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

1.1. Product identifier

ORALITE® 5018 Screen Printing Ink (035)

Further trade names

ORALITE® Siebdruckfarbe 5018-035
Colour: orange (035)
Products-Number: 30041969, 30041970, 30041971. 30041972, 30041973, 30041974, 30041975, 30041976, 30041977, 30042023, 30042024, 30042025

UFI: XEGK-T85E-2Q31-9G6M

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

Use of the substance/mixture

Colour (Screen Printing Ink) Reserved for industrial and professional use.

Uses advised against

Do not use for private purposes (household).

1.3. Details of the supplier of the safety data sheet

Company name:	ORAFOL Europe GmbH Germany	
Street:	Orafolstraße 1	
Place:	D-16515 Oranienburg	
Telephone:	+ 49 3301 864 0	Telefax: + 49 3301 864 100
E-mail:	EHSQ@orafol.de	
Contact person:	EHSQ Department	
Internet:	www.orafol.com	

1.4. Emergency telephone number:

National Poison Information Service: In case of a medical emergency following exposure to a chemical, the public should call NHS Direct in England or Wales 0845 46 47 or NHS 24 in Scotland 08454 24 24 24 (UK only).

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GB CLP Regulation

Flam. Liq. 3; H226
Skin Sens. 1; H317
Aquatic Chronic 3; H412

Full text of hazard statements: see SECTION 16.

2.2. Label elements

GB CLP Regulation

Hazard components for labelling

Reaction mass of 1,2,2,6,6-pentamethyl-4-piperidyl sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate

Signal word: Warning

Pictograms:

Hazard statements

H226	Flammable liquid and vapour.
H317	May cause an allergic skin reaction.

Hazard statements

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

P363 Wash contaminated clothing before reuse.

P403+P235 Store in a well-ventilated place. Keep cool.

P501 Dispose of contents/container to an appropriate recycling or disposal facility.

Labelling of packages where the contents do not exceed 125 ml

Signal word: Warning

Pictograms:

Hazard statements

H317-H412

Precautionary statements

P280-P501

2.3. Other hazards

The mixture contains the following substances fulfilling the PBT-/vPvB criteria according to REACH Annex XIII: none

Endocrine disrupting properties - Toxicity:
The mixture does not contain substances >=0.1% of substances that have endocrine disrupting properties according to Regulation (EC) No. 1907/2006, Article 59(1) or Regulation (EU) 2017/2100 or Regulation (EU) 2018/605.

Endocrine disrupting properties - Ecotoxicity:
The mixture does not contain substances >=0.1% of substances that have endocrine disrupting properties according to Regulation (EC) No. 1907/2006, Article 59(1) or Regulation (EU) 2017/2100 or Regulation (EU) 2018/605.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
112-07-2	2-butoxyethyl acetate; butylglycol acetate			5 - < 10 %
	203-933-3	607-038-00-2		
	Acute Tox. 4, Acute Tox. 4, Acute Tox. 4; H332 H312 H302			
	Reaction mass of ethylbenzene and xylene			5 - < 10 %
	905-588-0		01-2119488216-32	
	Flam. Liq. 3, Acute Tox. 4, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3, STOT RE 2, Asp. Tox. 1, Aquatic Chronic 3; H226 H332 H312 H315 H319 H335 H373 H304 H412			
108-65-6	2-methoxy-1-methylethyl acetate			5 - < 10 %
	203-603-9	607-195-00-7	01-2119475791-29	
	Flam. Liq. 3, STOT SE 3; H226 H336			

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
1065336-91-5	Reaction mass of 1,2,2,6,6-pentamethyl-4-piperidyl sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate			< 1 %
	915-687-0		01-2119491304-40	
	Repr. 2, Skin Sens. 1A, Aquatic Acute 1, Aquatic Chronic 1; H361f H317 H400 H410			

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
112-07-2	203-933-3	2-butoxyethyl acetate; butylglycol acetate	5 - < 10 %
	inhalation: ATE = 11 mg/l (vapours); inhalation: LC50 = 2,66 mg/l (dusts or mists); dermal: LD50 = ca. 1500 mg/kg; oral: LD50 = ca. 1880 mg/kg		
	905-588-0	Reaction mass of ethylbenzene and xylene	5 - < 10 %
	inhalation: LC50 = 6700 mg/l (vapours); inhalation: ATE = 1,5 mg/l (dusts or mists); dermal: LD50 = 12126 mg/kg; oral: LD50 = 3523 mg/kg		
108-65-6	203-603-9	2-methoxy-1-methylethyl acetate	5 - < 10 %
	dermal: LD50 = > 5000 mg/kg; oral: LD50 = 6190 - 10000 mg/kg		
1065336-91-5	915-687-0	Reaction mass of 1,2,2,6,6-pentamethyl-4-piperidyl sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	< 1 %
	inhalation: Data lacking (gases); dermal: LD50 = > 3170 mg/kg; oral: LD50 = 3230 mg/kg Aquatic Acute 1; H400: M=1 Aquatic Chronic 1; H410: M=1		

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

First aider: Pay attention to self-protection! Remove affected person from the danger area and lay down.

After inhalation

Provide fresh air. When in doubt or if symptoms are observed, get medical advice.

After contact with skin

After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. Medical treatment necessary.

After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water. In case of eye irritation consult an ophthalmologist. If eye irritation persists: Get medical advice/attention.

After ingestion

Rinse mouth immediately and drink 1 glass of of water. Do NOT induce vomiting.

4.2. Most important symptoms and effects, both acute and delayed

No information available.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Water spray jet, Carbon dioxide (CO2), Foam, Extinguishing powder.

Unsuitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

Flammable. Vapours can form explosive mixtures with air. Hazardous combustion products: Carbon dioxide (CO2), Carbon monoxide (CO), Sulphur oxides, Silicon dioxide (SiO2) .

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit. The danger areas must be delimited and identified using relevant warning and safety signs. Heating causes rise in pressure with risk of bursting. The vapour of the product is heavier than air and may accumulate below ground level, in pits, channels and basements in higher concentration. Beware of reignition.

Additional information

Use water spray jet to protect personnel and to cool endangered containers. Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

Remove all sources of ignition. Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment. Use personal protection equipment. Provide adequate ventilation.

6.2. Environmental precautions

Do not allow uncontrolled discharge of product into the environment. Explosion risk. Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains. In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

6.3. Methods and material for containment and cleaning up

For cleaning up

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

Other information

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections

Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Provide adequate ventilation. Avoid contact with skin, eyes and clothes.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges. Vapours can form explosive mixtures with air.

Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat, drink, smoke, sniff. Take off contaminated clothing. Wash hands before breaks and after work. When using do not eat, drink, smoke, sniff.

Further information on handling

Thermal hazards: Hazardous decomposition products: Methyl methacrylate, dodecyl methacrylate, Phenol, Sulphur dioxide (SO2).

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed. Keep in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep/Store only in original container.

Hints on joint storage

Do not store together with: Oxidizing agent. Pyrophoric or self-heating substances.

Further information on storage conditions

Unsuitable container/equipment material: Copper, Aluminium, Zinc.

7.3. Specific end use(s)

Colour (Screen Printing Ink)

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m³	fibres/ml	Category	Origin
108-65-6	1-Methoxypropyl acetate	50	274		TWA (8 h)	WEL
		100	548		STEL (15 min)	WEL
112-07-2	2-Butoxyethyl acetate	20	133		TWA (8 h)	WEL
		50	332		STEL (15 min)	WEL
7727-43-7	Barium sulphate, inhalable dust	-	10		TWA (8 h)	WEL
80-62-6	Methyl methacrylate	50	208		TWA (8 h)	WEL
		100	416		STEL (15 min)	WEL

DNEL/DMEL values

CAS No	Substance		
DNEL type	Exposure route	Effect	Value
112-07-2	2-butoxyethyl acetate; butylglycol acetate		
Worker DNEL, acute	inhalation	local	333 mg/m³
Worker DNEL, acute	dermal	systemic	120 mg/kg bw/day
Worker DNEL, acute	inhalation	systemic	775 mg/m³
Consumer DNEL, acute	dermal	systemic	72 mg/kg bw/day
Consumer DNEL, acute	inhalation	systemic	499 mg/m³
Consumer DNEL, acute	oral	systemic	36 mg/kg bw/day
Consumer DNEL, acute	inhalation	local	200 mg/m³
Consumer DNEL, long-term	dermal	systemic	102 mg/kg bw/day
Consumer DNEL, long-term	inhalation	systemic	80 mg/m³
Consumer DNEL, long-term	oral	systemic	8,6 mg/kg bw/day
Worker DNEL, long-term	dermal	systemic	169 mg/kg bw/day
Worker DNEL, long-term	inhalation	systemic	133 mg/m³
	Reaction mass of ethylbenzene and xylene		
Worker DNEL, long-term	inhalation	systemic	221 mg/m³
Worker DNEL, acute	inhalation	systemic	442 mg/m³
Worker DNEL, long-term	inhalation	local	221 mg/m³
Worker DNEL, acute	inhalation	local	442 mg/m³
Worker DNEL, long-term	dermal	systemic	212 mg/kg bw/day
Consumer DNEL, long-term	inhalation	systemic	65,3 mg/m³
Consumer DNEL, acute	inhalation	systemic	260 mg/m³
Consumer DNEL, long-term	inhalation	local	65,3 mg/m³
Consumer DNEL, acute	inhalation	local	260 mg/m³
Consumer DNEL, long-term	dermal	systemic	125 mg/kg bw/day
Consumer DNEL, long-term	oral	systemic	12,5 mg/kg bw/day
108-65-6	2-methoxy-1-methylethyl acetate		
Worker DNEL, long-term	inhalation	systemic	275 mg/m³

DNEL/DMEL values

CAS No	Substance			
DNEL type		Exposure route	Effect	Value
Worker DNEL, acute		inhalation	local	550 mg/m³
Worker DNEL, long-term		dermal	systemic	796 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	33 mg/m³
Consumer DNEL, long-term		inhalation	local	33 mg/m³
Consumer DNEL, long-term		dermal	systemic	320 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	36 mg/kg bw/day
1065336-91-5	Reaction mass of 1,2,2,6,6-pentamethyl-4-piperidyl sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate			
Worker DNEL, acute		dermal	systemic	2,5 mg/kg bw/day
Worker DNEL, acute		inhalation	systemic	2,35 mg/m³
Worker DNEL, long-term		inhalation	systemic	0,68 mg/m³
Worker DNEL, long-term		dermal	systemic	0,5 mg/kg bw/day
Consumer DNEL, acute		dermal	systemic	1,25 mg/kg bw/day
Consumer DNEL, acute		inhalation	systemic	0,58 mg/m³
Consumer DNEL, acute		oral	systemic	1,25 mg/kg bw/day
Consumer DNEL, long-term		dermal	systemic	0,25 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	0,17 mg/m³
Consumer DNEL, long-term		oral	systemic	0,05 mg/kg bw/day
7727-43-7	Barium Sulfate			
Worker DNEL, long-term		inhalation	systemic	10 mg/m³
Consumer DNEL, long-term		oral	systemic	13000 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	10 mg/m³
Worker DNEL, long-term		inhalation	local	10 mg/m³

PNEC values

CAS No	Substance	
Environmental compartment		Value
112-07-2	2-butoxyethyl acetate; butylglycol acetate	
Freshwater		0,304 mg/l
Freshwater (intermittent releases)		0,56 mg/l
Marine water		0,03 mg/l
Freshwater sediment		2,03 mg/kg
Marine sediment		0,203 mg/kg
Secondary poisoning		60 mg/kg
Micro-organisms in sewage treatment plants (STP)		90 mg/l
Soil		0,415 mg/kg
	Reaction mass of ethylbenzene and xylene	
Freshwater		0,327 mg/l
Freshwater (intermittent releases)		0,327 mg/l
Marine water		0,327 mg/l
Freshwater sediment		12,46 mg/kg
Marine sediment		12,46 mg/kg
Micro-organisms in sewage treatment plants (STP)		6,58 mg/l
Soil		2,31 mg/kg
108-65-6	2-methoxy-1-methylethyl acetate	
Freshwater		0,635 mg/l
Freshwater (intermittent releases)		6,35 mg/l
Marine water		0,064 mg/l
Freshwater sediment		3,29 mg/kg
Marine sediment		0,329 mg/kg

PNEC values

CAS No	Substance
Environmental compartment	Value
Micro-organisms in sewage treatment plants (STP)	100 mg/l
Soil	0,29 mg/kg
1065336-91-5	Reaction mass of 1,2,2,6,6-pentamethyl-4-piperidyl sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate
Freshwater	0,002 mg/l
Freshwater (intermittent releases)	0,009 mg/l
Marine water	0 mg/l
Freshwater sediment	1,05 mg/kg
Marine sediment	0,11 mg/kg
Micro-organisms in sewage treatment plants (STP)	1 mg/l
Soil	0,21 mg/kg
7727-43-7	Barium Sulfate
Freshwater	0,115 mg/l
Freshwater sediment	600,4 mg/kg
Micro-organisms in sewage treatment plants (STP)	62,2 mg/l
Soil	207,7 mg/kg

Additional advice on limit values

TRGS 900, 2-butoxyethyl acetate; butylglycol acetate & 2-methoxypropyl acetate & 2-methoxypropyl acetate:: Aerosol, vapour May be absorbed through the skin.

2-methoxypropyl acetate: Z: A risk of reproductive effects cannot to be excluded if the occupational exposure limit value (AGW) and the biological limit value (BGW) is kept

8.2. Exposure controls

Appropriate engineering controls

Use explosion-proof ventilating equipment.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear eye protection/face protection.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. Suitable gloves type Butyl caoutchouc (butyl rubber). Use gloves only once.

Skin protection

Use of protective clothing.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls

Collect spillage.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Liquid

Colour:	orange
Melting point/freezing point:	not determined
Boiling point or initial boiling point and boiling range:	139,1 °C
Flammability:	not determined
Lower explosion limits:	1,1 vol. %
Upper explosion limits:	7 vol. %
Flash point:	40 °C
Auto-ignition temperature:	>210 °C
Decomposition temperature:	not determined
pH-Value:	not determined
Viscosity / kinematic:	not determined
Water solubility:	The study does not need to be conducted because the substance is known to be insoluble in water.

Solubility in other solvents

not determined

Partition coefficient n-octanol/water:	not determined
Vapour pressure (at 20 °C):	5,02 hPa
Density (at 20 °C):	1,02 g/cm³
Relative vapour density:	not determined
Particle characteristics:	not applicable

9.2. Other information

Information with regard to physical hazard classes

Explosive properties

The product is not: Explosive. Vapours can form explosive mixtures with air.

Oxidizing properties

The product is not: oxidising.

Other safety characteristics

Evaporation rate:	not determined
Solvent content:	60 - 70%
Solid content:	25 - 35%

SECTION 10: Stability and reactivity

10.1. Reactivity

Flammable. In use, may form flammable/explosive vapour-air mixture.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

No known hazardous reactions.

10.4. Conditions to avoid

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Vapours can form explosive mixtures with air.

10.5. Incompatible materials

Unsuitable container/equipment material: Copper, Aluminium, Zinc.

Avoid: Strong acid, Oxidising agent.

10.6. Hazardous decomposition products

Thermal hazards: Hazardous decomposition products: Methyl methacrylate, dodecyl methacrylate, Phenol, Sulphur dioxide (SO2).

Hazardous combustion products: Carbon dioxide (CO2), Carbon monoxide (CO), Sulphur oxides, Silicon dioxide (SiO2) .

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in GB CLP Regulation

Acute toxicity

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

ATEmix calculated

ATE (oral) > 5000 mg/kg; ATE (dermal) > 5000 mg/kg; ATE (inhalation vapour) > 50 mg/l; ATE (inhalation dust/mist) > 5 mg/l

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
112-07-2	2-butoxyethyl acetate; butylglycol acetate				
	oral	LD50 ca. 1880 mg/kg	Rat	Study report (1963)	OECD Guideline 401
	dermal	LD50 ca. 1500 mg/kg	Rabbit	Toxicol Appl Pharmac 51, 117-27 (1979)	Modification of the Draize 1959 method u
	inhalation vapour	ATE 11 mg/l			
	inhalation (4 h) dust/mist	LC50 2,66 mg/l	Rat		
	Reaction mass of ethylbenzene and xylene				
	oral	LD50 3523 mg/kg	Rat	Study report (1986)	EU Method B.1
	dermal	LD50 12126 mg/kg	Rabbit	Publication (1962)	Single dermal dose under occlusion follo
	inhalation (4 h) vapour	LC50 6700 mg/l	Rat	Toxicol Appl Pharmacol 33:543-558. (1975	EU Method B.2
	inhalation dust/mist	ATE 1,5 mg/l			
108-65-6	2-methoxy-1-methylethyl acetate				
	oral	LD50 6190 - 10000 mg/kg	Rat	Study report (1985)	OECD Guideline 401
	dermal	LD50 > 5000 mg/kg	Rat	Study report (1985)	OECD Guideline 402
1065336-91-5	Reaction mass of 1,2,2,6,6-pentamethyl-4-piperidyl sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate				
	oral	LD50 3230 mg/kg	Rat	Study report (1981)	OECD Guideline 423
	dermal	LD50 > 3170 mg/kg	Rat	Study report (1975)	OECD Guideline 402
	inhalation	Data lacking			

Irritation and corrosivity

Skin corrosion/irritation: Based on available data, the classification criteria are not met.
Serious eye damage/eye irritation: Based on available data, the classification criteria are not met.

Sensitising effects

May cause an allergic skin reaction. (Reaction mass of 1,2,2,6,6-pentamethyl-4-piperidyl sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate)

Carcinogenic/mutagenic/toxic effects for reproduction

Germ cell mutagenicity: Based on available data, the classification criteria are not met.
Carcinogenicity: Based on available data, the classification criteria are not met.
Reproductive toxicity: Based on available data, the classification criteria are not met.

STOT-single exposure

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

STOT-repeated exposure

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

Aspiration hazard

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

11.2. Information on other hazards

Other information

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

SECTION 12: Ecological information

12.1. Toxicity

Harmful to aquatic life with long lasting effects.

The product has not been tested. The ecotoxicological properties of this mixture are determined by the ecotoxicological properties of the single components (see section 3).

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h][d]	Species	Source	Method
112-07-2	2-butoxyethyl acetate; butylglycol acetate					
	Acute fish toxicity	LC50 > 20 - < 40 mg/l	96 h	Oncorhynchus mykiss	Toxicol Mech & meth 12, 255-63 (2002)	OECD Guideline 203
	Acute algae toxicity	ErC50 1570 mg/l	72 h	Pseudokirchneriella subcapitata	Toxicol Mech & meth 12, 255-63 (2002)	ISO 8692
	Acute crustacea toxicity	EC50 67,5 mg/l	48 h	Daphnia magna	Toxicol Mech & meth 12, 255-63 (2002)	ISO 6341
	Reaction mass of ethylbenzene and xylene					
	Acute fish toxicity	LC50 8,4 mg/l	96 h	Oncorhynchus mykiss	Ecotoxicology and Environmental Safety.	OECD Guideline 203
	Acute algae toxicity	ErC50 4,9 mg/l	72 h	Pseudokirchneriella subcapitata	Ecotoxicology and Environmental Safety.	OECD Guideline 201
	Acute crustacea toxicity	EC50 > 3,4 mg/l	48 h	Ceriodaphnia dubia	Ecotoxicology and Environmental Safety 3	other: US EPA 600/4-91-003
	Fish toxicity	NOEC > 1,3 mg/l	56 d	Oncorhynchus mykiss	Appl. Sci. Branch, Eng. Res. Cent. Denve	Fish were exposed in artificial streams
	Crustacea toxicity	NOEC 1,17 mg/l	7 d	Ceriodaphnia dubia	Ecotoxicology and Environmental Safety 3	other: US EPA 600/4-91-003
	Acute bacteria toxicity	EC50 > 175 mg/l ( )	0,5 h	Activated sludge	Research Journal WPCF 60(10) 1850-1856 (	OECD Guideline 209

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]|[d]	Species	Source	Method
108-65-6	2-methoxy-1-methylethyl acetate					
	Acute fish toxicity	LC50 100 - 180 mg/l	96 h	Oncorhynchus mykiss	Study report (1987)	OECD Guideline 203
	Acute algae toxicity	ErC50 > 1000 mg/l	96 h	Pseudokirchneriella subcapitata	Study report (1986)	OECD Guideline 201
	Acute crustacea toxicity	EC50 > 500 mg/l	48 h	Daphnia magna	Study report (1987)	EU Method C.2
	Fish toxicity	NOEC 47,5 mg/l	14 d	Oryzias latipes	Study report (1998)	OECD Guideline 204
	Crustacea toxicity	NOEC >= 100 mg/l	21 d	Daphnia magna	Study report (1998)	OECD Guideline 211
1065336-91-5	Reaction mass of 1,2,2,6,6-pentamethyl-4-piperidyl sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate					
	Acute fish toxicity	LC50 0,9 mg/l	96 h	Danio rerio	Study report (2010)	OECD Guideline 203
	Acute algae toxicity	ErC50 1,68 mg/l	72 h	Desmodesmus subspicatus	Study report (2010)	OECD Guideline 201
	Acute crustacea toxicity	EC50 20 mg/l	48 h	Daphnia magna		
	Crustacea toxicity	NOEC 1 mg/l	21 d	Daphnia magna	Study report (2010)	OECD Guideline 211
	Acute bacteria toxicity	EC50 > 100 mg/l ( )	3 h			

12.2. Persistence and degradability

The product has not been tested.

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
112-07-2	2-butoxyethyl acetate; butylglycol acetate			
	OECD 301F	88%	28	
	Readily biodegradable (according to OECD criteria).			
	Reaction mass of ethylbenzene and xylene			
	OECD 301F	90%	28	
	Readily biodegradable (according to OECD criteria).			
108-65-6	2-methoxy-1-methylethyl acetate			
	OECD 301F	83%	28	
	Readily biodegradable (according to OECD criteria).			
	OECD 302B	100%	28	
	Readily biodegradable (according to OECD criteria).			
1065336-91-5	Reaction mass of 1,2,2,6,6-pentamethyl-4-piperidyl sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate			
	OECD 301F; ISO 9408; 92/69/EWG, C.4-D	38%	28	
	Not readily biodegradable (according to OECD criteria) Moderately/partially biodegradable. 38 % DOC reduction			

12.3. Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
112-07-2	2-butoxyethyl acetate; butylglycol acetate	1,51
	Reaction mass of ethylbenzene and xylene	3,2
108-65-6	2-methoxy-1-methylethyl acetate	1,2
1065336-91-5	Reaction mass of 1,2,2,6,6-pentamethyl-4-piperidyl sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	2,37

BCF

CAS No	Chemical name	BCF	Species	Source
	Reaction mass of ethylbenzene and xylene	> 5,5 - < 12,2	Oncorhynchus mykiss	Appl. Sci. Branch, E
1065336-91-5	Reaction mass of 1,2,2,6,6-pentamethyl-4-piperidyl sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	< 9,7	Cyprinus carpio	Study report (1981)

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH.
The product has not been tested.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

No information available.

Further information

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. The product contains organically bound halogen as per formulation. It may increase the AOX value when discharged from treatment plants or into natural waters. AOX: Chlorine

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation.

Dispose of this material and its container to hazardous or special waste collection point. Consult the appropriate local waste disposal expert about waste disposal.

Contaminated packaging

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number: UN 1263
14.2. UN proper shipping name: PAINT
14.3. Transport hazard class(es): 3
14.4. Packing group: III
Hazard label: 3

Classification code:	F1
Special Provisions:	163 367 650
Limited quantity:	5 L
Excepted quantity:	E1
Transport category:	3
Hazard No:	30
Tunnel restriction code:	D/E

Inland waterways transport (ADN)

14.1. UN number or ID number:	UN 1263
14.2. UN proper shipping name:	Paint
14.3. Transport hazard class(es):	3
14.4. Packing group:	III
Hazard label:	3

Classification code:	F1
Special Provisions:	163 367 650
Limited quantity:	5 L
Excepted quantity:	E1

Marine transport (IMDG)

14.1. UN number or ID number:	UN 1263
14.2. UN proper shipping name:	PAINT
14.3. Transport hazard class(es):	3
14.4. Packing group:	III
Hazard label:	3

Special Provisions:	163, 223, 367, 955
Limited quantity:	5 L
Excepted quantity:	E1
EmS:	F-E, S-E

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number:	UN 1263
14.2. UN proper shipping name:	PAINT
14.3. Transport hazard class(es):	3
14.4. Packing group:	III
Hazard label:	3

Special Provisions:	A3 A72 A192
Limited quantity Passenger:	10 L

Passenger LQ:	Y344
Excepted quantity:	E1
IATA-packing instructions - Passenger:	355
IATA-max. quantity - Passenger:	60 L
IATA-packing instructions - Cargo:	366
IATA-max. quantity - Cargo:	220 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

Combustible liquid. Warning: flammable liquids

14.7. Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

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

EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 40, Entry 75

Directive 2010/75/EU on industrial emissions:	66,782 % (681,18 g/l)
Directive 2004/42/EC on VOC in paints and varnishes:	67,344 % (686,908 g/l)
Information according to Directive 2012/18/EU (SEVESO III):	P5c FLAMMABLE LIQUIDS

Additional information

This mixture contains the following substances of very high concern (SVHC) which are included in the Candidate List according to Article 59 of REACH: none
This mixture contains the following substances of very high concern (SVHC) which are subject to authorisation according to Annex XIV of REACH: none

National regulatory information

Employment restrictions:	Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).
Water hazard class (D):	2 - obviously hazardous to water
Skin resorption/Sensitization:	Causes allergic hypersensitivity reactions.

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 1,2,4,6,8,9,11,12,15,16.

Abbreviations and acronyms

Flam. Liq: Flammable liquids
Acute Tox: Acute toxicity
Asp. Tox: Aspiration hazard
Skin Irrit: Skin irritation
Eye Irrit: Eye irritation
Skin Sens: Skin sensitisation
Repr: Reproductive toxicity
STOT SE: Specific target organ toxicity - single exposure
STOT RE: Specific target organ toxicity - repeated exposure
Aquatic Acute: Acute aquatic hazard
Aquatic Chronic: Chronic aquatic hazard

CLP: Classification, labelling and Packaging
REACH: Registration, Evaluation and Authorization of Chemicals
GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals
UN: United Nations
CAS: Chemical Abstracts Service
DNEL: Derived No Effect Level
DMEL: Derived Minimal Effect Level
PNEC: Predicted No Effect Concentration
ATE: Acute toxicity estimate
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%
LL50: Lethal loading, 50%
EL50: Effect loading, 50%
EC50: Effective Concentration 50%
ErC50: Effective Concentration 50%, growth rate
NOEC: No Observed Effect Concentration
BCF: Bio-concentration factor
PBT: persistent, bioaccumulative, toxic
vPvB: very persistent, very bioaccumulative
MARPOL: International Convention for the Prevention of Marine Pollution from Ships
IBC: Intermediate Bulk Container
VOC: Volatile Organic Compounds
SVHC: Substance of Very High Concern
For abbreviations and acronyms, see table at http://abbrev.esdscom.eu
ADR: Accord européen sur le transport des marchandises dangereuses par Route
(European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID: Regulations concerning the international carriage of dangerous goods by rail
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
(Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures)
IMDG: International Maritime Code for Dangerous Goods
EmS: Emergency Schedules
MFAG: Medical First Aid Guide
IATA: International Air Transport Association
ICAO: International Civil Aviation Organization
For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).
EC/EEC: European Community/European Economic Community
EU: European Union
M-factor: Multiplying factor
IATA: International Air Transport Association
DGR: Dangerous Goods Regulations
ICAO: International Civil Aviation Organization
TI: Technical Instructions
VOC: volatile organic compound

Classification for mixtures and used evaluation method according to GB CLP Regulation

Classification	Classification procedure
Flam. Liq. 3; H226	On basis of test data
Skin Sens. 1; H317	Calculation method
Aquatic Chronic 3; H412	Calculation method

Relevant H and EUH statements (number and full text)

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

Relevant H and EUH statements (number and full text)

H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H361f	Suspected of damaging fertility.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

(The data for the relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)