BYK-220 SN

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

1.1 Product identifier

Trade name	:	BYK-220 SN
UFI	:	X5JE-C0N9-T00T-DH5D
Product code	:	000000000000133096

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 irritation, Category 2	H315: Causes skin irritation.
Eye irritation, Category 2	H319: Causes serious eye irritation.
Respiratory sensitisation, Category 1	H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
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 - single exposure, Category 3, Central nervous system	H336: May cause drowsiness or dizziness.
Specific target organ toxicity - repeated exposure, Category 2	H373: May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard, Category 1	H304: May be fatal if swallowed and enters airways.
Long-term (chronic) aquatic hazard, Category 2	H411: Toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal word : Danger

Hazard statements :

H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H373	May cause damage to organs through prolonged or repeated exposure.
H411	Toxic 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:

P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P304 + P340 + P312	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
P331	Do NOT induce vomiting.
P342 + P311	If experiencing respiratory symptoms: Call a POISON CENTER/ doctor.
P370 + P378	In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
P391	Collect spillage.

Hazardous components which must be listed on the label:

- 64742-95-6 Solvent naphtha (petroleum), light arom.; Low boiling point naphtha - unspecified

- 91001-64-8 Fatty acids, C14-18 and C16-18-unsatd., 2-phenoxyethyl esters, maleated

- 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.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : Solution of a lower molecular weight unsaturated acidic polycarboxylic acid polyester with a polysiloxane copolymer

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Solvent naphtha (petroleum), light arom.; Low boiling point naphtha - unspecified	64742-95-6 01-2119455851-35	STOT SE 3; H336 (Central nervous system) STOT SE 3; H335 (Respiratory system) Aquatic Chronic 2; H411 Flam. Liq. 3; H226 Asp. Tox. 1; H304	>= 30 - < 50
Fatty acids, C14-18 and C16-18-unsatd., 2-phenoxyethyl esters, maleated	91001-64-8 292-835-4 01-2120057275-56-0000	Eye Irrit. 2; H319 Skin Sens. 1A; H317	>= 30 - < 50
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)	>= 1 - < 3

		EUH071 specific concentration 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 M-Factor (Chronic aquatic toxicity): 10	>= 0,025 - < 0,1

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.
Symptoms of poisoning may appear several hours later.
Do not leave the victim unattended.

If inhaled : Call a physician or poison control centre immediately.
If unconscious, place in recovery position and seek medical advice.

In case of skin contact : If skin irritation persists, call a physician.
If on skin, rinse well with water.
If on clothes, remove clothes.

In case of eye contact : Immediately flush eye(s) with plenty of water.
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 induce vomiting.

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.
Risks	:	May be fatal if swallowed and enters airways. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. May cause drowsiness or dizziness. May cause damage to organs through prolonged or repeated exposure.

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 Silicon 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.
Ensure adequate ventilation.
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.

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 : Do not spray on a naked flame or any incandescent material.

fire and explosion		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

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
maleic anhydride	108-31-6	TWA	0,1 ppm 0,4 mg/m3	CH SUVA
	Further information: Sensitizers; Substances marked with an S can lead to very strong allergic reactions., National Institute for Occupational Safety and Health, Occupational Safety and Health Administration, Harm to the unborn child is not to be expected when the OEL-value is respected			
		STEL	0,1 ppm 0,4 mg/m3	CH SUVA
	Further information: Sensitizers; Substances marked with an S can lead to very strong allergic reactions., National Institute for Occupational Safety and Health, Occupational Safety and Health Administration, Harm to the unborn child is not to be expected when the OEL-value is respected			

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

Substance name	End Use	Exposure routes	Potential health effects	Value
Solvent naphtha (petroleum), light arom.; Low boiling point naphtha - unspecified	Workers	Skin contact	Long-term exposure, Systemic effects	25 mg/kg
	Workers	Inhalation	Long-term exposure, Systemic effects	150 mg/m3
	Consumers	Skin contact	Long-term exposure, Systemic effects	11 mg/kg

	Consumers	Inhalation	Long-term exposure, Systemic effects	32 mg/m3
	Consumers	Ingestion	Long-term exposure, Systemic effects	11 mg/kg
Fatty acids, C14-18 and C16-18-unsatd., 2-phenoxyethyl esters, maleated	Workers	Dermal	Long-term systemic effects	1 mg/kg
	Consumers	Dermal	Long-term systemic effects	0,5 mg/kg
	Consumers	Oral	Long-term systemic effects	0,5 mg/kg
maleic anhydride	Workers	Inhalation	Long-term systemic effects, Long-term local effects	0,081 mg/m3
	Workers	Inhalation	Systemic effects, Acute effects, Local effects	0,2 mg/m3
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/m3
	Workers	Inhalation	Acute systemic effects, Acute local effects, Long-term systemic effects, Long-term local effects	73 mg/m3

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

Substance name	Environmental Compartment	Value
Fatty acids, C14-18 and C16-18-unsatd., 2-phenoxyethyl esters, maleated	Hazard for predators: secondary poisoning	20 mg/kg
maleic anhydride	Fresh water	0,038 mg/l
	Marine water	0,0038 mg/l
	Intermittent releases	0,379 mg/l
	Soil	0,037 mg/kg
	Fresh water sediment	0,296 mg/kg
	Marine sediment	0,0296 mg/kg
	Sewage treatment plant	44,6 mg/l
octamethylcyclotetrasiloxane [D4]	Fresh water	1,5 µg/l
	Marine water	0,15 µg/l
	Fresh water sediment	0,64 mg/kg
	Soil	0,84 mg/kg
	Sewage treatment plant	10 mg/l

	Marine sediment	0,064 mg/kg
	Hazard for predators: secondary poisoning	41 mg/kg

8.2 Exposure controls

Personal protective equipment

Eye/face protection : Eye wash bottle with pure water
Tightly fitting safety goggles
Wear face-shield and protective suit for abnormal processing problems.

Hand protection

Material : Nitrile rubber
Break through time : > 480 min

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.

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 yellow

Odour : characteristic

Odour Threshold : No data available

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

Initial boiling point : 165 °C
Method: derived

Upper explosion limit / Upper flammability limit : 7,5 %(V)

Lower explosion limit / Lower flammability limit : 1 %(V)

Flash point	:	51 °C Method: 48 (Abel-Pensky) DIN 51755
Auto-ignition temperature	:	> 200 °C Method: M0062 (Analytics Wesel)
pH	:	3,5 (20 °C) Concentration: 1 % Method: DIN 19268
Viscosity		
Viscosity, dynamic	:	18 mPa.s Method: P/K 20°C
Solubility(ies)		
Water solubility	:	immiscible
Vapour pressure	:	5 hPa (ca. 20 °C) Method: derived
Density	:	0,96 g/cm3 (20 °C, 1.013 hPa) 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
Surface tension	:	24 mN/m, ring dynamometer

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.

10.5 Incompatible materials

Materials to avoid : Strong oxidizing agents

10.6 Hazardous decomposition products

No decomposition if stored and applied as directed.

SECTION 11: Toxicological information

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

Acute toxicity

Not classified due to lack of data.

Product:

Acute oral toxicity : Acute toxicity estimate: > 2.000 mg/kg
Method: Calculation method

Components:

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Acute oral toxicity : Remarks: No data available

Acute inhalation toxicity : Remarks: No data available

Acute dermal toxicity : LD50 (Rabbit, male and female): > 3.160 mg/kg
Method: OECD Test Guideline 402

Fatty acids, C14-18 and C16-18-unsatd., 2-phenoxyethyl esters, maleated:

Acute oral toxicity : LD50 Oral (Rat, male and female): 8.295 mg/kg
Method: OECD Test Guideline 401
GLP: yes

maleic anhydride:

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

Causes skin irritation.

Product:

Remarks : May irritate skin.
May cause skin irritation and/or dermatitis.

Components:

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

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

Fatty acids, C14-18 and C16-18-unsatd., 2-phenoxyethyl esters, maleated:

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

Causes serious eye irritation.

Product:

Remarks	:	Causes serious eye irritation.

Components:

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

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

Fatty acids, C14-18 and C16-18-unsatd., 2-phenoxyethyl esters, maleated:

Species	:	Rabbit
Assessment	:	Irritating to eyes.
Result	:	Eye irritation
GLP	:	yes

maleic anhydride:

Species	:	Rabbit
Result	:	Corrosive to eyes
GLP	:	yes

Respiratory or skin sensitisation

Skin sensitisation

May cause an allergic skin reaction.

Respiratory sensitisation

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Product:

Remarks	:	Causes sensitisation.

Components:

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Test Type	:	Maximisation Test
Exposure routes	:	Dermal
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	Does not cause skin sensitisation.

Fatty acids, C14-18 and C16-18-unsatd., 2-phenoxyethyl esters, maleated:

Test Type	:	Mouse Local Lymph Node assay (LLNA)
Species	:	Mouse
Assessment	:	The product is a skin sensitiser, sub-category 1A.
Method	:	OECD Test Guideline 429
Result	:	The product is a skin sensitiser, sub-category 1A.
GLP	:	yes

maleic anhydride:

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

Not classified due to lack of data.

Product:

Genotoxicity in vitro	:	Remarks: No data available

Genotoxicity in vivo : Remarks: No data available

Components:

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Germ cell mutagenicity-Assessment : Classified based on benzene content < 0.1% (Regulation (EC) 1272/2008, Annex VI, Part 3, Note P)

Fatty acids, C14-18 and C16-18-unsatd., 2-phenoxyethyl esters, 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: Chromosome aberration test in vitro
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
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

Carcinogenicity

Not classified due to lack of data.

Product:

Remarks : No data available

Components:

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Carcinogenicity - Assessment : Classified based on benzene content < 0.1% (Regulation (EC) 1272/2008, Annex VI, Part 3, Note P)

Reproductive toxicity

Not classified due to lack of data.

Product:

Effects on fertility : Remarks: No data available

Effects on foetal development : Remarks: No data available

STOT - single exposure

May cause respiratory irritation.
May cause drowsiness or dizziness.

Product:

Remarks : No data available

STOT - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Product:

Remarks : No data available

Repeated dose toxicity

Product:

Remarks : No data available

Components:

Fatty acids, C14-18 and C16-18-unsatd., 2-phenoxyethyl esters, maleated:

Species	:	Rat, male and female
NOAEL	:	300 mg/kg
Application Route	:	Oral
Method	:	OECD Test Guideline 422
GLP	:	yes
Target Organs	:	Blood

Aspiration toxicity

May be fatal if swallowed and enters airways.

Product:

No data available

Components:

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

11.2 Information on other hazards

Endocrine disrupting properties

Not classified due to lack of data.

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 : Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.
Concentrations substantially above the TLV value may cause narcotic effects.
Solvents may degrease the skin.

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish : Remarks: No data available

Toxicity to daphnia and other aquatic invertebrates : Remarks: No data available

Components:

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Toxicity to fish : LL50 (Fish): 9,2 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
GLP: yes

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 3,2 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
GLP: yes

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata): 2,6 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
GLP: yes

Fatty acids, C14-18 and C16-18-unsatd., 2-phenoxyethyl esters, maleated:

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l
Exposure time: 96 h
Test Type: semi-static test
Method: OECD Test Guideline 203
GLP: yes

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

GLP: yes

Toxicity to algae/aquatic plants	:	ErL50 (Pseudokirchneriella subcapitata): > 100 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: Respiration inhibition Method: OECD Test Guideline 209 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 aquatic invertebrates (Chronic toxicity)	:	NOEC: 10 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea) GLP: no

12.2 Persistence and degradability

Product:

Biodegradability	:	Remarks: No data available

Components:

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Biodegradability	:	Result: Readily biodegradable. Method: OECD Test Guideline 301F

Fatty acids, C14-18 and C16-18-unsatd., 2-phenoxyethyl esters, maleated:

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

maleic anhydride:

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

12.3 Bioaccumulative potential

Product:

Bioaccumulation	:	Remarks: No data available

Components:

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. Toxic 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 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

ADN	:	UN 1268
ADR	:	UN 1268
RID	:	UN 1268
IMDG	:	UN 1268
IATA	:	UN 1268

14.2 UN proper shipping name

ADN	:	PETROLEUM DISTILLATES, N.O.S.
ADR	:	PETROLEUM DISTILLATES, N.O.S.
RID	:	PETROLEUM DISTILLATES, N.O.S.
IMDG	:	PETROLEUM DISTILLATES, N.O.S. (Solvent naphtha)
IATA	:	Petroleum distillates, n.o.s.

14.3 Transport hazard class(es)

ADN	:	3
ADR	:	3

RID	:	3
IMDG	:	3
IATA	:	3

14.4 Packing group

ADN

Packing group	:	III
Classification Code	:	F1
Hazard Identification Number	:	30
Labels	:	3

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
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 instruction (LQ)	:	Y344
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

ADN

Environmentally hazardous	:	yes

ADR

Environmentally hazardous	:	yes

RID

Environmentally hazardous	:	yes

IMDG
Marine pollutant : yes

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 must be considered:: Number on list 3 Number on list 75: If you intend to use this product as tattoo ink, please contact your vendor.
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.	E2	ENVIRONMENTAL HAZARDS
	P5c	FLAMMABLE LIQUIDS

Volatile organic compounds : Ordinance on the Incentive Tax on Volatile Organic Compounds (OVOC)
Volatile organic compounds (VOC) content: 46,68 %

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.
H226	:	Flammable liquid and vapour.
H302	:	Harmful if swallowed.
H304	:	May be fatal if swallowed and enters airways.
H314	:	Causes severe skin burns and eye damage.
H317	:	May cause an allergic skin reaction.
H318	:	Causes serious eye damage.
H319	:	Causes serious eye irritation.
H334	:	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	:	May cause respiratory irritation.
H336	:	May cause drowsiness or dizziness.
H361f	:	Suspected of damaging fertility.
H372	:	Causes damage to organs through prolonged or repeated exposure if inhaled.
H410	:	Very toxic to aquatic life with long lasting effects.
H411	:	Toxic to aquatic life with long lasting effects.
EUH071	:	Corrosive to the respiratory tract.

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 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
CH SUVA	:	Switzerland. Limit values at the work place
CH SUVA / TWA	:	Time Weighted Average
CH SUVA / STEL	:	Short Term Exposure Limit

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; BGW - Biological Limit Values; 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); LSPN - List of Hazardous Notified Substances (Chile); 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; 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

Classification of the mixture:		**Classification procedure:**
Flam. Liq. 3	H226	Based on product data or assessment
Skin Irrit. 2	H315	Calculation method
Eye Irrit. 2	H319	Calculation method
Resp. Sens. 1	H334	Calculation method
Skin Sens. 1	H317	Calculation method
STOT SE 3	H335	Calculation method
STOT SE 3	H336	Calculation method
STOT RE 2	H373	Calculation method
Asp. Tox. 1	H304	Calculation method
Aquatic Chronic 2	H411	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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