

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**ORALITE® 5018 Screen Printing Ink (035)**

Revision date: 19.05.2021

Product code: SDF5018-035N

Page 1 of 17

**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)

UFI: NVD1-GM25-5N48-MWEA

**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:	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.

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**ORALITE® 5018 Screen Printing Ink (035)**

Revision date: 19.05.2021

Product code: SDF5018-035N

Page 2 of 17

P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing 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.
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**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	
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	
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	
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	

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	
1330-20-7	215-535-7	xylene	5 - < 10 %
		inhalation: LC50 = 5922 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 = > 2000 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 %
		dermal: LD50 = > 3170 mg/kg; oral: LD50 = 3230 mg/kg M akut; H400: M=1	

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**ORALITE® 5018 Screen Printing Ink (035)**

Revision date: 19.05.2021

Product code: SDF5018-035N

Page 3 of 17

**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. If eye irritation persists: Get medical advice/attention.

**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 (CO<sub>2</sub>), 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 (CO<sub>2</sub>), Carbon monoxide (CO), Sulphur oxides, Silicon dioxide (SiO<sub>2</sub>).

**5.3. Advice for firefighters**

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

Remove all sources of ignition. 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.

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**ORALITE® 5018 Screen Printing Ink (035)**

Revision date: 19.05.2021

Product code: SDF5018-035N

Page 4 of 17

**6.3. Methods and material for containment and cleaning up****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.

**Further information on handling**

Thermal hazards: Hazardous decomposition products: Methyl methacrylate, dodecyl methacrylate, Phenol, Sulphur dioxide (SO<sub>2</sub>).

**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**

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**ORALITE® 5018 Screen Printing Ink (035)**

Revision date: 19.05.2021

Product code: SDF5018-035N

Page 5 of 17

**Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m <sup>3</sup>	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
110-82-7	Cyclohexane	100	350		TWA (8 h)	WEL
		300	1050		STEL (15 min)	WEL
80-62-6	Methyl methacrylate	50	208		TWA (8 h)	WEL
		100	416		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

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**ORALITE® 5018 Screen Printing Ink (035)**

Revision date: 19.05.2021

Product code: SDF5018-035N

Page 6 of 17

**DNEL/DMEL values**

CAS No	Substance	Exposure route	Effect	Value
112-07-2	2-butoxyethyl acetate, butylglycol acetate			
Worker DNEL, acute		inhalation	local	333 mg/m <sup>3</sup>
Worker DNEL, acute		dermal	systemic	120 mg/kg bw/day
Worker DNEL, acute		inhalation	systemic	775 mg/m <sup>3</sup>
Consumer DNEL, acute		dermal	systemic	72 mg/kg bw/day
Consumer DNEL, acute		inhalation	systemic	499 mg/m <sup>3</sup>
Consumer DNEL, acute		oral	systemic	36 mg/kg bw/day
Consumer DNEL, acute		inhalation	local	200 mg/m <sup>3</sup>
Consumer DNEL, long-term		dermal	systemic	102 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	80 mg/m <sup>3</sup>
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/m <sup>3</sup>
1330-20-7	xylene			
Worker DNEL, long-term		inhalation	systemic	221 mg/m <sup>3</sup>
Worker DNEL, acute		inhalation	systemic	442 mg/m <sup>3</sup>
Worker DNEL, long-term		inhalation	local	221 mg/m <sup>3</sup>
Worker DNEL, acute		inhalation	local	442 mg/m <sup>3</sup>
Worker DNEL, long-term		dermal	systemic	212 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	65,3 mg/m <sup>3</sup>
Consumer DNEL, acute		inhalation	systemic	260 mg/m <sup>3</sup>
Consumer DNEL, long-term		inhalation	local	65,3 mg/m <sup>3</sup>
Consumer DNEL, acute		inhalation	local	260 mg/m <sup>3</sup>
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/m <sup>3</sup>
Worker DNEL, acute		inhalation	local	550 mg/m <sup>3</sup>
Worker DNEL, long-term		dermal	systemic	796 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	33 mg/m <sup>3</sup>
Consumer DNEL, long-term		inhalation	local	33 mg/m <sup>3</sup>
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/m <sup>3</sup>
Worker DNEL, long-term		inhalation	systemic	0,68 mg/m <sup>3</sup>
Worker DNEL, long-term		dermal	systemic	0,5 mg/kg bw/day

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### ORALITE® 5018 Screen Printing Ink (035)

Revision date: 19.05.2021

Product code: SDF5018-035N

Page 7 of 17

Consumer DNEL, acute	dermal	systemic	1,25 mg/kg bw/day
Consumer DNEL, acute	inhalation	systemic	0,58 mg/m <sup>3</sup>
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/m <sup>3</sup>
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/m <sup>3</sup>
Worker DNEL, long-term	inhalation	local	10 mg/m <sup>3</sup>
Consumer DNEL, long-term	inhalation	systemic	10 mg/m <sup>3</sup>
Consumer DNEL, long-term	oral	systemic	13000 mg/kg bw/day

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### ORALITE® 5018 Screen Printing Ink (035)

Revision date: 19.05.2021

Product code: SDF5018-035N

Page 8 of 17

**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
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
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
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::

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### ORALITE® 5018 Screen Printing Ink (035)

Revision date: 19.05.2021

Product code: SDF5018-035N

Page 9 of 17

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.

##### Protective and hygiene measures

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

##### Eye/face protection

Wear eye/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

Wear suitable 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
pH-Value:	not determined

#### Changes in the physical state

Melting point:	not determined
Boiling point or initial boiling point and boiling range:	ca. 139,1 °C
Flash point:	27 °C

#### Flammability

Solid/liquid:	not applicable
Gas:	not applicable

#### Explosive properties

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

Lower explosion limits:	1,21 vol. %
Upper explosion limits:	7 vol. %
Auto-ignition temperature:	>210 °C

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**ORALITE® 5018 Screen Printing Ink (035)**

Revision date: 19.05.2021

Product code: SDF5018-035N

Page 10 of 17

**Self-ignition temperature**

Solid: not applicable  
Gas: not applicable

Decomposition temperature: not determined

**Oxidizing properties**

Not oxidising.

Vapour pressure: 5,02 hPa  
(at 20 °C)Density: 1,02 g/cm<sup>3</sup>

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

Relative vapour density: not determined

Evaporation rate: not determined

Solvent content: 62 - 67%

**9.2. Other information**

Solid content: 33 - 38%

**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 (SO<sub>2</sub>).Hazardous combustion products: Carbon dioxide (CO<sub>2</sub>), Carbon monoxide (CO), Sulphur oxides, Silicon dioxide (SiO<sub>2</sub>).**SECTION 11: Toxicological information****11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008****Acute toxicity**

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

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### ORALITE® 5018 Screen Printing Ink (035)

Revision date: 19.05.2021

Product code: SDF5018-035N

Page 11 of 17

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
112-07-2	2-butoxyethyl acetate, butylglycol acetate				
	oral	LD50 mg/kg	ca. 1880	Rat	Study report (1963) OECD Guideline 401
	dermal	LD50 mg/kg	ca. 1500	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 mg/kg	3523	Rat	Study report (1986) EU Method B.1
	dermal	LD50 mg/kg	12126	Rabbit	Publication (1962) Single dermal dose under occlusion follo
	inhalation (4 h) vapour	LC50	5922 mg/l	Rat	Study report (1986) EPA OPP 81-3
	inhalation aerosol	ATE	1,5 mg/l		
108-65-6	2-methoxy-1-methylethyl acetate				
	oral	LD50 mg/kg	6190 - 10000	Rat	Study report (1985) OECD Guideline 401
	dermal	LD50 mg/kg	> 2000	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 mg/kg	3230	Rat	Study report (1981) OECD Guideline 423
	dermal	LD50 mg/kg	> 3170	Rat	Study report (1975) OECD Guideline 402

#### Irritation and corrosivity

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

#### Sensitising effects

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.

#### Carcinogenic/mutagenic/toxic effects for reproduction

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.

## 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).

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**ORALITE® 5018 Screen Printing Ink (035)**

Revision date: 19.05.2021

Product code: SDF5018-035N

Page 12 of 17

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
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 4,6 mg/l	72 h	Pseudokirchneriella subcapitata	Ecotoxicology and Environmental Safety 1	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	(> 175 mg/l)	0,5 h	Activated sludge	Research Journal WPCF 60(10) 1850-1856 (	OECD Guideline 209
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	(> 100 mg/l)	3 h			

**12.2. Persistence and degradability**

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**ORALITE® 5018 Screen Printing Ink (035)**

Revision date: 19.05.2021

Product code: SDF5018-035N

Page 13 of 17

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).				
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
112-07-2	2-butoxyethyl acetate, butylglycol acetate	1,51
1330-20-7	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
1330-20-7	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 product has not been tested.

**12.7. Other adverse effects**

No information available.

**Further information**

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

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. 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**

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**ORALITE® 5018 Screen Printing Ink (035)**

Revision date: 19.05.2021

Product code: SDF5018-035N

Page 14 of 17

**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)**

<b>14.1. UN number:</b>	UN 1263
<b>14.2. UN proper shipping name:</b>	PAINT
<b>14.3. Transport hazard class(es):</b>	3
<b>14.4. Packing group:</b>	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)**

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



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

**Marine transport (IMDG)**

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

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**ORALITE® 5018 Screen Printing Ink (035)**

Revision date: 19.05.2021

Product code: SDF5018-035N

Page 15 of 17



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. 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 57

2010/75/EU (VOC): 66,481 % (678,109 g/l)  
 2004/42/EC (VOC): 66,481 % (678,109 g/l)  
 Information according to 2012/18/EU (SEVESO III): P5c FLAMMABLE LIQUIDS

**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.

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### ORALITE® 5018 Screen Printing Ink (035)

Revision date: 19.05.2021

Product code: SDF5018-035N

Page 16 of 17

#### SECTION 16: Other information

##### Changes

This data sheet contains changes from the previous version in section(s): 1,11,14.

##### Abbreviations and acronyms

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

##### 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)

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.

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**ORALITE® 5018 Screen Printing Ink (035)**

Revision date: 19.05.2021

Product code: SDF5018-035N

Page 17 of 17

H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
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.
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 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 hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*