 mg/kg dry
		weight (d.w.)
	Marine sediment	0.211 mg/kg dry
		weight (d.w.)
	Soil	1 0 376 ma/ka drv
	Soil	0.376 mg/kg dry
n-hutyl acetate		weight (d.w.)
n-butyl acetate	Fresh water	weight (d.w.) 0.18 mg/l
n-butyl acetate	Fresh water Marine water	weight (d.w.) 0.18 mg/l 0.018 mg/l
n-butyl acetate	Fresh water	weight (d.w.) 0.18 mg/l 0.018 mg/l 0.981 mg/kg dry
n-butyl acetate	Fresh water Marine water Fresh water sediment	weight (d.w.) 0.18 mg/l 0.018 mg/l 0.981 mg/kg dry weight (d.w.)
n-butyl acetate	Fresh water Marine water	weight (d.w.) 0.18 mg/l 0.018 mg/l 0.981 mg/kg dry weight (d.w.) 0.098 mg/kg dry
n-butyl acetate	Fresh water Marine water Fresh water sediment Marine sediment	weight (d.w.) 0.18 mg/l 0.018 mg/l 0.981 mg/kg dry weight (d.w.) 0.098 mg/kg dry weight (d.w.)
n-butyl acetate	Fresh water Marine water Fresh water sediment Marine sediment Sewage treatment plant	weight (d.w.) 0.18 mg/l 0.018 mg/l 0.981 mg/kg dry weight (d.w.) 0.098 mg/kg dry weight (d.w.) 35.6 mg/l
n-butyl acetate	Fresh water Marine water Fresh water sediment Marine sediment	weight (d.w.) 0.18 mg/l 0.018 mg/l 0.981 mg/kg dry weight (d.w.) 0.098 mg/kg dry weight (d.w.) 35.6 mg/l 0.09 mg/kg dry
n-butyl acetate	Fresh water Marine water Fresh water sediment Marine sediment Sewage treatment plant	weight (d.w.) 0.18 mg/l 0.018 mg/l 0.981 mg/kg dry weight (d.w.) 0.098 mg/kg dry weight (d.w.) 35.6 mg/l

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	Fresh water sediment	12.46 mg/kg dry weight (d.w.)
	Marine sediment	12.46 mg/kg dry weight (d.w.)
	Sewage treatment plant	6.58 mg/l
	Soil	2.31 mg/kg dry weight (d.w.)
4-morpholinecarbaldehyde	Fresh water	0.5 mg/l
	Marine water	0.05 mg/l
	Sewage treatment plant	2000 mg/l
	Fresh water sediment	2.69 mg/kg dry weight (d.w.)
	Marine sediment	0.269 mg/kg dry weight (d.w.)
	Soil	0.244 mg/kg dry weight (d.w.)

8.2 Exposure controls

Engineering measures

Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain aerosol- and solvent vapours concentration below the OEL, suitable respiratory protection must be worn.

Personal protective equipment Eye/face protection :	Wear safety goggles to protect against solvent splashes.
Hand protection	
Remarks :	Adhere to the professional organisation rule "Use of protec- tive gloves". Appropriate chemicals resistant glove tested in compliance with EN 374. Recommendation for protection against components general- ly found in the products:
	For short-term contact (i.e. splash protection): Appropriate material: nitrile rubber, Neoprene Material thickness: > 0,4 mm Breakthrough time: > 480 min
	Before use, the protective glove should be tested in any case for its specific work-station suitability (i.e. mechanical re- sistance, product compatibility and antistatic properties). Ad- here to the manufacturer's instructions and information relat- ing to the use, storage, care and replacement of protective gloves. Protective gloves shall be replaced immediately when physically damaged or worn. Preventive hand protection (skin protection cream) recommended. Wash immediately contam- inated skin. Design operations thus to avoid permanent use of protective gloves.
Skin and body protection	Depending on the probability of the occurrence of dangerous-

Skin and body protection : Depending on the probability of the occurrence of dangerously explosive atmospheres, adapted protective clothing must

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be worn.	

Respiratory protection	:	If the solvent concentration is above the air limit values, a breathing apparatus approved for this purpose must be worn Use half-mask model with cartridge or air-fed. Dry grinding, torch cutting and/or welding however can pro- duce hazardous dust and/or vapour. If possible, machine employing a wet medium. Where practicable, install exhaust hoods to improve capture of vapours and fumes and avoid exposition; otherwise wear res- piratory protection equipment.
Protective measures	:	Do not eat or drink during work - no smoking. Avoid product contact with skin, eyes and clothing. Avoid the inhalation of dust from sanding, particulates and spray mist arising from the application of this preparation. When operators, whether spraying or not, have to work inside the spray booth, ventilation is unlikely to be sufficient to con- trol particulates and solvent vapour in all cases. In such cir- cumstances they should wear a compressed air-fed respira- tor during the spraying process until such time as the particu- lates and solvent vapour concentration has fallen below the exposure limits.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	: liquid	
Colour	: according product name	
Odour	: characteristic	
Boiling point/boiling range	: ca. 120 °C	
Upper explosion limit	: 10 %(V)	
Lower explosion limit	: 1 %(V)	
Flash point	: 25 °C Method: ISO 13736	
Auto-ignition temperature	: >400 °C	
рН	:	
	No data available	
Viscosity Viscosity, kinematic	: > 21 mm²/s	
Flow time	: 151 s	
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		Cross section: 4 mm Method: DIN 53211
		> 101 s Cross section: 6 mm Method: ISO 2431
Solubility(ies) Water solubility	:	insoluble
Vapour pressure	:	ca. 100 hPa (50 °C)
Density	:	1.156 g/cm3 (20 °C)
9.2 Other information		
Miscibility with water	:	immiscible
Solvent separation	:	< 3.00 %(V)

SECTION 10: Stability and reactivity

10.1 Reactivity

No decomposition if stored and applied as directed.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous r	eactio	ons
Hazardous reactions	:	No dangerous reaction known under conditions of normal use. There are no data available on the preparation itself.
10.4 Conditions to avoid		
Conditions to avoid	:	Stable under recommended storage and handling conditions (See section 7).
10.5 Incompatible materials		
Materials to avoid	:	Keep away from oxidizing agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions.

10.6 Hazardous decomposition products

When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide and dioxide, smoke, oxides of nitrogen.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Not classified based on available information.

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Product:							
Acute oral toxicity	:	Acute toxicity estimate: > 2,000 mg/kg Method: Calculation method					
Acute inhalation toxicity	:	Acute toxicity estimate: > 20 mg/l Exposure time: 4 h Test atmosphere: vapour Method: Calculation method					
Acute dermal toxicity	:	Acute toxicity estimate: > 2,000 mg/kg Method: Calculation method					
Components:							
2-butoxyethyl acetate:							
Acute oral toxicity	:	LD50 (Rat): 1,880 mg/kg					
Acute dermal toxicity	:	LD50 (Rabbit): 1,480 mg/kg					
xylene:							
Acute oral toxicity	:	LD50 Oral (Rat): 4,300 mg/kg					
Skin corrosion/irritation							
Not classified based on ava	ilable	information.					
Serious eye damage/eye in Not classified based on ava							
Respiratory or skin sensit	Respiratory or skin sensitisation						
Skin sensitisation							
May cause an allergic skin r	May cause an allergic skin reaction.						
Respiratory sensitisation Not classified based on ava	ilable	information.					
Germ cell mutagenicity							
Not classified based on ava	ilable	information.					
Carcinogenicity Not classified based on ava	ilable	information.					
Reproductive toxicity Not classified based on ava	ilable	information.					
STOT - single exposure							
May cause drowsiness or di	izzine	SS.					
STOT - repeated exposure	•						
Not classified based on available information.							
Aspiration toxicity							
Not classified based on ava	ilable	information.					



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11.	2 Information on other hazards	
	Endocrine disrupting propertie	S
	Product:	
	Assessment :	The substance/mixture does not contain components consid- ered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
	Further information	
	Product:	
	Remarks :	Exposure of vapour concentration in excess of the stated OEL's may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse ef- fects on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue muscular weakness, drowsiness and in extrem cases, loss of con- sciousness. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non- allergic contact dermatitis and absorption through the skin. The liquid splashed in the eyes may cause irritation and re- versible damage.

SECTION 12: Ecological information

12.1 Toxicity

Product: Ecotoxicology Assessment Acute aquatic toxicity : There are no data available on the preparation itself. Product: Biodegradability Biodegradability : Remarks: There are no data available on the preparation itself. 12.3 Bioaccumulative potential

Product:

Bioaccumulation	:	Remarks: There are no data available on the preparation it-
		self.

12.4 Mobility in soil

Product:

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Mobility	: Remarks: There are no data avai self.	lable on the preparation it-
12.5 Results of PBT and vPvB a	ssessment	
Product:		
Assessment	: This substance/mixture contains to be either persistent, bioaccume very persistent and very bioaccur 0.1% or higher.	ulative and toxic (PBT), or
	: This substance/mixture contains to be either persistent, bioaccume very persistent and very bioaccur 0.1% or higher.	ulative and toxic (PBT), or
12.6 Endocrine disrupting prope	erties	
Product:		
Assessment	: The substance/mixture does not ered to have endocrine disrupting REACH Article 57(f) or Commissi (EU) 2017/2100 or Commission F levels of 0.1% or higher.	g properties according to ion Delegated regulation
12.7 Other adverse effects		
Product:		
Additional ecological infor- mation	: There are no data available on th	e preparation itself.
	The product should not be allowe courses.	ed to enter drains or water

SECTION 13: Disposal considerations

13.1 Waste treatment methods Product	:	Dispose of in accordance with local regulations.
Contaminated packaging	:	Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse. Packaging that cannot be cleaned should be disposed off in agreement with the regional waste disposal company.

SECTION 14: Transport information

14.1 UN number or ID number

ADR			: L	JN 126	63			
IMDG			: L	JN 126	63			
Mankiewicz Gebr. & Co. (GmbH & Co. KG) Georg-Wilhelm-Straße 189 21107 Hamburg (Wilhelmsburg) Tel.: +49 (0) 40 / 75 10 30 Fax: +49 (0) 40 / 75 10 33 75 www.mankiewicz.de	Deutsche Bank HypoVereinsbank	Hamburg Hamburg	600227300 59273300	200 300 00	HYVEDEMM300	DE58 2007 0000 0600 2273 00 DE34 2003 0000 0059 2733 00	Sitz/Registergericht Hamburg: HRA 42442 Persönlich hattende Gesellschafterin: Grau Gebr. Beteiligungs-GmbH Sitz/Registergericht Hamburg: HRB 17189 Geschäftsführender Gesellschafter: Michael O. Grau	Certification: ISO 9001,



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ΙΑΤΑ	•	UN 1263	
14.2 UN proper shipping name	•		
ADR		PAINT RELATED MA	TERIAL
IMDG	•	PAINT RELATED MA	
IATA		PAINT RELATED MA	
14.3 Transport hazard class(es)	•		
		Class	
ADR		Class 3	Subsidiary risks
	:	3	
	:	3	
	•	3	
14.4 Packing group			
ADR Packing group Classification Code Hazard Identification Number Labels Tunnel restriction code Remarks		always in closed, upri	ne user's premises: To be transported ght and safe containers. Make sure that se containers are aware of the rules of ident or spillage.
IMDG Packing group Labels EmS Code IATA (Cargo) Packing instruction (cargo aircraft) Packing group Labels IATA (Passenger) Packing instruction (passen-		III 3 <u>F-E, S-E</u> 366 III Flammable Liquids 355	
Packing instruction (passen- ger aircraft)	:	355	
Packing instruction (LQ) Packing group	:	Y344 III	
Labels	:	Flammable Liquids	
14.5 Environmental hazards			
ADR Environmentally hazardous IMDG Marine pollutant	:	no	
14.6 Special precautions for user	r		
Remarks	:		th less than 450 litres capacity, are not
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subject to ADR (see ADR 2.2.3.1.5) IMDG: Receptacles with less than 450 litres capacity, are not subject to the regulations of IMDG chapters 4.1, 5.2 and 6.1 (see IMDG 2.3.2.5)

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

Relevant EU provisions transposed through retained EU law

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)	:	Conditions of restriction for the fol- lowing entries should be considered: Number on list 3
UK REACH Candidate list of substances of very high concern (SVHC) for Authorisation	:	Not applicable
UK REACH List of substances subject to authorisation (Annex XIV)	:	Not applicable
Volatile organic compounds :		

Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control) Volatile organic compounds (VOC) content: 61.18 %, 707 g/l

Other regulations:

15.2 Chemical safety assessment

A chemical safety assessment has not been carried out for the mixture.

SECTION 16: Other information

Full text of H-Statements

H226 H302 H304 H312 H315 H317 H319 H332	 Flammable liquid and vapour. Harmful if swallowed. May be fatal if swallowed and enters airways. Harmful in contact with skin. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. Harmful if inbaled
H332	: Harmful if inhaled.

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H335 H336 H373	:	May cause respiratory irritation. May cause drowsiness or dizziness. May cause damage to organs through prolonged or repeated exposure.
H412 EUH066	:	Harmful to aquatic life with long lasting effects. Repeated exposure may cause skin dryness or cracking.
Full text of other abbreviation	ıs	
Acute Tox.	:	Acute toxicity
Aquatic Chronic	:	Long-term (chronic) aquatic hazard
Asp. Tox.	:	Aspiration hazard
Eye Irrit.	:	Eye irritation
Flam. Liq.	:	Flammable liquids
Skin Irrit.	:	Skin irritation
Skin Sens.	:	Skin sensitisation
STOT RE	:	Specific target organ toxicity - repeated exposure
STOT SE	:	Specific target organ toxicity - single exposure
2000/39/EC	:	Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values
2019/1831/EU	:	Europe. Commission Directive 2019/1831/EU establishing a fifth list of indicative occupational exposure limit values
GB EH40	:	UK. EH40 WEL - Workplace Exposure Limits
GB EH40 BAT	:	UK. Biological monitoring guidance values
2000/39/EC / TWA	:	Limit Value - eight hours
2000/39/EC / STEL	:	Short term exposure limit
2019/1831/EU / TWA	:	Limit Value - eight hours
2019/1831/EU / STEL	:	Short term exposure limit
GB EH40 / TWA GB EH40 / STEL	:	Long-term exposure limit (8-hour TWA reference period) Short-term exposure limit (15-minute reference period)

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA -European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory: LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quanti-

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tative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI -Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Other information

The information given in this material safety data sheet does 2 not release the user from its duty of risk assessment and control in the work place defined in other health and safety law. Adhere to the national sanitary and occupational safety regulations when using this product.

This safety datasheet complies with the requirements of requlation (EC) No 1907/2006(2020/878).

Classification of the mix	cture:	Classification procedure:
Flam. Liq. 3	H226	Based on product data or assessment
Skin Sens. 1	H317	Calculation method
STOT SE 3	H336	Calculation method

Department issuing safety data sheet

UMCO GmbH Georg-Wilhelm-Str.187, D-21107 Hamburg Telefon: +49(0)40/555 546 300 Fax: +49(0)40/555 546 357 e-mail:umco@umco.de

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 Sitz/Registergericht Hamburg: HRA 42442

 Deutsche Bank
 Hamburg
 600227300
 200 700 00
 DEUTDEHH0XX
 DES8 2007 0000 0600 2273 00
 Persönlich hattende Gesellschafterin: HypotVereinsbank

 HpotVereinsbank
 Hamburg
 373205
 200 300 00
 HVPDEMM300
 DE34 2003 0000 0059 2733 00
 Grauz Gebr. Betelligunge-GmbH

 Postbank
 Hamburg
 373205
 200 100 20
 PBNKDEFF200
 DE85 2001 0020 0000 373 205
 Sitz/Registergericht Hamburg: HRB 17189
 Mankiewicz Gebr. & Co. (GmbH & Co. KG) Bank Name Bureau Verita Georg-Wilhelm-Straße 189 21107 Hamburg Miliholm Certification Hamburg (Wilhelmsburg) ISO 9001 Tel.: +49 (0) 40 / 75 10 30 Fax: +49 (0) 40 / 75 10 33 75 Geschäftsführender Gesellschafter: Michael O. Grau EN 9100 wicz.de

