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

1.1. Product identifier

ORALITE® 5019i brown (080)

Further trade names

ORALITE® 5019i UV Digital Printing Ink - 750 ml
brown (080)

UFI: RHV8-A0FU-X003-JM7U

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

Use of the substance/mixture

Colour (UV Digital Printing Ink).

Uses advised against

For use in industrial installations only.

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

Skin Irrit. 2; H315
Eye Irrit. 2; H319
Skin Sens. 1; H317
Carc. 2; H351
Repr. 1B; H360Fd
STOT RE 1; H372
Aquatic Chronic 2; H411

Full text of hazard statements: see SECTION 16.

Organs affected: liver, Respiratory tract

2.2. Label elements

GB CLP Regulation

Hazard components for labelling

2-Phenoxyethyl acrylate
Isobornyl acrylate (Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate)
N-Vinylcaprolactam
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide

Signal word: Danger

Pictograms:

Hazard statements

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H351	Suspected of causing cancer.
H360Fd	May damage fertility. Suspected of damaging the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P391	Collect spillage.

Special labelling of certain mixtures

Restricted to professional users.

Labelling of packages where the contents do not exceed 125 ml

Signal word: Danger

Pictograms:

Hazard statements

H317-H351-H360Fd-H372

Precautionary statements

P260-P280-P308+P313

2.3. Other hazards

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

Endocrine disruption for human health: 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 disruption for the environment: 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)			
48145-04-6	2-Phenoxyethyl acrylate			25 - < 50 %
	256-360-6		01-2119980532-35	
	Repr. 2, Skin Sens. 1A, Aquatic Chronic 2; H361d H317 H411			

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
66492-51-1	(5-ethyl-1,3-dioxan-5-yl)methyl prop-2-enoate			10 - < 25 %
	266-380-7		01-2119976303-36	
	Skin Irrit. 2, Skin Sens. 1B, Aquatic Chronic 2; H315 H317 H411			
2235-00-9	N-Vinylcaprolactam			10 - < 20 %
	218-787-6		01-2119977109-27	
	Acute Tox. 4, Acute Tox. 4, Eye Irrit. 2, Skin Sens. 1B, STOT RE 1; H312 H302 H319 H317 H372			
5888-33-5	Isobornyl acrylate (Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate)			5 - < 10 %
	227-561-6		01-2119957862-25	
	Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1A, STOT SE 3, Aquatic Acute 1, Aquatic Chronic 1; H315 H319 H317 H335 H400 H410			
75980-60-8	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide			5 - < 10 %
	278-355-8	015-203-00-X	01-2119972295-29	
	Repr. 1B, Skin Sens. 1B, Aquatic Chronic 2; H360Fd H317 H411			
162881-26-7	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide			1 - < 5 %
	423-340-5	015-189-00-5	01-2119489401-38	
	Skin Sens. 1A, Aquatic Chronic 4; H317 H413			
56641-05-5	Ethoxylated phenyl acrylate			2,5 - < 5 %
	500-133-9		01-2120752382-57	
	Skin Sens. 1, Aquatic Chronic 2; H317 H411			
5495-84-1	2-Isopropyl-9H-thioxanthen-9-one			3 - < 5 %
	226-827-9		01-2120769513-49	
	Repr. 2, Aquatic Acute 1, Aquatic Chronic 1; H361f H400 H410			
122-99-6	2-phenoxyethanol			1 - < 2,5 %
	204-589-7	603-098-00-9	01-2119488943-21	
	Acute Tox. 4, Eye Dam. 1, STOT SE 3; H302 H318 H335			
15625-89-5	2-ethyl-2-[[(1-oxoallyl)oxy]methyl]-1,3-propanediyl diacrylate; 2,2-bis(acryloyloxymethyl)butyl acrylate; trimethylolpropane triacrylate			1 - < 2,5 %
	239-701-3	607-111-00-9	01-2119489896-11	
	Carc. 2, Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1, Aquatic Acute 1, Aquatic Chronic 1; H351 H315 H319 H317 H400 H410			
128-37-0	2,6-Di-tert-butyl-p-kresol			0,25 - < 1 %
	204-881-4		01-2119565113-46	
	Aquatic Acute 1, Aquatic Chronic 1; H400 H410			
57472-68-1	Oxybis(methyl-2,1-ethanediyl) diacrylate			0,1 - < 1 %
	260-754-3		01-2119484629-21	
	Skin Irrit. 2, Eye Dam. 1, Skin Sens. 1; H315 H318 H317			

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		
48145-04-6	256-360-6	2-Phenoxyethyl acrylate	25 - < 50 %
	oral: LD50 = 5000 mg/kg		
66492-51-1	266-380-7	(5-ethyl-1,3-dioxan-5-yl)methyl prop-2-enoate	10 - < 25 %
	dermal: LD50 = > 2000 mg/kg; oral: LD50 = > 2000 mg/kg		

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
2235-00-9	218-787-6	N-Vinylcaprolactam	10 - < 20 %
	dermal: LD50 = 1700 mg/kg; oral: LD50 = 1114 mg/kg		
5888-33-5	227-561-6	Isobornyl acrylate (Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate)	5 - < 10 %
	dermal: LD50 = > 3000 mg/kg; oral: LD50 = 5750 mg/kg		
75980-60-8	278-355-8	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	5 - < 10 %
	dermal: LD50 = > 2000 mg/kg; oral: LD50 = > 5000 mg/kg		
162881-26-7	423-340-5	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	1 - < 5 %
	dermal: LD50 = > 2000 mg/kg; oral: LD50 = > 2000 mg/kg		
5495-84-1	226-827-9	2-Isopropyl-9H-thioxanthen-9-one	3 - < 5 %
	dermal: LD50 = > 2000 mg/kg; oral: LD50 = > 2000 mg/kg		
122-99-6	204-589-7	2-phenoxyethanol	1 - < 2,5 %
	dermal: LD50 = > 2000 mg/kg; oral: ATE 1394 mg/kg		
15625-89-5	239-701-3	2-ethyl-2-[[(1-oxoallyl)oxy]methyl]-1,3-propanediyl diacrylate; 2,2-bis(acryloyloxymethyl)butyl acrylate; trimethylolpropane triacrylate	1 - < 2,5 %
	dermal: LD50 = > 2000 mg/kg; oral: LD50 = > 5000 mg/kg Aquatic Acute 1; H400: M=1 Aquatic Chronic 1; H410: M=1		
128-37-0	204-881-4	2,6-Di-tert-butyl-p-kresol	0,25 - < 1 %
	dermal: LD50 = > 2000 mg/kg; oral: LD50 = > 6000 mg/kg		
57472-68-1	260-754-3	Oxybis(methyl-2,1-ethanediyl) diacrylate	0,1 - < 1 %
	dermal: LD50 = > 2000 mg/kg; oral: LD50 = 3530 mg/kg		

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. In case of skin reactions, consult a physician.

After contact with eyes

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately. Remove contact lenses, if present and easy to do. Continue rinsing.

After ingestion

Observe risk of aspiration if vomiting occurs. If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention.

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. Remove casualty to fresh air and keep warm and at rest. Where appropriate artificial ventilation.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings. Carbon dioxide (CO2), Extinguishing powder, Foam.

Unsuitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

Non-flammable. In case of fire may be liberated: Gases/vapours, harmful

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

Additional information

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water. Immediately remove any contaminated clothing, shoes or stockings.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

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

For non-emergency personnel

Use personal protection equipment.

For emergency responders

Use personal protection equipment. The danger areas must be delimited and identified using relevant warning and safety signs. First aider: Pay attention to self-protection!

6.2. Environmental precautions

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

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid contact with skin. Avoid contact with eyes. Use personal protection equipment.

Swiss Maternity Protection Ordinance (SR 822.111.52): Pregnant women and nursing mothers are only allowed to get in contact with or be exposed to this preparation in the course of their work when it is established on the basis of a risk assessment by a specialist, that in context with the activities and the protection measures applied, exposure does no harm to mother and child.

Advice on protection against fire and explosion

No special fire protection measures are necessary.

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. 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 or drink.
The type of personal protection equipment has to be chosen based on the concentration and amount of the dangerous substance at the workplace.

Further information on handling

Use extractor hood (laboratory). When using do not eat or drink.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaustion at critical locations.

Hints on joint storage

Do not store together with: Organic peroxides and self-reactive substances, Explosives.

7.3. Specific end use(s)

Colour. Reserved for industrial and professional use.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m³	fibres/ml	Category	Origin
105-60-2	1,6-Hexanolactam, dust and vapour	-	10		TWA (8 h)	WEL
		-	20		STEL (15 min)	WEL
128-37-0	2,6-Di-tert-butyl-p-cresol	-	10		TWA (8 h)	WEL
79-10-7	Acrylic acid	10	29		TWA (8 h)	WEL
		20	59		STEL (1 min)	WEL

DNEL/DMEL values

CAS No	Substance			
DNEL type		Exposure route	Effect	Value
48145-04-6	2-Phenoxyethyl acrylate			
Worker DNEL, long-term		inhalation	systemic	12 mg/m³
Worker DNEL, long-term		inhalation	local	77 mg/m³
Worker DNEL, long-term		dermal	systemic	3,5 mg/kg bw/day
66492-51-1	(5-ethyl-1,3-dioxan-5-yl)methyl prop-2-enoate			
,				
2235-00-9	N-Vinylcaprolactam			
Worker DNEL, long-term		inhalation	systemic	4,9 mg/m³
Worker DNEL, long-term		inhalation	local	0,17 mg/m³
Worker DNEL, long-term		dermal	systemic	0,7 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	1,04 mg/m³
Consumer DNEL, long-term		inhalation	local	0,04 mg/m³
Consumer DNEL, long-term		dermal	systemic	0,42 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	0,4 mg/kg bw/day
5888-33-5	Isobornyl acrylate (Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate)			
Worker DNEL, long-term		inhalation	systemic	4,9 mg/m³
Consumer DNEL, long-term		inhalation	systemic	1,45 mg/m³
Worker DNEL, long-term		dermal	systemic	1,39 mg/kg bw/day
Consumer DNEL, long-term		dermal	systemic	0,83 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	0,83 mg/kg bw/day
75980-60-8	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide			
Consumer DNEL, long-term		inhalation	systemic	0,145 mg/m³
Consumer DNEL, long-term		dermal	systemic	0,0833 mg/kg bw/day

DNEL/DMEL values

CAS No	Substance			
DNEL type		Exposure route	Effect	Value
Consumer DNEL, long-term		oral	systemic	0,0833 mg/kg bw/day
Worker DNEL, long-term		inhalation	systemic	0,822 mg/m³
Worker DNEL, long-term		dermal	systemic	0,233 mg/kg bw/day
162881-26-7	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide			
Worker DNEL, long-term		dermal	systemic	3 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	5,2 mg/m³
Consumer DNEL, long-term		dermal	systemic	1,5 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	1,5 mg/kg bw/day
Worker DNEL, long-term		inhalation	systemic	21 mg/m³
56641-05-5	Ethoxylated phenyl acrylate			
Worker DNEL, long-term		inhalation	systemic	12 mg/m³
Worker DNEL, long-term		inhalation	local	97 mg/m³
Worker DNEL, long-term		dermal	systemic	3,5 mg/kg bw/day
5495-84-1	2-Isopropyl-9H-thioxanthen-9-one			
Worker DNEL, long-term		inhalation	systemic	0,73 mg/m³
Worker DNEL, long-term		dermal	systemic	0,42 mg/kg bw/day
122-99-6	2-phenoxyethanol			
Worker DNEL, long-term		inhalation	systemic	5,7 mg/m³
Worker DNEL, long-term		inhalation	local	5,7 mg/m³
Worker DNEL, long-term		dermal	systemic	20,83 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	2,41 mg/m³
Consumer DNEL, long-term		inhalation	local	2,41 mg/m³
Consumer DNEL, long-term		dermal	systemic	10,42 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	9,23 mg/kg bw/day
Consumer DNEL, acute		oral	systemic	9,23 mg/kg bw/day
15625-89-5	2-ethyl-2-[[(1-oxoallyl)oxy]methyl]-1,3-propanediyl diacrylate; 2,2-bis(acryloyloxymethyl)butyl acrylate; trimethylolpropane triacrylate			
Consumer DNEL, long-term		oral	systemic	0,5 mg/kg bw/day
Worker DNEL, long-term		inhalation	systemic	3,5 mg/m³
Worker DNEL, long-term		dermal	systemic	83 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	0,87 mg/m³
Consumer DNEL, long-term		dermal	systemic	42 mg/kg bw/day
128-37-0	2,6-Di-tert-butyl-p-kresol			
Consumer DNEL, long-term		oral	systemic	0,25 mg/kg bw/day
Worker DNEL, long-term		inhalation	systemic	1,76 mg/m³
Worker DNEL, long-term		dermal	systemic	0,5 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	0,435 mg/m³
Consumer DNEL, long-term		dermal	systemic	0,25 mg/kg bw/day
57472-68-1	Oxybis(methyl-2,1-ethanediyl) diacrylate			
Worker DNEL, long-term		inhalation	systemic	24,48 mg/m³
Worker DNEL, long-term		dermal	systemic	2,77 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	7,24 mg/m³
Consumer DNEL, long-term		dermal	systemic	1,66 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	2,08 mg/kg bw/day

PNEC values

CAS No	Substance	
Environmental compartment		Value
48145-04-6	2-Phenoxyethyl acrylate	
Freshwater		0,002 mg/l
Freshwater (intermittent releases)		0,012 mg/l
Marine water		0,0002 mg/l
Freshwater sediment		0,02 mg/kg
Marine sediment		0,002 mg/kg
Micro-organisms in sewage treatment plants (STP)		1,77 mg/l
Soil		0,006 mg/kg
66492-51-1	(5-ethyl-1,3-dioxan-5-yl)methyl prop-2-enoate	
Freshwater		0,004 mg/l
Freshwater (intermittent releases)		0,04 mg/l
Marine water		0 mg/l
Freshwater sediment		0,019 mg/kg
Marine sediment		0,002 mg/kg
Micro-organisms in sewage treatment plants (STP)		30 mg/l
Soil		0,001 mg/kg
2235-00-9	N-Vinylcaprolactam	
Freshwater		0,1 mg/l
Freshwater (intermittent releases)		1 mg/l
Marine water		0,01 mg/l
Freshwater sediment		0,829 mg/kg
Marine sediment		0,083 mg/kg
Micro-organisms in sewage treatment plants (STP)		262 mg/l
Soil		0,107 mg/kg
5888-33-5	Isobornyl acrylate (Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate)	
Freshwater		0,001 mg/l
Freshwater (intermittent releases)		0,007 mg/l
Marine water		0 mg/l
Freshwater sediment		0,145 mg/kg
Marine sediment		0,015 mg/kg
Micro-organisms in sewage treatment plants (STP)		2 mg/l
Soil		0,029 mg/kg
75980-60-8	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	
Freshwater		0,0014 mg/l
Freshwater (intermittent releases)		0,014 mg/l
Marine water		0,00014 mg/l
Freshwater sediment		0,115 mg/kg
Marine sediment		0,0115 mg/kg
Soil		0,0222 mg/kg
162881-26-7	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	
Freshwater		0,001 mg/l
Freshwater (intermittent releases)		0,001 mg/l
Marine water		0,001 mg/l
Freshwater sediment		0,712 mg/kg
Marine sediment		0,712 mg/kg
Micro-organisms in sewage treatment plants (STP)		1 mg/l
Soil		20 mg/kg
56641-05-5	Ethoxylated phenyl acrylate	
Freshwater		0,002 mg/l

PNEC values

CAS No	Substance	
Environmental compartment		Value
Freshwater (intermittent releases)		0,012 mg/l
Marine water		0,0002 mg/l
Freshwater sediment		0,053 mg/kg
Marine sediment		0,005 mg/kg
Micro-organisms in sewage treatment plants (STP)		1,77 mg/l
Soil		0,009 mg/kg
5495-84-1	2-Isopropyl-9H-thioxanthen-9-one	
Freshwater		0 mg/l
Freshwater (intermittent releases)		0 mg/l
Marine water		0 mg/l
Freshwater sediment		0,013 mg/kg
Marine sediment		0,001 mg/kg
Secondary poisoning		0,333 mg/kg
Micro-organisms in sewage treatment plants (STP)		100 mg/l
Soil		0,003 mg/kg
122-99-6	2-phenoxyethanol	
Freshwater		0,943 mg/l
Freshwater (intermittent releases)		3,44 mg/l
Marine water		0,094 mg/l
Freshwater sediment		7,237 mg/kg
Marine sediment		0,724 mg/kg
Micro-organisms in sewage treatment plants (STP)		36 mg/l
Soil		1,31 mg/kg
15625-89-5	2-ethyl-2-[[(1-oxoallyl)oxy]methyl]-1,3-propanediyl diacrylate; 2,2-bis(acryloyloxymethyl)butyl acrylate; trimethylolpropane triacrylate	
Freshwater		0,00087 mg/l
Freshwater (intermittent releases)		0,0087 mg/l
Marine water		0,000087 mg/l
Freshwater sediment		0,017 mg/kg
Marine sediment		0,002 mg/kg
Secondary poisoning		10 mg/kg
Micro-organisms in sewage treatment plants (STP)		6,25 mg/l
Soil		0,003 mg/kg
128-37-0	2,6-Di-tert-butyl-p-kresol	
Freshwater		0,000199 mg/l
Freshwater (intermittent releases)		0,00199 mg/l
Marine water		0,00002 mg/l
Freshwater sediment		0,458 mg/kg
Marine sediment		0,046 mg/kg
Secondary poisoning		16,67 mg/kg
Micro-organisms in sewage treatment plants (STP)		0,017 mg/l
Soil		0,054 mg/kg
57472-68-1	Oxybis(methyl-2,1-ethanediyl) diacrylate	
Freshwater		0,003 mg/l
Freshwater (intermittent releases)		0,034 mg/l
Marine water		0 mg/l
Freshwater sediment		0,009 mg/kg
Micro-organisms in sewage treatment plants (STP)		100 mg/l
Soil		0,001 mg/kg

Additional advice on limit values

2-phenoxyethanol MAK 1 ppm / 5.7 mg/m³

2,6-Di-tert-butyl-p-kresol (E: inhalable fraction) MAK 10 mg/m³

epsylon-caprolactam STEL 40 mg/m³
epsylon-caprolactam TWA 10 mg/m³

epsylon-caprolactam (E: inhalable fraction) MAK 5 mg/m³
epsylon-caprolactam (E: inhalable fraction) TWA 10 mg/m³
epsylon-caprolactam (E: inhalable fraction) STEL 40 mg/m³

8.2. Exposure controls


Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

Minimum room ventilation rate for handling/application (air changes per hour): 10

Individual protection measures, such as personal protective equipment

Eye/face protection

Suitable eye protection: goggles.

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.

Butyl caoutchouc (butyl rubber) (EN 374)
Thickness of the glove material > 0.35 mm
Breakthrough time: 240 min

NBR (Nitrile rubber), Wearing time with occasional contact (splashes): Immediately remove any contaminated clothing, shoes or stockings.

Skin protection

Use of protective clothing.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls

Dangerous for the environment. Discharge into the environment must be avoided. Do not allow to enter into surface water or drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid	
Colour:	brown	
Melting point/freezing point:		< 0 °C
Boiling point or initial boiling point and boiling range:		> 100 °C
Flammability:		not determined

Lower explosion limits:	not determined
Upper explosion limits:	not determined
Flash point:	> 100 °C
Auto-ignition temperature:	> 200 °C
Decomposition temperature:	not determined
pH-Value:	not determined
Viscosity / kinematic (at 45 °C):	8,2 - 10,0 mm²/s
Water solubility:	easily soluble

Solubility in other solvents

not determined

Partition coefficient n-octanol/water:	not determined
Vapour pressure (at 20 °C):	< 0,03 hPa
Density (at 20 °C):	1,0985 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.

Oxidizing properties

The product is not: oxidising.

Other safety characteristics

Evaporation rate:	not determined
Solid content:	not determined

SECTION 10: Stability and reactivity

10.1. Reactivity

No hazardous reaction when handled and stored according to provisions.

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

none

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

In case of fire may be liberated: Gases/vapours, harmful

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) > 2000 mg/kg; ATE (dermal) > 5000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
48145-04-6	2-Phenoxyethyl acrylate				
	oral	LD50 5000 mg/kg	Rat	Study report (1981)	OECD Guideline 401
66492-51-1	(5-ethyl-1,3-dioxan-5-yl)methyl prop-2-enoate				
	oral	LD50 > 2000 mg/kg	Rat	Study report (2011)	OECD Guideline 423
	dermal	LD50 > 2000 mg/kg	Rat		
2235-00-9	N-Vinylcaprolactam				
	oral	LD50 1114 mg/kg	Rat	Study report	OECD Guideline 401
	dermal	LD50 1700 mg/kg	Rabbit	Study report (1993)	OECD Guideline 402
5888-33-5	Isobornyl acrylate (Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate)				
	oral	LD50 5750 mg/kg	Rat	Study report (1974)	Standard acute method. Study conducted p
	dermal	LD50 > 3000 mg/kg	Rabbit	Study report (1974)	other: pre-guideline
75980-60-8	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide				
	oral	LD50 > 5000 mg/kg	Rat	Study report (1989)	OECD Guideline 401
	dermal	LD50 > 2000 mg/kg	Rat	Study report (2011)	OECD Guideline 402
162881-26-7	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide				
	oral	LD50 > 2000 mg/kg	Rat	Study report (1996)	OECD Guideline 401
	dermal	LD50 > 2000 mg/kg	Rat	Study report (1996)	OECD Guideline 402
5495-84-1	2-Isopropyl-9H-thioxanthen-9-one				
	oral	LD50 > 2000 mg/kg	Rat	Study report (1998)	OECD Guideline 401
	dermal	LD50 > 2000 mg/kg	Rat	Study report (1987)	OECD Guideline 402
122-99-6	2-phenoxyethanol				
	oral	ATE 1394 mg/kg			
	dermal	LD50 > 2000 mg/kg	Rabbit	J. Am. Coll. Toxicol. 9(2): 259-277 (198	other: Draft IRLG
15625-89-5	2-ethyl-2-[[(1-oxoallyl)oxy]methyl]-1,3-propanediyl diacrylate; 2,2-bis(acryloyloxymethyl)butyl acrylate; trimethylolpropane triacrylate				
	oral	LD50 > 5000 mg/kg	Rat	Study report (1972)	An acute oral toxicity study was perform
	dermal	LD50 > 2000 mg/kg		Other company data (1981)	
128-37-0	2,6-Di-tert-butyl-p-kresol				
	oral	LD50 > 6000 mg/kg	Rat	Study report (1989)	OECD Guideline 401
	dermal	LD50 > 2000 mg/kg	Rat	Study report (1988)	OECD Guideline 402

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
57472-68-1	Oxybis(methyl-2,1-ethanediyl) diacrylate				
	oral	LD50 3530 mg/kg	Rat	Study report (1987)	OECD Guideline 401
	dermal	LD50 > 2000 mg/kg	Rabbit	Publication (1984)	OECD Guideline 402

Irritation and corrosivity

Skin corrosion/irritation: Causes skin irritation.
Serious eye damage/eye irritation: Causes serious eye irritation.

Sensitising effects

May cause an allergic skin reaction. (2-Phenoxyethyl acrylate; (5-ethyl-1,3-dioxan-5-yl)methyl prop-2-enoate; N-Vinylcaprolactam; Isobornyl acrylate (Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate); diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide; phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide; Ethoxylated phenyl acrylate; 2-ethyl-2-[[(1-oxoallyl)oxy]methyl]-1,3-propanediyl diacrylate; 2,2-bis(acryloyloxymethyl)butyl acrylate; trimethylolpropane triacrylate; Oxybis(methyl-2,1-ethanediyl) diacrylate)

Carcinogenic/mutagenic/toxic effects for reproduction

Suspected of causing cancer. (2-ethyl-2-[[(1-oxoallyl)oxy]methyl]-1,3-propanediyl diacrylate; 2,2-bis(acryloyloxymethyl)butyl acrylate; trimethylolpropane triacrylate)
May damage fertility. Suspected of damaging the unborn child. (diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide)
Germ cell mutagenicity: 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

Causes damage to organs through prolonged or repeated exposure. (N-Vinylcaprolactam)
Organs affected: liver, Respiratory tract

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]. Special hazards arising from the substance or mixture!

SECTION 12: Ecological information

12.1. Toxicity

Toxic to aquatic life with long lasting effects.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h][d]	Species	Source	Method
48145-04-6	2-Phenoxyethyl acrylate					
	Acute algae toxicity	ErC50 4,4 mg/l	72 h	Desmodesmus subspicatus	Study report (1989)	ISO 8692
	Acute crustacea toxicity	EC50 1,21 mg/l	48 h	Daphnia magna (Big water flea)		static
	Acute bacteria toxicity	EC50 177 mg/l ( )	3 h	Activated sludge	Study report (2013)	ISO 8192
66492-51-1	(5-ethyl-1,3-dioxan-5-yl)methyl prop-2-enoate					
	Acute fish toxicity	LC50 4 mg/l	96 h	Oncorhynchus mykiss	Study report (2010)	OECD Guideline 203
	Acute algae toxicity	ErC50 34 mg/l	72 h	Desmodesmus subspicatus	Study report (2010)	OECD Guideline 201
	Acute crustacea toxicity	EC50 20 mg/l	48 h	Daphnia magna	Study report (2010)	OECD Guideline 202

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]|[d]	Species	Source	Method
2235-00-9	N-Vinylcaprolactam					
	Acute fish toxicity	LC50 318 mg/l	96 h	Danio rerio	Study report (1995)	OECD Guideline 203
	Acute algae toxicity	ErC50 > 100 mg/l	72 h	Desmodesmus subspicatus	Study report (1993)	other: 79/831/EEC, Annex V, part C
	Acute crustacea toxicity	EC50 > 100 mg/l	48 h	Daphnia magna	Study report (1993)	EU Method C.2
5888-33-5	Isobornyl acrylate (Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate)					
	Acute fish toxicity	LC50 0,704 mg/l	96 h	Danio rerio	REACh Registration Dossier	OECD Guideline 203
	Acute algae toxicity	ErC50 2,7 mg/l	96 h	Pseudokirchneriella subcapitata	REACh Registration Dossier	OECD Guideline 201
	Acute crustacea toxicity	EC50 1,1 mg/l	48 h	Daphnia magna (Big water flea)		
	Crustacea toxicity	NOEC 0,092 mg/l	21 d	Daphnia magna	REACh Registration Dossier	OECD Guideline 211
75980-60-8	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide					
	Acute fish toxicity	LC50 1,4 mg/l	96 h	Cyprinus carpio	REACh Registration Dossier	OECD Guideline 203
	Acute algae toxicity	ErC50 > 2,01 mg/l	72 h	Pseudokirchneriella subcapitata	REACh Registration Dossier	OECD Guideline 201
	Acute crustacea toxicity	EC50 3,53 mg/l	48 h	Daphnia magna	REACh Registration Dossier	OECD Guideline 202
162881-26-7	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide					
	Acute fish toxicity	LC50 > 0,09 mg/l	96 h	Danio rerio	Study report (1997)	OECD Guideline 203
	Acute algae toxicity	ErC50 > 0,26 mg/l	72 h	Desmodesmus subspicatus	Study report (1997)	OECD Guideline 201
	Acute crustacea toxicity	EC50 > 1,175 mg/l	48 h	Daphnia magna	Study report (1997)	OECD Guideline 202
	Crustacea toxicity	NOEC >= 0,0081 mg/l	21 d	Daphnia magna	Study report (2003)	OECD Guideline 211
	Acute bacteria toxicity	EC50 > 100 mg/l ( )	3 h	activated sludge, domestic	Study report (1997)	OECD Guideline 209
56641-05-5	Ethoxylated phenyl acrylate					
	Acute algae toxicity	ErC50 4,4 mg/l	72 h	Desmodesmus subspicatus	REACh Registration Dossier	ISO 8692
	Acute bacteria toxicity	EC50 177 mg/l ( )	3 h	Activated sludge	REACh Registration Dossier	ISO 8192

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]|[d]	Species	Source	Method
5495-84-1	2-Isopropyl-9H-thioxanthen-9-one					
	Acute fish toxicity	LC50 0,125 mg/l	96 h		REACh Registration Dossier	other: REACH Guidance on QSARs R.6
	Acute algae toxicity	ErC50 > 0,047 mg/l	72 h	Pseudokirchneriella subcapitata	REACh Registration Dossier	OECD Guideline 201
	Acute crustacea toxicity	EC50 > 0,028 mg/l	48 h	Daphnia magna	REACh Registration Dossier	OECD Guideline 202
	Acute bacteria toxicity	EC50 > 1000 mg/l ( )	3 h	activated sludge of a predominantly domestic sewag	REACh Registration Dossier	OECD Guideline 209
122-99-6	2-phenoxyethanol					
	Acute fish toxicity	LC50 344 mg/l	96 h	Pimephales promelas	Publication (1984)	other: ASTM
	Acute algae toxicity	ErC50 > 500 mg/l	72 h	Desmodesmus subspicatus	Study report (2012)	OECD Guideline 201
	Acute crustacea toxicity	EC50 > 500 mg/l	48 h	Daphnia magna	Study report (1989)	other: EU guideline 79/831 EEC, Annex V,
	Fish toxicity	NOEC 23 mg/l	34 d	Pimephales promelas	Study report (2005)	OECD Guideline 210
	Crustacea toxicity	NOEC 9,43 mg/l	21 d	Daphnia magna	Study report (2006)	OECD Guideline 211
	Acute bacteria toxicity	EC50 > 1000 mg/l ( )	0,5 h	activated sludge of a predominantly domestic sewag	Study report (2002)	OECD Guideline 209
15625-89-5	2-ethyl-2-[[(1-oxoallyl)oxy]methyl]-1,3-propanediyl diacrylate; 2,2-bis(acryloyloxymethyl)butyl acrylate; trimethylolpropane triacrylate					
	Acute fish toxicity	LC50 0,87 mg/l	96 h	Danio rerio	Study report (2016)	OECD Guideline 203
	Acute algae toxicity	ErC50 4,86 mg/l	96 h	Desmodesmus subspicatus	Study report (1989)	EU Method C.3
	Acute crustacea toxicity	EC50 19,9 mg/l	48 h	Daphnia magna	Study report (1991)	EU Method C.2

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]|[d]	Species	Source	Method
128-37-0	2,6-Di-tert-butyl-p-kresol					
	Acute fish toxicity	LC50 0,199 mg/l	96 h	Oryzias latipes	REACh Registration Dossier	OECD Guideline 203
	Acute algae toxicity	ErC50 0,758 mg/l	96 h	Pseudokirchneriella subcapitata	REACh Registration Dossier	OECD Guideline 201
	Acute crustacea toxicity	EC50 0,48 mg/l	48 h	Daphnia magna	REACh Registration Dossier	OECD Guideline 202
	Fish toxicity	NOEC 0,053 mg/l	30 d	Oryzias latipes	REACh Registration Dossier	OECD Guideline 210
	Crustacea toxicity	NOEC 0,069 mg/l	21 d	Daphnia magna	REACh Registration Dossier	OECD Guideline 211
	Acute bacteria toxicity	EC50 > 10000 mg/l ( )	3 h	Activated sludge	Study report (2000)	OECD Guideline 209
57472-68-1	Oxybis(methyl-2,1-ethanediyl) diacrylate					
	Acute fish toxicity	LC50 2,2 - 4,64 mg/l	96 h	Leuciscus idus	Study report (1989)	other: German industrial standard test g
	Acute algae toxicity	ErC50 16,7 mg/l	72 h	Desmodesmus subspicatus	Study report (1990)	other: DIN 38412, part 9
	Acute crustacea toxicity	EC50 22,3 mg/l	48 h	Daphnia magna	Study report (1988)	EU Method C.2
	Acute bacteria toxicity	EC50 > 1000 mg/l ( )	0,5 h	activated sludge, domestic	Study report (2002)	OECD Guideline 209

12.2. Persistence and degradability

The product has not been tested.

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
48145-04-6	2-Phenoxyethyl acrylate			
		22,3%	28	
66492-51-1	(5-ethyl-1,3-dioxan-5-yl)methyl prop-2-enoate			
	QSAR	33,62%	28	
2235-00-9	N-Vinylcaprolactam			
		30-40%	28	
5888-33-5	Isobornyl acrylate (Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate)			
	OECD 310	57%	28	
	Not readily biodegradable (according to OECD criteria)			
75980-60-8	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide			
		0-10%	28	
122-99-6	2-phenoxyethanol			
		21,33%	20	
15625-89-5	2-ethyl-2-[[(1-oxoallyl)oxy]methyl]-1,3-propanediyl diacrylate; 2,2-bis(acryloyloxymethyl)butyl acrylate; trimethylolpropane triacrylate			
		70-80%	28	

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
128-37-0	2,6-Di-tert-butyl-p-kresol			
		4,5%	28	
57472-68-1	Oxybis(methyl-2,1-ethanediyl) diacrylate			
		90-100%	28	

12.3. Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
48145-04-6	2-Phenoxyethyl acrylate	ca. 2,58
66492-51-1	(5-ethyl-1,3-dioxan-5-yl)methyl prop-2-enoate	1,9
2235-00-9	N-Vinylcaprolactam	1,2
5888-33-5	Isobornyl acrylate (Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate)	4,52
75980-60-8	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	3,1
162881-26-7	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	5,8
56641-05-5	Ethoxylated phenyl acrylate	2,672
5495-84-1	2-Isopropyl-9H-thioxanthen-9-one	5,59
122-99-6	2-phenoxyethanol	1,2
15625-89-5	2-ethyl-2-[[(1-oxoallyl)oxy]methyl]-1,3-propanediyl diacrylate; 2,2-bis(acryloyloxymethyl)butyl acrylate; trimethylolpropane triacrylate	4,35
128-37-0	2,6-Di-tert-butyl-p-kresol	5,03
57472-68-1	Oxybis(methyl-2,1-ethanediyl) diacrylate	0,01 - 0,39

BCF

CAS No	Chemical name	BCF	Species	Source
5888-33-5	Isobornyl acrylate (Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate)	37	Danio rerio	Study report (2006)
75980-60-8	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	47 - 55	Cyprinus carpio	REACh Registration D
162881-26-7	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	< 5	Cyprinus carpio	Study report (1997)
122-99-6	2-phenoxyethanol	0,349	calculation	QSAR (2007)
15625-89-5	2-ethyl-2-[[(1-oxoallyl)oxy]methyl]-1,3-propanediyl diacrylate; 2,2-bis(acryloyloxymethyl)butyl acrylate; trimethylolpropane triacrylate	344		The BCF was calculat
128-37-0	2,6-Di-tert-butyl-p-kresol	465	fish	REACh Registration D

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.

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.

Contaminated packaging

Hazardous waste according to Directive 2008/98/EC (waste framework directive). 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 3082
14.2. UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2-Phenoxyethyl acrylate, (5-ethyl-1,3-dioxan-5-yl)methyl prop-2-enoate, Isobornyl acrylate (Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate), ...)
14.3. Transport hazard class(es):	9
14.4. Packing group:	III
Hazard label:	9

Classification code:	M6
Special Provisions:	274 335 375 601
Limited quantity:	5 L
Excepted quantity:	E1
Transport category:	3
Hazard No:	90
Tunnel restriction code:	-

Inland waterways transport (ADN)

14.1. UN number or ID number:	UN 3082
14.2. UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2-Phenoxyethyl acrylate, (5-ethyl-1,3-dioxan-5-yl)methyl prop-2-enoate, Isobornyl acrylate (Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate), ...)
14.3. Transport hazard class(es):	9
14.4. Packing group:	III
Hazard label:	9

Classification code:	M6
Special Provisions:	274 335 375 601
Limited quantity:	5 L
Excepted quantity:	E1

Marine transport (IMDG)

14.1. UN number or ID number:	UN 3082

14.2. UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2-Phenoxyethyl acrylate, (5-ethyl-1,3-dioxan-5-yl)methyl prop-2-enoate, Isobornyl acrylate (Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate), ...)

14.3. Transport hazard class(es): 9

14.4. Packing group: III

Hazard label: 9

Special Provisions: 274, 335, 969

Limited quantity: 5 L

Excepted quantity: E1

EmS: F-A, S-F

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number: UN 3082

14.2. UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2-Phenoxyethyl acrylate, (5-ethyl-1,3-dioxan-5-yl)methyl prop-2-enoate, Isobornyl acrylate (Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate), ...)

14.3. Transport hazard class(es): 9

14.4. Packing group: III

Hazard label: 9

Special Provisions: A97 A158 A197

Limited quantity Passenger: 30 kg G

Passenger LQ: Y964

Excepted quantity: E1

IATA-packing instructions - Passenger: 964

IATA-max. quantity - Passenger: 450 L

IATA-packing instructions - Cargo: 964

IATA-max. quantity - Cargo: 450 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: Yes

Danger releasing substance: (2-Phenoxyethyl acrylate, (5-ethyl-1,3-dioxan-5-yl)methyl prop-2-enoate, Isobornyl acrylate (Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate), ...)

14.6. Special precautions for user

No information available.

14.7. Maritime transport in bulk according to IMO instruments

not applicable

Other applicable information

This product is not regulated as a dangerous good when transported in sizes of <=5 L or <=5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.
Special Provisions: ADR + IMDG SV 375, IATA SP A197

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):
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 40, Entry 70, Entry 75

Directive 2004/42/EC on VOC in paints and varnishes:	26,28 % (262,8 g/l)
Information according to Directive 2012/18/EU (SEVESO III):	E2 Hazardous to the Aquatic Environment

Additional information

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). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.
Water hazard class (D):	3 - highly hazardous to water
Skin resorption/Sensitization:	Causes allergic hypersensitivity reactions.

Additional information

Technische Anleitung zur Reinhaltung der Luft (TA-Luft)
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes (Pigment Yellow 150) (CAS 68511-62-6) 1 - 10%
C.I. Pigment Blue 15 (CAS 147-14-8) 0.1 - <1.0%
epsylon-caprolactam (CAS 105-60-2) 0.1 - <1.0%
acrylic acid; prop-2-enoic acid (CAS 79-10-7) 0 - <0.1%
Hydrogen [29H,31H-phthalocyaninesulphonato(3-)-N29,N30,N31,N32]cuprate(1-), compound with dodecylamine (1:1) (CAS 73455-75-1) 0 - <0.1%
octamethylcyclotetrasiloxane (CAS 556-67-2) 0 - < 0.1%

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): 1,2,4,5,6,7,8,9,11,12,13,15,16.

Abbreviations and acronyms

Acute Tox: Acute toxicity
Skin Irrit: Skin irritation
Eye Dam: Eye damage
Eye Irrit: Eye irritation
Skin Sens: Skin sensitisation
Carc: Carcinogenicity
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

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%
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
DNEL: Derived No Effect Level
DMEL: Derived Minimal Effect Level
PNEC: Predicted No Effect Concentration
ATE: Acute toxicity estimate
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
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)
EmS: Emergency Schedules
MFAG: Medical First Aid Guide
ICAO: International Civil Aviation Organization
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: 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
Skin Irrit. 2; H315	Calculation method
Eye Irrit. 2; H319	Calculation method
Skin Sens. 1; H317	Calculation method
Carc. 2; H351	Calculation method
Repr. 1B; H360Fd	Calculation method
STOT RE 1; H372	Calculation method
Aquatic Chronic 2; H411	Calculation method

Relevant H and EUH statements (number and full text)

H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.

Relevant H and EUH statements (number and full text)

H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
H360Fd	May damage fertility. Suspected of damaging the unborn child.
H361d	Suspected of damaging the unborn child.
H361f	Suspected of damaging fertility.
H372	Causes damage to organs (liver, respiratory system) through prolonged or repeated exposure.
H372	Causes damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.

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.)