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

1.1. Product identifier

ORALITE® 5018 Screen Printing Ink (050)

Further trade names

ORALITE® Siebdruckfarbe 5018-050 (blau), ORALITE® Screen Printing Ink 5018-050 (blue)

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

Use of the substance/mixture

Colour (Screen Printing Ink)

Uses advised against

Do not use for private purposes (household). Reserved for industrial and professional use.

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: msds@orafol.de
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

Regulation (EC) No. 1272/2008

Hazard categories:
Flammable liquid: Flam. Liq. 3
Hazardous to the aquatic environment: Aquatic Chronic 3
Hazard Statements:
Flammable liquid and vapour.
Harmful to aquatic life with long lasting effects.

2.2. Label elements

Regulation (EC) No. 1272/2008

Signal word: Warning

Pictograms:

Hazard statements

H226	Flammable liquid and vapour.
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.
P243	Take action to prevent static discharges.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P501	Dispose of contents/container to an appropriate recycling or disposal facility.

Special labelling of certain mixtures

EUH208	Contains Reaction mass of 1,2,2,6,6-pentamethyl-4-piperidyl sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate. May produce an allergic reaction.

Labelling of packages where the contents do not exceed 125 ml

Signal word: Warning

Pictograms:

Hazard statements

H412

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
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			
112-07-2	2-butoxyethyl acetate, butylglycol acetate			5 - < 10 %
	203-933-3	607-038-00-2	01-2119475112-47	
	Acute Tox. 4, Acute Tox. 4, Acute Tox. 4; H332 H312 H302			
1330-20-7	xylene			5 - < 10 %
	215-535-7	601-022-00-9	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			
100-41-4	ethylbenzene			1 - < 5 %
	202-849-4	601-023-00-4	01-2119489370-35	
	Flam. Liq. 2, Acute Tox. 4, STOT RE 2, Asp. Tox. 1, Aquatic Chronic 3; H225 H332 H373 H304 H412			
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	
	Skin Sens. 1, Aquatic Acute 1, Aquatic Chronic 1; H317 H400 H410			
556-67-2	octamethylcyclotetrasiloxane			< 1 %
	209-136-7		01-2119529238-36	
	Flam. Liq. 3, Repr. 2, Aquatic Chronic 4; H226 H361f H413			
108-88-3	toluene			< 1 %
	203-625-9	601-021-00-3	01-2119471310-51	
	Flam. Liq. 2, Repr. 2, Skin Irrit. 2, STOT SE 3, STOT RE 2, Asp. Tox. 1, Aquatic Chronic 3; H225 H361d H315 H336 H373 H304 H412			
70657-70-4	2-methoxypropyl acetate			< 0.1 %
	274-724-2	607-251-00-0		
	Flam. Liq. 3, Repr. 1B, STOT SE 3; H226 H360D H335			

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

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. If breathing is irregular or stopped, administer artificial respiration. Medical treatment necessary.

After contact with skin

After contact with skin, wash immediately with polyethylene glycol, followed by plenty of water. Take off immediately all contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention.

After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water.

After ingestion

Rinse mouth immediately and drink plenty 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: Nitrogen oxides (NOx), Carbon dioxide (CO2), Carbon monoxide.

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

Additional information

Use water spray jet to protect personnel and to cool endangered containers. 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

Remove all sources of ignition.

6.2. Environmental precautions

Do not allow uncontrolled discharge of product into the environment. Danger of explosion.
Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. 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.

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.

Hints on joint storage

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

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
100-41-4	Ethylbenzene	100	441		TWA (8 h)	WEL
		125	552		STEL (15 min)	WEL
80-62-6	Methyl methacrylate	50	208		TWA (8 h)	WEL
		100	416		STEL (15 min)	WEL
108-88-3	Toluene	50	191		TWA (8 h)	WEL
		100	384		STEL (15 min)	WEL
1330-20-7	Xylene: mixed isomers	50	220		TWA (8 h)	WEL
		100	441		STEL (15 min)	WEL

Biological Monitoring Guidance Values (EH40)

CAS No	Substance	Parameter	Value	Test material	Sampling time
1330-20-7	Xylene, o-, m-, p- or mixed isomers	methyl hippuric acid (creatinine)	650 mmol/mol	urine	Post shift

DNEL/DMEL values

CAS No	Substance			
DNEL type		Exposure route	Effect	Value
108-65-6	2-methoxy-1-methylethyl acetate			
Worker DNEL, long-term		inhalation	systemic	275 mg/m³
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
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
1330-20-7	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
100-41-4	ethylbenzene			
Worker DNEL, long-term		inhalation	systemic	77 mg/m³
Worker DNEL, acute		inhalation	local	293 mg/m³
Worker DNEL, long-term		dermal	systemic	180 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	15 mg/m³
Consumer DNEL, long-term		oral	systemic	1,6 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	3,53 mg/m³
Worker DNEL, long-term	dermal	systemic	2 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	1 mg/kg bw/day
Consumer DNEL, long-term	inhalation	systemic	0,87 mg/m³
Consumer DNEL, long-term	oral	systemic	0,5 mg/kg bw/day
556-67-2	octamethylcyclotetrasiloxane		
Worker DNEL, long-term	inhalation	systemic	73 mg/m³
Worker DNEL, acute	inhalation	systemic	73 mg/m³
Worker DNEL, long-term	inhalation	local	73 mg/m³
Worker DNEL, acute	inhalation	local	73 mg/m³
Consumer DNEL, long-term	inhalation	systemic	13 mg/m³
Consumer DNEL, acute	inhalation	systemic	13 mg/m³
Consumer DNEL, long-term	inhalation	local	13 mg/m³
Consumer DNEL, acute	inhalation	local	13 mg/m³
Consumer DNEL, long-term	oral	systemic	3,7 mg/kg bw/day
Consumer DNEL, acute	oral	systemic	3,7 mg/kg bw/day
108-88-3	toluene		
Worker DNEL, long-term	inhalation	systemic	192 mg/m³
Worker DNEL, acute	inhalation	systemic	384 mg/m³
Worker DNEL, long-term	inhalation	local	192 mg/m³
Worker DNEL, acute	inhalation	local	384 mg/m³
Worker DNEL, long-term	dermal	systemic	384 mg/kg bw/day
Consumer DNEL, long-term	inhalation	systemic	56,5 mg/m³
Consumer DNEL, acute	inhalation	systemic	226 mg/m³
Consumer DNEL, long-term	inhalation	local	56,5 mg/m³
Consumer DNEL, acute	inhalation	local	226 mg/m³
Consumer DNEL, long-term	dermal	systemic	226 mg/kg bw/day
Consumer DNEL, long-term	oral	systemic	8,13 mg/kg bw/day

PNEC values

CAS No	Substance	
Environmental compartment		Value
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
Micro-organisms in sewage treatment plants (STP)		100 mg/l
Soil		0,29 mg/kg
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
1330-20-7	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
100-41-4	ethylbenzene	
Freshwater		0,1 mg/l
Freshwater (intermittent releases)		0,1 mg/l
Marine water		0,01 mg/l
Freshwater sediment		13,7 mg/kg
Marine sediment		1,37 mg/kg
Secondary poisoning		20 mg/kg
Micro-organisms in sewage treatment plants (STP)		9,6 mg/l
Soil		2,68 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
556-67-2	octamethylcyclotetrasiloxane	
Freshwater		0,0015 mg/l
Marine water		0,00015 mg/l
Freshwater sediment		3 mg/kg
Marine sediment		0,3 mg/kg
Secondary poisoning		41 mg/kg
Micro-organisms in sewage treatment plants (STP)		10 mg/l
Soil		0,54 mg/kg
108-88-3	toluene	
Freshwater		0,68 mg/l
Freshwater (intermittent releases)		0,68 mg/l
Marine water		0,68 mg/l
Freshwater sediment		16,39 mg/kg
Marine sediment		16,39 mg/kg
Micro-organisms in sewage treatment plants (STP)		13,61 mg/l
Soil		2,89 mg/kg

8.2. Exposure controls

Protective and hygiene measures

Take off contaminated clothing. Wash hands before breaks and after work. When using do not eat or drink.

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.

Skin protection

Wear suitable protective clothing.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	blue
pH-Value:	not determined

Changes in the physical state

Melting point:	not determined

Initial boiling point and boiling range:	ca. 139,1 °C
Flash point:	27 °C
Flammability	
Solid:	not applicable
Gas:	not applicable
Explosive properties	
Vapours can form explosive mixtures with air.	
Lower explosion limits:	1 vol. %
Upper explosion limits:	8,54 vol. %
Ignition temperature:	333 °C
Auto-ignition temperature	
Solid:	not applicable
Gas:	not applicable
Decomposition temperature:	not determined
Oxidizing properties	
Not oxidising.	
Vapour pressure: (at 20 °C)	5,02 hPa
Density:	ca. 1,01 g/cm³
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:	not determined
Vapour density:	not determined
Evaporation rate:	not determined

9.2. Other information

Solid content:	not determined

SECTION 10: Stability and reactivity

10.1. Reactivity

Flammable.

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

No information available.

10.6. Hazardous decomposition products

No known hazardous decomposition products.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
108-65-6	2-methoxy-1-methylethyl acetate				
	oral	LD50 6190 - 10000 mg/kg	Rat	Study report (1985)	OECD Guideline 401
	dermal	LD50 > 2000 mg/kg	Rat	Study report (1985)	OECD Guideline 402
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) aerosol	LC50 2,66 mg/l	Rat		
1330-20-7	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 aerosol	ATE 1,5 mg/l			
100-41-4	ethylbenzene				
	oral	LD50 ca. 3500 mg/kg	Rat	AMA Arch. Ind. Health. 14:387-398. (1956	No guideline available
	dermal	LD50 15400 mg/kg	Rabbit	GESTIS	
	inhalation (4 h) vapour	LC50 17,2 mg/l	Rat		
	inhalation aerosol	ATE 1,5 mg/l			
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
556-67-2	octamethylcyclotetrasiloxane				
	oral	LD50 > 4800 mg/kg	Rat	Study report (1979)	OECD Guideline 401
	dermal	Data lacking			
	inhalation (4 h) vapour	LC50 12,17 mg/l	Rattus norvegicus f. dom.		
108-88-3	toluene				
	oral	LD50 5580 mg/kg	Rat	Toxicology 4, 5-15 (1975)	EU Method B.1
	dermal	LD50 > 5000 mg/kg	Rabbit	American Industrial Hygiene Association	Study investigated mortality in groups o
	inhalation (4 h) vapour	LC50 28,1 mg/l	Rat	Study report (1980)	OECD Guideline 403
70657-70-4	2-methoxypropyl acetate				
	dermal	LD50 > 2000 mg/kg	Rabbit		

SECTION 12: Ecological information

12.1. Toxicity

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

CAS No	Chemical name						
	Aquatic toxicity	Dose		[h] | [d]	Species	Source	Method
108-65-6	2-methoxy-1-methylethyl acetate						
	Acute fish toxicity	LC50 mg/l	> 100	96 h	Oryzias latipes	Study report (1998)	OECD Guideline 203
	Acute algae toxicity	ErC50 mg/l	> 1000	96 h	Pseudokirchneriella subcapitata	Study report (1986)	OECD Guideline 201
	Acute crustacea toxicity	EC50 mg/l	> 500	48 h	Daphnia magna	Study report (1987)	EU Method C.2
	Fish toxicity	NOEC mg/l	47,5	14 d	Oryzias latipes	Study report (1998)	OECD Guideline 204
	Crustacea toxicity	NOEC mg/l	>= 100	21 d	Daphnia magna	Study report (1998)	OECD Guideline 211
112-07-2	2-butoxyethyl acetate, butylglycol acetate						
	Acute fish toxicity	LC50	28 mg/l	96 h	Oncorhynchus mykiss	Toxicol Mech & meth 12, 255-63 (2002)	OECD Guideline 203
	Acute algae toxicity	ErC50	520 mg/l	72 h	Pseudokirchneriella subcapitata	Toxicol Mech & meth 12, 255-63 (2002)	ISO 8692
	Acute crustacea toxicity	EC50 mg/l	67,5	48 h	Daphnia magna	Toxicol Mech & meth 12, 255-63 (2002)	ISO 6341
1330-20-7	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 mg/l	> 3,4	48 h	Ceriodaphnia dubia	Ecotoxicology and Environmental Safety 3	other: US EPA 600/4-91-003
	Fish toxicity	NOEC mg/l	> 1,3	56 d	Oncorhynchus mykiss	Appl. Sci. Branch, Eng. Res. Cent. Denve	Fish were exposed in artificial streams
	Crustacea toxicity	NOEC mg/l	1,17	7 d	Ceriodaphnia dubia	Ecotoxicology and Environmental Safety 3	other: US EPA 600/4-91-003
	Acute bacteria toxicity	(> 175 mg/l)		0,5 h	Activated sludge	Research Journal WPCF 60(10) 1850-1856 (	OECD Guideline 209
100-41-4	ethylbenzene						
	Acute fish toxicity	LC50	4,2 mg/l	96 h	Oncorhynchus mykiss	Ecotoxicol. Environ. Saf. 16:158-169 (19	OECD Guideline 203
	Acute algae toxicity	ErC50	4,6 mg/l	72 h	Pseudokirchneriella subcapitata	Chemosphere 10(10): 1123-1126 (1981)	OECD Guideline 201
	Acute crustacea toxicity	EC50 mg/l	1,8 - 2,4	48 h	Daphnia magna	Water Res. 27:903-909 (1993)	other: According to EPA method F
	Acute bacteria toxicity	(ca. 600 mg/l)		0,5 h	activated sludge, domestic	Study report (1988)	OECD Guideline 209

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	(> 100 mg/l)	3 h			
556-67-2	octamethylcyclotetrasiloxane					
	Acute fish toxicity	LC50 > 0,022 mg/l	96 h	Oncorhynchus mykiss	Env. Toxicol. & Chemistry 14, 1639-1647	EPA OTS 797.1400
	Acute algae toxicity	ErC50 > 0,022 mg/l	96 h	Pseudokirchneriella subcapitata	Study report (1990)	EPA OTS 797.1050
	Acute crustacea toxicity	EC50 > 0,015 mg/l	48 h	Daphnia magna	Env. Toxicol. & Chemistry 14, 1639-1647	EPA OTS 797.1300
	Fish toxicity	NOEC >= 0,0044 mg/l	93 d	Oncorhynchus mykiss	Env. Toxicol. & Chemistry 14, 1639-1647	other: 40 CFR 797.1600
	Crustacea toxicity	NOEC >= 0,015 mg/l	21 d	Daphnia magna	Env. Toxicol. & Chemistry |14, 1639-1647	EPA OTS 797.1330
	Acute bacteria toxicity	(10000 mg/l)	3 h	Pseudomonas putida		
108-88-3	toluene					
	Acute fish toxicity	LC50 5,5 mg/l	96 h	Oncorhynchus kisutch	Transactions A. Fish. Soc. 110, 430-436.	Fry were exposed to toluene in a flow th
	Acute algae toxicity	ErC50 134 mg/l			GESTIS	
	Fish toxicity	NOEC 1,39 mg/l	40 d	Oncorhynchus kisutch	Transactions A. Fish. Soc. 110, 430-436.	Fry were exposed to toluene in a flow th
	Crustacea toxicity	NOEC 0,74 mg/l	7 d	Ceriodaphnia dubia	Ecotoxicol. Environ. Saf. 39, 136-146. (	other: US EPA 600/4-91-003

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 301C/ ISO 9408/ EEC 92/69/V, C.4-F	88 %	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
108-65-6	2-methoxy-1-methylethyl acetate	1,2
112-07-2	2-butoxyethyl acetate, butylglycol acetate	1,51
1330-20-7	xylene	3,2
100-41-4	ethylbenzene	3,6
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
556-67-2	octamethylcyclotetrasiloxane	6,488
108-88-3	toluene	2,73

BCF

CAS No	Chemical name	BCF	Species	Source
1330-20-7	xylene	> 5,5 - < 12,2	Oncorhynchus mykiss	Appl. Sci. Branch, E
100-41-4	ethylbenzene	1	Oncorhynchus kisutch	Arch. Environ. Conta
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)
556-67-2	octamethylcyclotetrasiloxane	12400	Pimephales promelas	Study report (1991)
108-88-3	toluene	90	Leuciscus idus melanotus	Chemosphere 14 (10).

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

The product has not been tested.

12.6. 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.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Advice on disposal

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.

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: 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:	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:	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:	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

Warning: flammable liquids

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

not applicable

SECTION 15: Regulatory information

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

EU regulatory information

Authorisations (REACH, annex XIV):

Substances of very high concern, SVHC (REACH, article 59):
octamethylcyclotetrasiloxane

Restrictions on use (REACH, annex XVII):

Entry 30: 2-methoxypropyl acetate
Entry 48: toluene
Entry 70: octamethylcyclotetrasiloxane

2010/75/EU (VOC):	56,804 % (573,72 g/l)
2004/42/EC (VOC):	57,305 % (578,78 g/l)
Information according to 2012/18/EU (SEVESO III):	P5c FLAMMABLE LIQUIDS

National regulatory information

Employment restrictions:	Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.
Water contaminating class (D):	2 - clearly water contaminating
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

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route
(European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%

Classification for mixtures and used evaluation method according to Regulation (EC) No. 1272/2008 [CLP]

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

Relevant H and EUH statements (number and full text)

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.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H360D	May damage the unborn child.
H361d	Suspected of damaging the unborn child.
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.
H413	May cause long lasting harmful effects to aquatic life.
EUH208	Contains Reaction mass of 1,2,2,6,6-pentamethyl-4-piperidyl sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate. May produce an allergic reaction.

Further Information

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

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