

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by
Commission Regulation (EU) 2020/878



BYK-P 104 S

Version: 16.2
SDB_IE

Revision Date: 22.01.2026

Date of last issue: 28.08.2024
Print Date: 27.01.2026

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

1.1 Product identifier

Trade name : BYK-P 104 S
UFI : F3Q7-W0Y2-V003-9J6A
Product code : 00000000000105747

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

Use of the Substance/Mixture : Wetting & Dispersing Additive

1.3 Details of the supplier of the safety data sheet

Company : BYK-Chemie GmbH
Abelstrasse 45
46483 Wesel
Telephone : +49 281 670-0
Telefax : +49 281 65735

Information : Regulatory Affairs
Telephone : +49 281 670-23532
Telefax : +49 281 670-23533
E-mail address : GHS.BYK@altana.com

1.4 Emergency telephone number

+44 1235 239670

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 exposure, Category 3, Respiratory system	H335: May cause respiratory irritation.
Specific target organ toxicity - repeated exposure, Category 2	H373: May cause damage to organs through prolonged or repeated exposure.
Long-term (chronic) aquatic hazard, Category 3	H412: Harmful to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

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Hazard pictograms	:	  
Signal word	:	Warning
Hazard statements	:	H226 Flammable liquid and vapour. H317 May cause an allergic skin reaction. H335 May cause respiratory irritation. H373 May cause damage to organs through prolonged or repeated exposure. H412 Harmful to aquatic life with long lasting effects.
Precautionary statements	:	Prevention: P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P260 Do not breathe mist or vapours. P273 Avoid release to the environment. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection. Response: P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Hazardous components which must be listed on the label:

- 85711-46-2 Fatty acids, C14-18 and C16-18-unsatd., maleated
- 1330-20-7 Xylene, mixture of isomers
- 108-31-6 maleic anhydride

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.

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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SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : Solution of a lower molecular weight unsaturated polycarboxylic acid polymer and a polysiloxane copolymer

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Fatty acids, C14-18 and C16-18-unsatd., maleated	85711-46-2 01-2119976378-19-0000	Skin Irrit. 2; H315 Skin Sens. 1; H317	>= 30 - < 50
Xylene, mixture of isomers	1330-20-7 01-2119488216-32	Eye Irrit. 2; H319 STOT SE 3; H335 (Respiratory system) STOT RE 2; H373 Asp. Tox. 1; H304 Flam. Liq. 3; H226 Acute Tox. 4; H332 Acute Tox. 4; H312 Skin Irrit. 2; H315 Aquatic Chronic 3; H412	>= 30 - < 50
ethylbenzene	100-41-4 202-849-4	Flam. Liq. 2; H225 Acute Tox. 4; H332 STOT RE 2; H373 (hearing organs) Asp. Tox. 1; H304 Aquatic Chronic 3; H412	>= 12,5 - < 20
2,6-dimethylheptan-4-one	108-83-8 203-620-1 01-2119474441-41	Flam. Liq. 3; H226 STOT SE 3; H335 (Respiratory system) specific concentration limit STOT SE 3; H335 >= 10 %	>= 3 - < 5
maleic anhydride	108-31-6 203-571-6 01-2119472428-31	Acute Tox. 4; H302 Skin Corr. 1B; H314 Eye Dam. 1; H318 Resp. Sens. 1; H334 Skin Sens. 1A; H317 STOT RE 1; H372 (Respiratory system) EUH071 specific concentration	>= 0,25 - < 0,5

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		limit Skin Sens. 1A; H317 ≥ 0,001 %	
		Acute toxicity estimate	
		Acute oral toxicity: 1.090 mg/kg	
octamethylcyclotetrasiloxane [D4]	556-67-2 209-136-7 01-2119529238-36	Repr. 2; H361f Aquatic Chronic 1; H410 PBT; EUH440 vPvB; EUH441 Flam. Liq. 3; H226	≥ 0,025 - < 0,1
		M-Factor (Chronic aquatic toxicity): 10	

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

- General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.
- If inhaled : If unconscious, place in recovery position and seek medical
advice.
If symptoms persist, call a physician.
- In case of skin contact : If on skin, rinse well with water.
If on clothes, remove clothes.
- In case of eye contact : Flush eyes with water as a precaution.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.
- If swallowed : Keep respiratory tract clear.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
Take victim immediately to hospital.

4.2 Most important symptoms and effects, both acute and delayed

- Symptoms : No information available.

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4.3 Indication of any immediate medical attention and special treatment needed

Treatment : No information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Alcohol-resistant foam
Carbon dioxide (CO₂)
Dry chemical

Unsuitable extinguishing media : High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : Carbon oxides

5.3 Advice for firefighters

Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
For safety reasons in case of fire, cans should be stored separately in closed containments.
Use a water spray to cool fully closed containers.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.
Remove all sources of ignition.
Evacuate personnel to safe areas.
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

6.2 Environmental precautions

Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.

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6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Neutralize with chalk, alkali solution or ammonia.
Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

6.4 Reference to other sections

For disposal considerations see section 13., For personal protection see section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Avoid formation of aerosol.
Do not breathe vapours/dust.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Take precautionary measures against static discharges.
Provide sufficient air exchange and/or exhaust in work rooms.
Open drum carefully as content may be under pressure.
Dispose of rinse water in accordance with local and national regulations.
Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.

Advice on protection against fire and explosion : Do not spray on a naked flame or any incandescent material.
Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Keep away from open flames, hot surfaces and sources of ignition.

Hygiene measures : When using do not eat or drink. When using do not smoke.
Wash hands before breaks and at the end of workday.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : No smoking. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Electrical installations / working materials must comply with the technological safety standards.

Further information on storage stability : No decomposition if stored and applied as directed.

7.3 Specific end use(s)

Specific use(s) : No data available

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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Xylene, mixture of isomers	1330-20-7	TWA	50 ppm 221 mg/m ³	2000/39/EC
		Further information: Identifies the possibility of significant uptake through the skin, Indicative		
		STEL	100 ppm 442 mg/m ³	2000/39/EC
		Further information: Identifies the possibility of significant uptake through the skin, Indicative		
		OELV - 8 hrs (TWA)	50 ppm 221 mg/m ³	IE OEL
		Further information: Substances which have the capacity to penetrate intact skin when they come in contact with it, and be absorbed into the body		
		OELV - 15 min (STEL)	100 ppm 442 mg/m ³	IE OEL
		Further information: Substances which have the capacity to penetrate intact skin when they come in contact with it, and be absorbed into the body		
ethylbenzene	100-41-4	TWA	100 ppm 442 mg/m ³	2000/39/EC
		Further information: Identifies the possibility of significant uptake through the skin, Indicative		
		STEL	200 ppm 884 mg/m ³	2000/39/EC
		Further information: Identifies the possibility of significant uptake through the skin, Indicative		
		OELV - 8 hrs (TWA)	100 ppm 442 mg/m ³	IE OEL
		Further information: Substances which have the capacity to penetrate intact skin when they come in contact with it, and be absorbed into the body		
		OELV - 15 min (STEL)	200 ppm 884 mg/m ³	IE OEL
		Further information: Substances which have the capacity to penetrate intact skin when they come in contact with it, and be absorbed into the body		
2,6-dimethylheptan-4-one	108-83-8	OELV - 8 hrs (TWA)	25 ppm 150 mg/m ³	IE OEL
maleic anhydride	108-31-6	OELV - 8 hrs (TWA) (Inhalable fraction and vapour)	0,01 ppm	IE OEL
		Further information: Chemical agents which following exposure may cause sensitisation of the respiratory tract and lead to asthma, rhinitis or extrinsic allergic alveolitis		

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

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Substance name	End Use	Exposure routes	Potential health effects	Value
Xylene, mixture of isomers	Workers	Inhalation	Long-term systemic effects	221 mg/m ³
	Workers	Inhalation	Acute local effects	442 mg/m ³
	Workers	Dermal	Long-term systemic effects	212 mg/kg
	Consumers	Inhalation	Long-term systemic effects	65,3 mg/m ³
	Consumers	Dermal	Long-term systemic effects	125 mg/kg
	Consumers	Oral	Long-term systemic effects	1,5 mg/kg
	Consumers	Inhalation	Acute local effects	260 mg/m ³
2,6-dimethylheptan-4-one	Workers	Inhalation	Acute systemic effects, Acute local effects, Long-term local effects	290 mg/m ³
	Workers	Skin contact	Long-term systemic effects	80 mg/kg
	Workers	Inhalation	Long-term systemic effects	479 mg/m ³
	Consumers	Inhalation	Acute systemic effects, Acute local effects, Long-term local effects	145 mg/m ³
	Consumers	Skin contact	Long-term systemic effects	28,5 mg/kg
	Consumers	Inhalation	Long-term systemic effects	171 mg/kg
	Consumers	Ingestion	Long-term systemic effects	7,14 mg/kg
maleic anhydride	Workers	Inhalation	Long-term systemic effects, Long-term local effects	0,081 mg/m ³
	Workers	Inhalation	Systemic effects, Acute effects, Local effects	0,2 mg/m ³
octamethylcyclotetrasiloxane [D4]	Consumers	Oral	Acute systemic effects, Long-term systemic effects	3,7 mg/kg
	Consumers	Inhalation	Acute systemic effects, Acute local effects, Long-term systemic effects, Long-term local effects	13 mg/m ³
	Workers	Inhalation	Acute systemic effects, Acute local effects, Long-term systemic effects, Long-term local	73 mg/m ³

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

Substance name	Environmental Compartment	Value	
Xylene, mixture of isomers	Fresh water	0,327 mg/l	
	Marine water	0,327 mg/l	
	Fresh water sediment	12,46 mg/kg	
	Marine sediment	12,46 mg/kg	
	Soil	2,31 mg/kg	
	Sewage treatment plant	6,58 mg/l	
2,6-dimethylheptan-4-one	Intermittent releases	0,327 mg/l	
	Fresh water	0,03 mg/l	
	Marine water	0,003 mg/l	
	Intermittent releases	0,3 mg/l	
	Fresh water sediment	0,46 mg/kg	
	Marine sediment	0,046 mg/kg	
maleic anhydride	Sewage treatment plant	2,55 mg/l	
	Soil	0,0746 mg/kg	
	Fresh water	0,038 mg/l	
	Marine water	0,0038 mg/l	
	Intermittent releases	0,379 mg/l	
	Soil	0,037 mg/kg	
octamethylcyclotetrasiloxane [D4]	Fresh water sediment	0,296 mg/kg	
	Marine sediment	0,0296 mg/kg	
	Sewage treatment plant	44,6 mg/l	
	Fresh water	1,5 µg/l	
	Marine water	0,15 µg/l	
	Fresh water sediment	0,64 mg/kg	
Hazard for predators: secondary poisoning	Soil	0,84 mg/kg	
	Sewage treatment plant	10 mg/l	
	Marine sediment	0,064 mg/kg	

8.2 Exposure controls

Personal protective equipment

Eye/face protection : Eye wash bottle with pure water
Tightly fitting safety goggles

Hand protection
Material : Fluorinated rubber
Break through time : > 480 min
Glove thickness : > 0,45 mm

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Skin and body protection : Impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Respiratory protection : In the case of vapour formation use a respirator with an approved filter.

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Environmental exposure controls

General advice : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform
respective authorities.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state : liquid

Colour : light brown

Odour : aromatic

Odour Threshold : No data available

Melting point/ range : < 0 °C
Method: derived

Initial boiling point : 137,00 °C
Method: derived

Upper explosion limit / Upper flammability limit : 7,60 %(V)

Lower explosion limit / Lower flammability limit : 0,80 %(V)

Flash point : 28,00 °C
Method: 48 (Abel-Pensky) DIN 51755

Auto-ignition temperature : > 200 °C
Method: DIN 51794

Decomposition temperature : No data available

pH : 4 (20 °C)
Concentration: 1 %
Method: Universal pH-value indicator

Viscosity

Viscosity, dynamic : No data available

Viscosity, kinematic : 40 mm²/s (40,00 °C)

Solubility(ies)

Water solubility : immiscible

Solubility in other solvents : No data available

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Partition coefficient: n-octanol/water	:	No data available
Vapour pressure	:	9 hPa (20,00 °C) Method: derived
Relative density	:	No data available
Density	:	0,9450 g/cm ³ (20,00 °C) Method: 4 (20°C oscillating U-tube)
Relative vapour density	:	No data available

9.2 Other information

Flammability (liquids)	:	Sustains combustion
Evaporation rate	:	No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No decomposition if stored and applied as directed.

10.2 Chemical stability

No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions	:	No decomposition if stored and applied as directed.
		Vapours may form explosive mixture with air.

10.4 Conditions to avoid

Conditions to avoid	:	Heat, flames and sparks.
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10.5 Incompatible materials

Materials to avoid	:	Strong oxidizing agents Strong acids
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10.6 Hazardous decomposition products

No decomposition if stored normally.

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SECTION 11: Toxicological information

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

Acute toxicity

Product:

- Acute oral toxicity : LD50 (Rat, male and female): > 3.500,000000 mg/kg
Method: OECD Test Guideline 401
GLP: yes
- 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:

Fatty acids, C14-18 and C16-18-unsatd., maleated:

- Acute oral toxicity : LD50 (Rat, female): > 2.000 mg/kg
Method: OECD Test Guideline 423
GLP: yes

Xylene, mixture of isomers:

- Acute oral toxicity : LD50 (Rat): 4.300 mg/kg
Method: EC Directive 92/69/EEC B.1 Acute Toxicity (Oral)
GLP: no
- Acute dermal toxicity : LD50 (Rabbit): > 4.200 mg/kg
GLP: No information available.

2,6-dimethylheptan-4-one:

- Acute oral toxicity : LD50 (Rat): > 2.000 mg/kg
Method: OECD Test Guideline 401
GLP: yes
- Acute inhalation toxicity : LC50 (Rat): > 14 mg/l
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
GLP: no
- Acute dermal toxicity : LD50 (Rat): > 2.000 mg/kg
Method: OECD Test Guideline 402
GLP: yes

maleic anhydride:

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Acute oral toxicity : LD50 (Rat, male and female): 1.090 mg/kg
Method: OECD Test Guideline 401

Acute dermal toxicity : LD50 (Rabbit, female): 2.620 mg/kg
GLP: No information available.

Skin corrosion/irritation

Product:

Species : Rabbit
Assessment : No skin irritation
Method : OECD Test Guideline 404
Result : No skin irritation

Remarks : May cause skin irritation and/or dermatitis.

Components:

Fatty acids, C14-18 and C16-18-unsatd., maleated:

Species : EPISKIN human epidermis skin constructs
Assessment : Irritating to skin.
Method : OECD Test Guideline 439
Result : Irritating to skin.
GLP : yes

2,6-dimethylheptan-4-one:

Species : Rabbit
Method : OECD Test Guideline 404
Result : No skin irritation
GLP : yes

maleic anhydride:

Species : Rabbit
Method : No information available.
Result : Corrosive to skin
GLP : no

Serious eye damage/eye irritation

Product:

Species : Rabbit
Assessment : No eye irritation
Method : OECD Test Guideline 405
Result : No eye irritation

Remarks : Vapours may cause irritation to the eyes, respiratory system
and the skin.

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Components:

Fatty acids, C14-18 and C16-18-unsatd., maleated:

Species : Rabbit
Method : OECD Test Guideline 405
Result : No eye irritation
GLP : yes

2,6-dimethylheptan-4-one:

Species : Rabbit
Method : OECD Test Guideline 405
Result : No eye irritation
GLP : no

maleic anhydride:

Species : Rabbit
Result : Corrosive to eyes
GLP : yes

Respiratory or skin sensitisation

Product:

Remarks : Causes sensitisation.

Components:

Fatty acids, C14-18 and C16-18-unsatd., maleated:

Test Type : Mouse Local Lymph Node assay (LLNA)
Species : Mouse
Assessment : May cause sensitisation by skin contact.
Method : OECD Test Guideline 429
Result : May cause sensitisation by skin contact.
GLP : yes

2,6-dimethylheptan-4-one:

Test Type : Maximisation Test
Exposure routes : Skin contact
Species : Guinea pig
Method : OECD Test Guideline 406
Result : Not a skin sensitizer.
GLP : yes

maleic anhydride:

Test Type : Buehler Test
Exposure routes : Skin contact
Species : Guinea pig
Method : OECD Test Guideline 406

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Result : Causes sensitisation.
GLP : yes

octamethylcyclotetrasiloxane [D4]:

Species : Guinea pig
Method : OECD Test Guideline 406
Result : Does not cause skin sensitisation.
GLP : yes

Germ cell mutagenicity

Product:

Genotoxicity in vitro : Remarks: No data available

Genotoxicity in vivo : Remarks: No data available

Components:

Fatty acids, C14-18 and C16-18-unsatd., maleated:

Genotoxicity in vitro : Test Type: Ames test
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: yes

Test Type: In vitro mammalian cell gene mutation test (mouse lymphoma)

Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative
GLP: yes

Test Type: Chromosome aberration test in vitro
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative
GLP: yes

Carcinogenicity

Product:

Remarks : No data available

Reproductive toxicity

Product:

Effects on fertility : Remarks: No data available

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Effects on foetal development : Remarks: No data available

STOT - single exposure

Product:

Remarks : No data available

STOT - repeated exposure

Product:

Remarks : No data available

Repeated dose toxicity

Product:

Remarks : No data available

Components:

Fatty acids, C14-18 and C16-18-unsatd., maleated:

Species : Rat, male and female
NOAEL : 1.000 mg/kg
Application Route : Oral
Method : OECD Test Guideline 422
GLP : yes
Target Organs : Stomach

Aspiration toxicity

Product:

No data available

11.2 Information on other hazards

Endocrine disrupting properties

Product:

Assessment : 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.

Further information

Product:

Remarks : Solvents may degrease the skin.

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SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish : Remarks: No data available

Components:

Fatty acids, C14-18 and C16-18-unsatd., maleated:

Toxicity to fish : LL50 (Leuciscus idus (Golden orfe)): > 150 mg/l
Exposure time: 48 h
Test Type: static test
Method: DIN 38412
GLP: no

Toxicity to daphnia and other : EL50 (Daphnia magna (Water flea)): > 100 mg/l
aquatic invertebrates
Exposure time: 48 h
Test Type: semi-static test
Method: OECD Test Guideline 202
GLP: yes

Toxicity to algae/aquatic : ErL50 (Pseudokirchneriella subcapitata (green algae)): > 100
plants
mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
GLP: yes

Toxicity to microorganisms : EC50 (activated sludge): > 1.000 mg/l
Exposure time: 3 h
Test Type: static test
Method: OECD Test Guideline 209
GLP: yes

Xylene, mixture of isomers:

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 1 mg/l
aquatic invertebrates
Exposure time: 24 h
Test Type: Immobilization
Method: OECD Test Guideline 202

Toxicity to algae/aquatic : EC50 (Selenastrum capricornutum (green algae)): 2,2 mg/l
plants
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
GLP: yes

NOEC (Pseudokirchneriella subcapitata (green algae)): 0,44
mg/l

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Exposure time: 72 h
Test Type: Growth inhibition
Method: OECD Test Guideline 201

Toxicity to fish (Chronic toxicity) : NOEC: > 1,3 mg/l
Exposure time: 56 d
Species: Oncorhynchus mykiss (rainbow trout)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 1,17 mg/l
Exposure time: 7 d
Species: Daphnia sp. (water flea)

NOEC: 0,96 mg/l
Exposure time: 7 d
Species: Daphnia sp. (water flea)

2,6-dimethylheptan-4-one:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 30 mg/l
Exposure time: 96 h
Test Type: flow-through test
Method: OECD Test Guideline 203
GLP: yes

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 37,2 mg/l
Exposure time: 48 h
Test Type: semi-static test
Method: OECD Test Guideline 202
GLP: yes

Toxicity to algae/aquatic plants : (Pseudokirchneriella subcapitata (green algae)): 46,9 mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
GLP: yes

maleic anhydride:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 75 mg/l
Exposure time: 96 h
Test Type: static test
GLP: no

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 42,81 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
GLP: yes

Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata): 74,35 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
GLP: yes

Toxicity to daphnia and other : NOEC: 10 mg/l

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aquatic invertebrates
(Chronic toxicity) Exposure time: 21 d
Species: Daphnia magna (Water flea)
GLP: no

12.2 Persistence and degradability

Product:

Biodegradability : Remarks: No data available

Components:

Fatty acids, C14-18 and C16-18-unsatd., maleated:

Biodegradability : Result: Not readily biodegradable.
Method: OECD Test Guideline 301
GLP: yes

Xylene, mixture of isomers:

Biodegradability : Test Type: aerobic
Result: Readily biodegradable.
Method: OECD Test Guideline 301F
GLP: yes

2,6-dimethylheptan-4-one:

Biodegradability : Result: Readily biodegradable.
Method: OECD Test Guideline 301D
GLP: no

maleic anhydride:

Biodegradability : Result: Readily biodegradable.
Method: OECD Test Guideline 301B
GLP: yes

12.3 Bioaccumulative potential

Product:

Bioaccumulation : Remarks: No data available

Components:

Xylene, mixture of isomers:

Bioaccumulation : Species: Oncorhynchus mykiss (rainbow trout)
Exposure time: 56 d
Bioconcentration factor (BCF): 25,9
GLP: no

Partition coefficient: n-
octanol/water : Pow: 3,2 (20 °C)
pH: 7

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maleic anhydride:

Partition coefficient: n-
octanol/water : log Pow: -2,61 (19,8 °C)
pH: 4 - 9
Method: OECD Test Guideline 107
GLP: yes

12.4 Mobility in soil

Components:

maleic anhydride:

Distribution among
environmental compartments : Koc: 42, log Koc: 1,63

12.5 Results of PBT and vPvB assessment

Product:

Assessment : 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.

Components:

octamethylcyclotetrasiloxane [D4]:

Assessment : Persistent, Bioaccumulative and Toxic (PBT).
: Very persistent and very bioaccumulative (vPvB).

12.6 Endocrine disrupting properties

Product:

Assessment : 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.

12.7 Other adverse effects

Product:

Additional ecological
information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Harmful to aquatic life with long lasting effects.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : The product should not be allowed to enter drains, water

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courses or the soil.
Do not contaminate ponds, waterways or ditches with
chemical or used container.
Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.
Do not burn, or use a cutting torch on, the empty drum.

SECTION 14: Transport information

14.1 UN number or ID number

ADR : UN 1993
RID : UN 1993
IMDG : UN 1993
IATA : UN 1993

14.2 UN proper shipping name

ADR : FLAMMABLE LIQUID, N.O.S.
(Xylene, Diisobutyl ketone)
RID : FLAMMABLE LIQUID, N.O.S.
(Xylene, Diisobutyl ketone)
IMDG : FLAMMABLE LIQUID, N.O.S.
(XYLENE, Diisobutyl ketone)
IATA : Flammable liquid, n.o.s.
(Xylene, Diisobutyl ketone)

14.3 Transport hazard class(es)

ADR : 3
RID : 3
IMDG : 3
IATA : 3

14.4 Packing group

ADR
Packing group : III
Classification Code : F1
Hazard Identification Number : 30
Labels : 3
Tunnel restriction code : D/E
RID
Packing group : III
Classification Code : F1
Hazard Identification Number : 30

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Labels : 3
IMDG
Packing group : III
Labels : 3
EmS Code : F-E, S-E
Remarks : IMDG Code segregation group - none

IATA (Cargo)
Packing instruction (cargo aircraft) : 366
Packing group : III
Labels : Flammable Liquids

IATA (Passenger)
Packing instruction (passenger aircraft) : 355
Packing instruction (LQ) : Y344
Packing group : III
Labels : Flammable Liquids

14.5 Environmental hazards

ADR
Environmentally hazardous : no

RID
Environmentally hazardous : no

IMDG
Marine pollutant : no

14.6 Special precautions for user

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

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 following entries should be considered:
Number on list 3

Number on list 75: If you intend to use this product as tattoo ink, please contact your vendor.
Banned and/or restricted

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REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).	:	This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).
REACH - List of substances subject to authorisation (Annex XIV)	:	Not applicable
Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.	P5c	FLAMMABLE LIQUIDS

15.2 Chemical safety assessment

Not applicable

SECTION 16: Other information

Items where relevant changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

Full text of H-Statements

EUH440	:	Accumulates in the environment and living organisms including in humans.
EUH441	:	Strongly accumulates in the environment and living organisms including in humans.
H225	:	Highly flammable liquid and vapour.
H226	:	Flammable liquid and vapour.
H302	:	Harmful if swallowed.
H304	:	May be fatal if swallowed and enters airways.
H312	:	Harmful in contact with skin.
H314	:	Causes severe skin burns and eye damage.
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.
H334	:	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	:	May cause respiratory irritation.
H361f	:	Suspected of damaging fertility.
H372	:	Causes damage to organs through prolonged or repeated exposure if inhaled.
H373	:	May cause damage to organs through prolonged or repeated exposure.
H410	:	Very toxic to aquatic life with long lasting effects.
H412	:	Harmful to aquatic life with long lasting effects.
EUH071	:	Corrosive to the respiratory tract.

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Full text of other abbreviations

Acute Tox.	:	Acute toxicity
Aquatic Chronic	:	Long-term (chronic) aquatic hazard
Asp. Tox.	:	Aspiration hazard
Eye Dam.	:	Serious eye damage
Eye Irrit.	:	Eye irritation
Flam. Liq.	:	Flammable liquids
PBT	:	Persistent, bioaccumulative and toxic
Repr.	:	Reproductive toxicity
Resp. Sens.	:	Respiratory sensitisation
Skin Corr.	:	Skin corrosion
Skin Irrit.	:	Skin irritation
Skin Sens.	:	Skin sensitisation
STOT RE	:	Specific target organ toxicity - repeated exposure
STOT SE	:	Specific target organ toxicity - single exposure
vPvB	:	Very persistent and very bioaccumulative
2000/39/EC	:	Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values
IE OEL	:	Ireland. List of Chemical Agents and Carcinogens with Occupational Exposure Limit Values - Code of Practice, Schedule 1 and 2
2000/39/EC / TWA	:	Limit Value - eight hours
2000/39/EC / STEL	:	Short term exposure limit
IE OEL / OELV - 8 hrs (TWA)	:	Occupational exposure limit value (8-hour reference period)
IE OEL / OELV - 15 min (STEL)	:	Occupational exposure limit value (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 Harmonised 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 Organisation; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardisation; 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 - Organisation 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 - (Quantitative) Structure Activity Relationship;

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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; TECl - 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

Classification of the mixture:

Flam. Liq. 3	H226
Skin Sens. 1	H317
STOT SE 3	H335
STOT RE 2	H373
Aquatic Chronic 3	H412

Classification procedure:

Based on product data or assessment
Calculation method
Calculation method
Calculation method
Calculation method

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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Annex: Exposure Scenarios

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