

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878 Issue date: 29-8-2017 Revision date: 4-7-2023 Supersedes version of: 28-4-2020 Version: 2.2

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

### **1.1. Product identifier**

Product form	:	Mixture
Product name	:	LUS-170 INK MAGENTA
UFI	:	X91A-E219-J20T-W2W7
Product code	:	LUS17-M-BA
Product group	:	Trade product

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

#### 1.2.1. Relevant identified uses

#### Main use category

: Industrial use, Professional use

Title	Use descriptors
LUS-170 INK MAGENTA	SU0, PC18, PROC1

Full text of use descriptors: see section 16

#### 1.2.2. Uses advised against

No additional information available

#### **1.3. Details of the supplier of the safety data sheet**

Mimaki Europe B.V. Stammerdijk 7E 1112 AA Diemen Netherlands T +31 20 4627640 reach@mimakieurope.com

### 1.4. Emergency telephone number

Emergency number

: National Poisons Information Centre +31 (0)30 - 274 8888 (Only for the purpose of informing medical personnel in cases of accidental intoxications. The emergency phone number is 24 hours/day available.)

Country	Organisation/Company	Address	Emergency number	Comment
Ũ	Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Guy's & St Thomas' Hospital Trust	Avonley Road SE14 5ER	+44 20 7188 7188	

## **SECTION 2: Hazards identification**

### 2.1. Classification of the substance or mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity (oral), Category 4	H302
Skin corrosion/irritation, Category 2	H315
Serious eye damage/eye irritation, Category 1	H318
Skin sensitisation, Category 1	H317
Reproductive toxicity, Category 1B	H360Df
Specific target organ toxicity – Repeated exposure, Category 1	H372
Hazardous to the aquatic environment – Chronic Hazard, Category 2	H411
Full text of H- and EUH-statements: see section 16	

#### Adverse physicochemical, human health and environmental effects

No additional information available

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#### 2.2. Label elements

Labelling according to Regulation (EC) No. 1272/20	008 [CLP]
Hazard pictograms (CLP)	
Signal word (CLD)	GHS05 GHS07 GHS08 GHS09
Signal word (CLP)	: Danger
Contains	2-phenoxyethyl acrylate; tetrahydrofurfuryl acrylate; 1-vinylhexahydro-2H-azepin-2-one; diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide; phenyl bis(2,4,6-trimethylbenzoyl)- phosphine oxide; exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate
Hazard statements (CLP)	: H302 - Harmful if swallowed.
	H315 - Causes skin irritation.
	H317 - May cause an allergic skin reaction.
	H318 - Causes serious eye damage.
	H360Df - May damage the unborn child. Suspected of damaging fertility.
	H372 - Causes damage to organs (liver, respiratory tract) through prolonged or repeated exposure.
	H411 - Toxic to aquatic life with long lasting effects.
Precautionary statements (CLP)	P201 - Obtain special instructions before use.
	P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
	P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
	P280 - Wear protective gloves, eye protection, face protection.
	P305+P351+P338+P310 - IF IN EYES: Rinse cautiously with water for several minutes.
	Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a doctor. a POISON CENTER.
	P308+P313 - IF exposed or concerned: Get medical advice/attention.
	r storr storr exposed of concerned. Get medical advice/attention.

## 2.3. Other hazards

Contains no PBT/vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

Component	
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII
(75980-60-8)	This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

Component	
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (75980-60-8)	The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

### **SECTION 3: Composition/information on ingredients**

### 3.1. Substances

## Not applicable

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## 3.2. Mixtures

Name	Product identifier	% w/w (% w/w)	Classification according to Regulation (EC) No. 1272/2008 [CLP]
2-phenoxyethyl acrylate	CAS-No.: 48145-04-6 EC-No.: 256-360-6 REACH-no: 01-2119980532- 35	20 – 30	Skin Sens. 1A, H317 Repr. 2, H361d Aquatic Chronic 2, H411
tetrahydrofurfuryl acrylate	CAS-No.: 2399-48-6 EC-No.: 219-268-7 REACH-no: 01-2120738396- 46	20 – 30	Acute Tox. 4 (Oral), H302 Skin Corr. 1C, H314 Eye Dam. 1, H318 Skin Sens. 1B, H317 Repr. 1B, H360Df Aquatic Chronic 2, H411
1-vinylhexahydro-2H-azepin-2-one	CAS-No.: 2235-00-9 EC-No.: 218-787-6 REACH-no: 01-2119977109- 27	10 – 20	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Eye Irrit. 2, H319 Skin Sens. 1B, H317 STOT RE 1, H372
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	CAS-No.: 5888-33-5 EC-No.: 227-561-6 EC Index-No.: 607-756-00-6 REACH-no: 01-2119957862- 25	10 – 20	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 STOT SE 3, H335 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide substance listed as REACH Candidate	CAS-No.: 75980-60-8 EC-No.: 278-355-8 EC Index-No.: 015-203-00-X REACH-no: 01-2119972295- 29	1 – 5	Repr. 2, H361fd
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	CAS-No.: 162881-26-7 EC-No.: 423-340-5 EC Index-No.: 015-189-00-5 REACH-no: 01-2119489401- 38	0,1 – 1	Skin Sens. 1, H317 Aquatic Chronic 4, H413

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

# SECTION 4: First aid measures

4.1. Description of first aid measures	
First-aid measures general	: Seek medical attention if ill effect develops. Do not breathe gas, fumes, vapour or spray. Avoid contact with skin and eyes. Never give anything by mouth to an unconscious person. IF exposed or concerned: Get medical advice/attention.
First-aid measures after inhalation	: In case of accident by inhalation : remove casualty to fresh air and keep at rest. Consult a doctor/medical service if you feel unwell.
First-aid measures after skin contact	: Seek medical attention if ill effect or irritation develops. Wash skin with mild soap and water. Wash contaminated clothing before reuse.
First-aid measures after eye contact	: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
First-aid measures after ingestion	: If swallowed, seek medical advice immediately and show this container or label. Never give anything by mouth to an unconscious person. Rinse mouth. Do NOT induce vomiting.

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4.2. Most important symptoms and effects, both acute and delayed		
Symptoms/effects	: May damage the unborn child. Suspected of damaging fertility. Causes damage to organs through prolonged or repeated exposure. liver. respiratory tract.	
Symptoms/effects after inhalation	: May cause an allergic skin reaction.	
Symptoms/effects after skin contact	: Causes skin irritation.	
Symptoms/effects after eye contact	: Causes serious eye damage.	
Symptoms/effects after ingestion	: Swallowing a small quantity of this material will result in serious health hazard.	

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

Concerning personal protective equipment to use, see section 8. Treat symptomatically.

SECTION 5: Firefighting measures		
5.1. Extinguishing media		
Suitable extinguishing media Unsuitable extinguishing media	<ul> <li>Carbon dioxide (CO2). Dry chemical. Alcohol resistant foam. Use extinguishing media appropriate for surrounding fire.</li> <li>Heavy water stream.</li> </ul>	
5.2. Special hazards arising from the substance or mixture		
Reactivity in case of fire	: Combustion produces toxic gases.	
5.3. Advice for firefighters		
Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.	
Protection during firefighting	: Do not breathe vapours. Do not enter fire area without proper protective equipment, including respiratory protection.	
Other information	: May cause sensitization by inhalation and skin contact.	

SECTION 6: Accidental release measures		
6.1. Personal precautions, protect	tive equipment and emergency procedures	
General measures	: Avoid contact with skin and eyes. Keep public away from danger area.	
6.1.1. For non-emergency personnel		
Emergency procedures	: Evacuate unnecessary personnel.	
6.1.2. For emergency responders		
Protective equipment	: For further information refer to section 8: "Exposure controls/personal protection". Equip cleanup crew with proper protection.	
Emergency procedures	: Ventilate area.	
6.2. Environmental precautions		

Do not allow material to contaminate ground water system. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up		
Methods for cleaning up	: Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Store away from other materials. Place in a suitable container for disposal in accordance with the waste regulations (see Section 13).	
Other information	: Clear contaminated areas thoroughly.	
6.4. Reference to other sections		

Concerning personal protective equipment to use, see section 8. See Section 12. Ecological information.

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SECTION 7: Handling and st	orage
7.1. Precautions for safe handling	ng
Precautions for safe handling Hygiene measures	<ul> <li>Provide good ventilation in process area to prevent formation of vapour. Local exhaust or breathing protection. Avoid inhalation of vapours. Use personal protective equipment as required. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.</li> <li>Do not eat, drink or smoke when using this product. Handle in accordance with good industrial hygiene and safety practice. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.</li> </ul>
7.2. Conditions for safe storage	, including any incompatibilities
Storage conditions Incompatible products Incompatible materials Storage area	<ul> <li>Keep out of the reach of children. Keep only in the original container in a cool well ventilated place. Keep container tightly closed.</li> <li>Strong bases. Strong acids.</li> <li>Sources of ignition. Direct sunlight.</li> <li>Avoid: Direct sunlight. Store away from heat.</li> </ul>
7.3. Specific end use(s)	

It is recommended to pass the information of this safety data sheet, eventually in an appropriated form, to the users.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

No additional information available

8.1.2. Recommended monitoring procedures

No additional information available

#### 8.1.3. Air contaminants formed

No additional information available

#### 8.1.4. DNEL and PNEC

2-phenoxyethyl acrylate (48145-04-6)		
DNEL/DMEL (Workers)		
Long-term - systemic effects, dermal	1,5 mg/kg bodyweight/day	
Long-term - systemic effects, inhalation	10 mg/m <sup>3</sup>	
Long-term - local effects, inhalation	77 mg/m³	
PNEC (Water)		
PNEC aqua (freshwater)	2 µg/l	
PNEC aqua (marine water)	0,2 µg/l	
PNEC aqua (intermittent, freshwater)	0,0121 mg/l	
PNEC (Sediment)		
PNEC sediment (freshwater)	0,02 mg/kg dwt	
PNEC sediment (marine water)	0,002 mg/kg dwt	
PNEC (Soil)		
PNEC soil	0,006 mg/kg dwt	

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2-phenoxyethyl acrylate (48145-04-6)		
PNEC (STP)		
PNEC sewage treatment plant	1,77 mg/l	
tetrahydrofurfuryl acrylate (2399-48-6)		
DNEL/DMEL (Workers)		
Long-term - systemic effects, dermal	4,9 mg/kg bodyweight/day	
Long-term - systemic effects, inhalation	1,73 mg/m³	
DNEL/DMEL (General population)		
Long-term - systemic effects,oral	180 µg/kg dw	
Long-term - systemic effects, inhalation	300 µg/m³	
Long-term - systemic effects, dermal	1,75 mg/kg bodyweight/day	
PNEC (Water)	·	
PNEC aqua (freshwater)	3,92 µg/L	
PNEC aqua (marine water)	392 ng/l	
PNEC aqua (intermittent, freshwater)	39,2 µg/L	
PNEC (Sediment)		
PNEC sediment (freshwater)	20,6 µg/kg	
PNEC sediment (marine water)	2,1 µg/kg	
PNEC (Soil)		
PNEC soil	1,8 µg/kg	
PNEC (STP)		
PNEC sewage treatment plant	2,637 mg/l	
1-vinylhexahydro-2H-azepin-2-one (2235-00-9	)	
DNEL/DMEL (Workers)		
Long-term - systemic effects, dermal	0,7 mg/kg bodyweight/day	
Long-term - systemic effects, inhalation	4,9 mg/m³	
Long-term - local effects, inhalation	0,17 mg/m³	
DNEL/DMEL (General population)		
Long-term - systemic effects,oral	0,4 mg/kg bodyweight/day	
Long-term - systemic effects, inhalation	1,04 mg/m³	
Long-term - systemic effects, dermal	0,42 mg/kg bodyweight/day	
Long-term - local effects, inhalation	0,04 mg/m³	
PNEC (Water)		
PNEC aqua (freshwater)	0,1 mg/l	
PNEC aqua (marine water)	0,01 mg/l	
PNEC aqua (intermittent, freshwater)	1 mg/l	
PNEC (Sediment)		
PNEC sediment (freshwater)	0,829 mg/kg dwt	
PNEC sediment (marine water)	0,0829 mg/kg dwt	

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1-vinylhexahydro-2H-azepin-2-one (2235-00-9)		
PNEC (Soil)		
PNEC soil	0,107 mg/kg dwt	
PNEC (STP)		
PNEC sewage treatment plant	262 mg/l	
diphenyl(2,4,6-trimethylbenzoyl)phosphine o	xide (75980-60-8)	
DNEL/DMEL (Workers)		
Long-term - systemic effects, dermal	0,233 mg/kg bodyweight/day	
Long-term - systemic effects, inhalation	0,822 mg/m <sup>3</sup>	
DNEL/DMEL (General population)		
Long-term - systemic effects,oral	83,3 μg/kg bodyweight/day	
Long-term - systemic effects, inhalation	0,145 mg/m³	
Long-term - systemic effects, dermal	83,3 μg/kg bodyweight/day	
PNEC (Water)		
PNEC aqua (freshwater)	1,4 µg/l	
PNEC aqua (marine water)	0,14 µg/l	
PNEC aqua (intermittent, freshwater)	14 µg/l	
PNEC aqua (intermittent, marine water)	1,4 µg/l	
PNEC (Sediment)		
PNEC sediment (freshwater)	0,115 mg/kg dwt	
PNEC sediment (marine water)	11,5 µg/kg dw	
PNEC (Soil)		
PNEC soil	22,2 µg/kg dw	
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine	e oxide (162881-26-7)	
DNEL/DMEL (Workers)		
Acute - systemic effects, dermal	3,33 mg/kg bodyweight/day	
Acute - systemic effects, inhalation	7,84 mg/m <sup>3</sup>	
Long-term - systemic effects, dermal	3,33 mg/kg bodyweight/day	
Long-term - systemic effects, inhalation	7,84 mg/m <sup>3</sup>	
DNEL/DMEL (General population)		
Acute - systemic effects, dermal	1,67 mg/kg bodyweight/day	
Acute - systemic effects, inhalation	3,92 mg/m <sup>3</sup>	
Acute - systemic effects, oral	1,67 mg/kg bodyweight/day	
Long-term - systemic effects,oral	1,67 mg/kg bodyweight/day	
Long-term - systemic effects, inhalation	3,92 mg/m <sup>3</sup>	
Long-term - systemic effects, dermal	1,67 mg/kg bodyweight/day	
PNEC (Water)		
PNEC aqua (freshwater)	0,8 µg/l	
PNEC aqua (marine water)	0,8 µg/l	

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PNEC (Sediment)           PNEC sediment (freshwater)         0.712 mg/kg dwt           PNEC sediment (marine water)         0.712 mg/kg dwt           PNEC (Soli)         20 mg/kg dwt           PNEC (Soli)         20 mg/kg dwt           PNEC Soli         20 mg/kg dwt           PNEC (STP)         I mg/l           exo-1,7,7-trimethylbicyclo[2,2,1]hept-2-yl acryLate (5888-33-5)         DDNEL/DMEL (Workers)           DDNEL/DMEL (Workers)         I.39 mg/kg bodyweight/day           Long-term - systemic effects, dermal         1,39 mg/kg bodyweight/day           Long-term - systemic effects, inhalation         4,8 mg/m³           DNEL/DMEL (General population)         0.83 mg/kg bodyweight/day           Long-term - systemic effects, inhalation         1,45 mg/m³           Long-term - systemic effects, dermal         0.83 mg/kg bodyweight/day           PNEC (water)         0.00092 mg/l           PNEC qua (freshwater)         0.00092 mg/l           PNEC aqua (ntermittent, freshwater)         0.000092 mg/l           PNEC Se	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide (162881-26-7)		
PNEC sediment (freshwater)         0.712 mg/kg dwt           PNEC sediment (marine water)         0.712 mg/kg dwt           PNEC (Soli)         20 mg/kg dwt           PNEC soli         20 mg/kg dwt           PNEC soli         20 mg/kg dwt           PNEC (STP)         revelop and the set of the set	PNEC aqua (intermittent, freshwater)	0,8 µg/l	
PNEC sediment (marine water)         0,712 mg/kg dwt           PNEC (Soli)         20 mg/kg dwt           PNEC soli         20 mg/kg dwt           PNEC soli         1 mg/l           exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrytate (5888-33-5)         DNEL/DMEL (Workers)           DNEL/DMEL (Workers)         1,39 mg/kg bodyweight/day           Long-term - systemic effects, inhalation         4,9 mg/m³           DNEL/DMEL (General population)         0,83 mg/kg bodyweight/day           Long-term - systemic effects, inhalation         1,45 mg/m³           DNEL/DMEL (General population)         0,83 mg/kg bodyweight/day           Long-term - systemic effects, inhalation         1,45 mg/m³           DNEL/DMEL (General population)         0,00092 mg/l           Long-term - systemic effects, inhalation         1,45 mg/m³           DNEC (Water)         0,00092 mg/l           PNEC aqua (intermittent, freshwater)         0,00092 mg/l           PNEC aqua (intermittent, freshwater)         0,00704 mg/l           PNEC Sediment)         0,145 mg/kg dwt           PNEC (Soli)         0,0145 mg/kg dwt           PNEC Sediment (marine water)         0,0145 mg/kg dwt           PNEC Sediment (marine water)         0,0285 mg/kg dwt           PNEC Soli         0,0285 mg/kg dwt	PNEC (Sediment)		
PNEC (Soil)     20 mg/kg dwt       PNEC Soil     20 mg/kg dwt       PNEC (STP)     1 mg/l       exc-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate (5888-33-5)     0       DNEL/DMEL (Workers)     1,39 mg/kg bodyweight/day       Long-term - systemic effects, dermal     1,39 mg/kg bodyweight/day       Long-term - systemic effects, inhalation     4,9 mg/m³       DNEL/DMEL (General population)     0.83 mg/kg bodyweight/day       Long-term - systemic effects, oral     0.83 mg/kg bodyweight/day       Long-term - systemic effects, inhalation     1,45 mg/m³       DNEL/DMEL (General population)     0.83 mg/kg bodyweight/day       Long-term - systemic effects, dermal     0,83 mg/kg bodyweight/day       PNEC (Water)     0,00092 mg/l       PNEC (aqua (marine water))     0,00092 mg/l       PNEC aqua (intermittent, freshwater)     0,00092 mg/l       PNEC aqua (intermittent, freshwater)     0,0145 mg/kg dwt       PNEC (Sediment)     0,0145 mg/kg dwt       PNEC Sediment (freshwater)     0,0145 mg/kg dwt       PNEC Sediment (marine water)     0,0145 mg/kg dwt       PNEC Sediment (marine water)     0,0285 mg/kg dwt       PNEC Soil     0,0285 mg/kg dwt	PNEC sediment (freshwater)	0,712 mg/kg dwt	
PNEC soil         20 mg/kg dwt           PNEC (STP)         1 mg/l           exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acr/>cr// (S888-33-5)         DNEL/DMEL (Workers)           DNEL/DMEL (Workers)         1,39 mg/kg bodyweight/day           Long-tern - systemic effects, inhalation         4,9 mg/m³           DNEL/DMEL (General population)         0.83 mg/kg bodyweight/day           Long-tern - systemic effects, inhalation         1,45 mg/m³           Long-tern - systemic effects, inhalation         0.83 mg/kg bodyweight/day           Long-tern - systemic effects, inhalation         0.83 mg/kg bodyweight/day           Long-tern - systemic effects, inhalation         0.83 mg/kg bodyweight/day           PNEC (Water)         0.00092 mg/l           PNEC aqua (freshwater)         0.00092 mg/l           PNEC aqua (intermittent, freshwater)         0.00092 mg/l           PNEC Sediment (freshwater)         0.0145 mg/kg dwt           PNEC Sediment (freshwater)         0.145 mg/kg dwt           PNEC Sediment (marine water)         0.0145 mg/kg dwt           PNEC Sediment (marine water)         0.0285 mg/kg dwt           PNEC Sediment (marine water)         0.0285 mg/kg dwt           PNEC Sediment (marine water)         0.0285 mg/kg dwt	PNEC sediment (marine water)	0,712 mg/kg dwt	
PNEC (STP)         1 mg/l           exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate (5888-33-5)         DNEL/DMEL (Workers)           DNEL/DMEL (Workers)         1.39 mg/kg bodyweight/day           Long-term - systemic effects, dermal         1.39 mg/kg bodyweight/day           Long-term - systemic effects, inhalation         4,9 mg/m <sup>3</sup> DNEL/DMEL (General population)         0.83 mg/kg bodyweight/day           Long-term - systemic effects, inhalation         1,45 mg/m <sup>3</sup> Long-term - systemic effects, inhalation         1,45 mg/m <sup>3</sup> Long-term - systemic effects, dermal         0.83 mg/kg bodyweight/day           Long-term - systemic effects, dermal         0.83 mg/kg bodyweight/day           Long-term - systemic effects, dermal         0.83 mg/kg bodyweight/day           PNEC (Water)         0.00092 mg/l           PNEC aqua (intersitent, freshwater)         0.00092 mg/l           PNEC aqua (intermittent, freshwater)         0.00092 mg/l           PNEC (Sediment)         0.0145 mg/kg dwt           PNEC sediment (marine water)         0.145 mg/kg dwt           PNEC csoil         0.0285 mg/kg dwt           PNEC soil         0.0285 mg/kg dwt	PNEC (Soil)		
PNEC sewage treatment plant         1 mg/l           exco-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acr/te (5888-33-5)           DNEL/DMEL (Workers)           Long-term - systemic effects, dermal         1.39 mg/kg bodyweight/day           Long-term - systemic effects, inhalation         4,9 mg/m³           DNEL/DMEL (General population)         0.83 mg/kg bodyweight/day           Long-term - systemic effects, inhalation         1,45 mg/m³           Long-term - systemic effects, inhalation         1,45 mg/m³           Long-term - systemic effects, dermal         0.83 mg/kg bodyweight/day           Long-term - systemic effects, dermal         0.83 mg/kg bodyweight/day           PNEC (Water)         0.00092 mg/l           PNEC aqua (freshwater)         0.00092 mg/l           PNEC aqua (intermittent, freshwater)         0.00092 mg/l           PNEC Sediment)         0.00092 mg/l           PNEC Sediment (freshwater)         0,145 mg/kg dwt           PNEC Sediment (marine water)         0,145 mg/kg dwt           PNEC Sediment (marine water)         0,0285 mg/kg dwt           PNEC Soil         0.0285 mg/kg dwt	PNEC soil	20 mg/kg dwt	
exco-1,7,-trimethylbicyclo[2.2.1]hept-2-yl acrylate (5888-33-5)         DNEL/DMEL (Workers)         Long-term - systemic effects, dermal       1,39 mg/kg bodyweight/day         Long-term - systemic effects, inhalation       4,9 mg/m³         DNEL/DMEL (General population)       0.83 mg/kg bodyweight/day         Long-term - systemic effects, inhalation       1,45 mg/m³         Long-term - systemic effects, inhalation       1,45 mg/m³         Long-term - systemic effects, inhalation       1,45 mg/m³         Long-term - systemic effects, inhalation       0,83 mg/kg bodyweight/day         Long-term - systemic effects, dermal       0,83 mg/kg bodyweight/day         PNEC (Water)       0,00092 mg/l         PNEC aqua (freshwater)       0,00092 mg/l         PNEC aqua (intermittent, freshwater)       0,00704 mg/l         PNEC (Sediment)       0,145 mg/kg dwt         PNEC (Sediment)       0,145 mg/kg dwt         PNEC (Soil)       0,0285 mg/kg dwt         PNEC soil       0,0285 mg/kg dwt         PNEC (STP)       E	PNEC (STP)		
DNEL/DMEL (Workers)           Long-term - systemic effects, dermal         1,39 mg/kg bodyweight/day           Long-term - systemic effects, inhalation         4,9 mg/m³           DNEL/DMEL (General population)	PNEC sewage treatment plant	1 mg/l	
Long-term - systemic effects, dermal1,39 mg/kg bodyweight/dayLong-term - systemic effects, inhalation4,9 mg/m³DNEL/DMEL (General population)0,83 mg/kg bodyweight/dayLong-term - systemic effects, oral0,83 mg/kg bodyweight/dayLong-term - systemic effects, inhalation1,45 mg/m³Long-term - systemic effects, dermal0,83 mg/kg bodyweight/dayPNEC (Water)0,00092 mg/lPNEC aqua (freshwater)0,00092 mg/lPNEC aqua (intermittent, freshwater)0,00704 mg/lPNEC sediment (freshwater)0,145 mg/kg dwtPNEC sediment (marine water)0,0145 mg/kg dwtPNEC soil0,0285 mg/kg dwtPNEC soil0,0285 mg/kg dwt	exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acry	/late (5888-33-5)	
Long-term - systemic effects, inhalation       4,9 mg/m³         DNEL/DMEL (General population)       0,83 mg/kg bodyweight/day         Long-term - systemic effects, oral       0,83 mg/kg bodyweight/day         Long-term - systemic effects, inhalation       1,45 mg/m³         Long-term - systemic effects, dermal       0,83 mg/kg bodyweight/day         PNEC (Water)       0,83 mg/kg bodyweight/day         PNEC aqua (freshwater)       0,00092 mg/l         PNEC aqua (intermittent, freshwater)       0,00092 mg/l         PNEC aqua (intermittent, freshwater)       0,00704 mg/l         PNEC (Sediment)       0,145 mg/kg dwt         PNEC sediment (marine water)       0,0145 mg/kg dwt         PNEC sediment (marine water)       0,0285 mg/kg dwt         PNEC soil       0,0285 mg/kg dwt         PNEC soil       0,0285 mg/kg dwt	DNEL/DMEL (Workers)		
DNEL/DMEL (General population)       Long-term - systemic effects, oral     0,83 mg/kg bodyweight/day       Long-term - systemic effects, inhalation     1,45 mg/m³       Long-term - systemic effects, dermal     0,83 mg/kg bodyweight/day       PNEC (Water)     0,00092 mg/l       PNEC aqua (freshwater)     0,00092 mg/l       PNEC aqua (intermittent, freshwater)     0,00092 mg/l       PNEC aqua (intermittent, freshwater)     0,00704 mg/l       PNEC sediment (freshwater)     0,145 mg/kg dwt       PNEC sediment (freshwater)     0,145 mg/kg dwt       PNEC soil     0,0285 mg/kg dwt	Long-term - systemic effects, dermal	1,39 mg/kg bodyweight/day	
Long-term - systemic effects, oral       0,83 mg/kg bodyweight/day         Long-term - systemic effects, inhalation       1,45 mg/m³         Long-term - systemic effects, dermal       0,83 mg/kg bodyweight/day         PNEC (Water)       0,83 mg/kg bodyweight/day         PNEC aqua (freshwater)       0,00092 mg/l         PNEC aqua (marine water)       0,00092 mg/l         PNEC aqua (intermittent, freshwater)       0,00092 mg/l         PNEC aqua (intermittent, freshwater)       0,00704 mg/l         PNEC Sediment (freshwater)       0,145 mg/kg dwt         PNEC sediment (marine water)       0,145 mg/kg dwt         PNEC sediment (marine water)       0,0145 mg/kg dwt         PNEC sediment (marine water)       0,0285 mg/kg dwt         PNEC soil       0,0285 mg/kg dwt	Long-term - systemic effects, inhalation	4,9 mg/m³	
Long-term - systemic effects, inhalation     1,45 mg/m <sup>3</sup> Long-term - systemic effects, dermal     0,83 mg/kg bodyweight/day       PNEC (Water)     0,00092 mg/l       PNEC aqua (freshwater)     0,00092 mg/l       PNEC aqua (marine water)     0,00092 mg/l       PNEC aqua (intermittent, freshwater)     0,00704 mg/l       PNEC (Sediment)     0,145 mg/kg dwt       PNEC sediment (marine water)     0,0145 mg/kg dwt       PNEC sediment (marine water)     0,0285 mg/kg dwt	DNEL/DMEL (General population)		
Long-term - systemic effects, dermal     0,83 mg/kg bodyweight/day       PNEC (Water)     0,00092 mg/l       PNEC aqua (freshwater)     0,00092 mg/l       PNEC aqua (marine water)     0,00092 mg/l       PNEC aqua (intermittent, freshwater)     0,00704 mg/l       PNEC (Sediment)     0,145 mg/kg dwt       PNEC sediment (marine water)     0,0145 mg/kg dwt       PNEC (Soil)     0,0285 mg/kg dwt	Long-term - systemic effects,oral	0,83 mg/kg bodyweight/day	
PNEC (Water)       0,00092 mg/l         PNEC aqua (freshwater)       0,00092 mg/l         PNEC aqua (marine water)       0,000092 mg/l         PNEC aqua (intermittent, freshwater)       0,00704 mg/l         PNEC (Sediment)       0,00704 mg/l         PNEC sediment (freshwater)       0,145 mg/kg dwt         PNEC sediment (marine water)       0,0145 mg/kg dwt         PNEC (Soil)       0,0285 mg/kg dwt         PNEC (STP)	Long-term - systemic effects, inhalation	1,45 mg/m³	
PNEC aqua (freshwater)       0,00092 mg/l         PNEC aqua (marine water)       0,00092 mg/l         PNEC aqua (intermittent, freshwater)       0,00704 mg/l         PNEC (Sediment)       0,145 mg/kg dwt         PNEC sediment (freshwater)       0,0145 mg/kg dwt         PNEC (Soil)       0,0285 mg/kg dwt         PNEC soil       0,0285 mg/kg dwt	Long-term - systemic effects, dermal	0,83 mg/kg bodyweight/day	
PNEC aqua (marine water)       0,000092 mg/l         PNEC aqua (intermittent, freshwater)       0,00704 mg/l         PNEC (Sediment)       0,145 mg/kg dwt         PNEC sediment (freshwater)       0,145 mg/kg dwt         PNEC sediment (marine water)       0,0145 mg/kg dwt         PNEC (Soil)       0,0285 mg/kg dwt         PNEC (STP)       0,0285 mg/kg dwt	PNEC (Water)		
PNEC aqua (intermittent, freshwater) 0,00704 mg/l PNEC (Sediment) PNEC sediment (freshwater) 0,145 mg/kg dwt PNEC sediment (marine water) 0,0145 mg/kg dwt PNEC (Soil) PNEC soil 0,0285 mg/kg dwt PNEC (STP)	PNEC aqua (freshwater)	0,00092 mg/l	
PNEC (Sediment)       0,145 mg/kg dwt         PNEC sediment (freshwater)       0,0145 mg/kg dwt         PNEC sediment (marine water)       0,0145 mg/kg dwt         PNEC (Soil)       0,0285 mg/kg dwt         PNEC soil       0,0285 mg/kg dwt	PNEC aqua (marine water)	0,000092 mg/l	
PNEC sediment (freshwater)     0,145 mg/kg dwt       PNEC sediment (marine water)     0,0145 mg/kg dwt       PNEC (Soil)     0,0285 mg/kg dwt       PNEC (STP)     0,0285 mg/kg dwt	PNEC aqua (intermittent, freshwater)	0,00704 mg/l	
PNEC sediment (marine water) 0,0145 mg/kg dwt PNEC (Soil) PNEC soil 0,0285 mg/kg dwt PNEC (STP)	PNEC (Sediment)		
PNEC (Soil) PNEC soil 0,0285 mg/kg dwt PNEC (STP)	PNEC sediment (freshwater)	0,145 mg/kg dwt	
PNEC soil 0,0285 mg/kg dwt PNEC (STP)	PNEC sediment (marine water)	0,0145 mg/kg dwt	
PNEC (STP)	PNEC (Soil)		
	PNEC soil	0,0285 mg/kg dwt	
PNEC sewage treatment plant 2 mg/l	PNEC (STP)		
	PNEC sewage treatment plant	2 mg/l	

### 8.1.5. Control banding

No additional information available

### 8.2. Exposure controls

### 8.2.1. Appropriate engineering controls

## Appropriate engineering controls:

Ensure that there is a suitable ventilation system.

#### 8.2.2. Personal protection equipment

#### Personal protective equipment:

Safety glasses. Gloves. Protective clothing. Avoid all unnecessary exposure.

### Personal protective equipment symbol(s):



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#### 8.2.2.1. Eye and face protection

#### Eye protection:

Chemical goggles or safety glasses (acc. EN 166)

#### 8.2.2.2. Skin protection

#### Skin and body protection:

Wear suitable protective clothing. Standard. EN 13034

#### Hand protection:

Wear suitable gloves resistant to chemical penetration. Breakthrough time (EN 374-3:2003): > 480 min (www.echa.europa.eu). Nitrile rubber gloves (0,4 mm). Chloroprene rubber (0,5mm). Polyvinylchloride (PVC). Wear protective gloves.

#### 8.2.2.3. Respiratory protection

#### **Respiratory protection:**

Provide adequate ventilation. In case of inadequate ventilation wear respiratory protection. Extra personal protection: A/P2 filter respirator for organic vapour and harmful dust. Standard. EN 14387

#### 8.2.2.4. Thermal hazards

No additional information available

#### 8.2.3. Environmental exposure controls

#### Environmental exposure controls:

### Do not discharge into drains or the environment.

### Other information:

Do not eat, drink or smoke during use.

### **SECTION 9: Physical and chemical properties**

### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Magenta.
Odour	: characteristic.
Odour threshold	: Not available
Melting point	: Not available
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Non flammable.
Explosive limits	: Not available
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: 95 °C
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
рН	: Not available
Viscosity, kinematic	: Not available
Viscosity, dynamic	: 7 – 12 mPa⋅s @ 25°C
Solubility	: Water: insoluble in water
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: Not available
Relative density	: 1 – 1,1
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not applicable

### 9.2. Other information

#### 9.2.1. Information with regard to physical hazard classes

No additional information available

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### 9.2.2. Other safety characteristics

VOC content

: < 30 %

SECTION 10: Stability and reactivity		
10.1. Reactivity		
Stable under normal conditions.		
10.2. Chemical stability		
Stable under normal conditions.		
10.3. Possibility of hazardous reactions		
No dangerous reactions known under normal conditions of use.		
10.4. Conditions to avoid		
Heat. Sparks. Open flame. Direct sunlight. Extremely high or low temperatures.		
10.5. Incompatible materials		
Strong oxidizers. Powdered metals.		
10.6. Hazardous decomposition products		

No hazardous decomposition products known.

SECTION 11: Toxicological information		
11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008		
Acute toxicity (dermal)	Harmful if swallowed. Not classified Not classified	
LUS-170 INK MAGENTA		
ATE CLP (oral)	1854,6 mg/kg	
ATE CLP (dermal)	2023,9 mg/kg	
2-phenoxyethyl acrylate (48145-04-6)		
LD50 oral rat	5000 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 401 (Acute Oral Toxicity)	
LD50 dermal rat	2000 mg/kg	
tetrahydrofurfuryl acrylate (2399-48-6)		
LD50 oral rat	928 mg/kg bodyweight	
1-vinylhexahydro-2H-azepin-2-one (2235-00-9)		
LD50 oral rat	1114 mg/kg	
LD50 dermal rat	1700 mg/kg	
LC50 Inhalation - Rat	1,6 mg/l (8h)	
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (75980-60-8)		
LD50 oral rat	> 5000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), Remarks on results: other:	

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diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (75980-60-8)		
LD50 dermal rat	<ul> <li>&gt; 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Guideline: EU Method B.3 (Acute Toxicity (Dermal)), Guideline: EPA OPPTS 870.1200 (Acute Dermal Toxicity), Guideline: other:, Remarks on results: other:</li> </ul>	
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine	e oxide (162881-26-7)	
LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: EU Method B.1 (Acute Toxicity (Oral))	
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: other:92/69/EEC	
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acr	ylate (5888-33-5)	
LD50 oral rat	5750 mg/kg	
LD50 dermal rabbit	> 3000 mg/kg bodyweight Animal: rabbit, Animal sex: male, Guideline: other:pre-guideline	
Skin corrosion/irritation : Additional information :	Causes skin irritation. On basis of test data not corrosive GLP OECD TG431	
Serious eye damage/irritation :	Causes serious eye damage.	
Respiratory or skin sensitisation :	May cause an allergic skin reaction.	
Germ cell mutagenicity : Additional information :	Not classified Based on available data, the classification criteria are not met	
Carcinogenicity :	Not classified	
Additional information :	Based on available data, the classification criteria are not met	
Reproductive toxicity :	May damage the unborn child. Suspected of damaging fertility.	
2-phenoxyethyl acrylate (48145-04-6)		
NOAEL (animal/female, F0/P)	300 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)	
STOT-single exposure : Additional information :	Not classified Based on available data, the classification criteria are not met	
diphenyl(2,4,6-trimethylbenzoyl)phosphine o	xide (75980-60-8)	
LOAEL (oral, rat)	250 – 300 mg/kg bodyweight	
NOAEL (oral, rat)	50 – 100 mg/kg bodyweight/day	
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acr	ylate (5888-33-5)	
NOAEL (oral, rat)	84 – 111 mg/kg bodyweight/day	
STOT-single exposure	May cause respiratory irritation.	
STOT-repeated exposure :	Causes damage to organs (liver, respiratory tract) through prolonged or repeated exposure.	
2-phenoxyethyl acrylate (48145-04-6)		
NOAEL (oral, rat, 90 days)	300 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)	
tetrahydrofurfuryl acrylate (2399-48-6)		
NOAEL (oral, rat, 90 days)	35 mg/kg bodyweight/day	
1-vinylhexahydro-2H-azepin-2-one (2235-00-9)		
LOAEC (inhalation, rat, vapour, 90 days)	0,181 mg/l air Animal: rat, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study), Guideline: EU Method B.29 (Sub-Chronic Inhalation Toxicity:90-Day Study)	
	50 mg/kg bodyweight NOAEL (oral, rat)	
NOAEL (subacute, oral, animal/male, 28 days)	So mg/kg bodyweight NOALE (Stal, Tal)	

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1-vinylhexahydro-2H-azepin-2-one (2235-00-9)		
STOT-repeated exposure	Causes damage to organs (liver, respiratory tract) through prolonged or repeated exposure.	
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (75980-60-8)		
NOAEL (subacute, oral, animal/male, 28 days)	50 mg/kg bodyweight NOAEL (oral, rat)	
NOAEL (subacute, oral, animal/female, 28 days)	50 mg/kg bodyweight NOAEL (oral, rat)	
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine	e oxide (162881-26-7)	
NOAEL (oral, rat, 90 days)	> 1000 mg/kg bodyweight Animal: rat, Guideline: other:92/69/eec	
NOAEL (dermal, rat/rabbit, 90 days)	1000 mg/kg bodyweight/day	
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acr	ylate (5888-33-5)	
NOAEL (oral, rat, 90 days)	100 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)	
Aspiration hazard :	Not classified	
Additional information :	Based on available data, the classification criteria are not met	
2-phenoxyethyl acrylate (48145-04-6)		
Viscosity, kinematic	≈ 10,136 mm²/s	
1-vinylhexahydro-2H-azepin-2-one (2235-00-9)		
Viscosity, kinematic	3,5 – 6,16 mm²/s	
11.2. Information on other hazards		
11.2.1. Endocrine disrupting properties		

#### 11.2.1. Endocrine disrupting properties

No additional information available

#### 11.2.2. Other information

Potential adverse human health effects and	: Harmful if swallowed.
symptoms	

# SECTION 12: Ecological information

# 12.1. Toxicity

Hazardous to the aquatic environment, short-term : (acute)	Toxic to aquatic life with long lasting effects. Not classified Toxic to aquatic life with long lasting effects.
2-phenoxyethyl acrylate (48145-04-6)	
LC50 - Fish [1]	10 mg/l Test organisms (species): Leuciscus idus
LC50 - Fish [2]	10 mg/l (72 h)
EC50 - Crustacea [1]	1,21 mg/l Test organisms (species): Daphnia magna
EC50 - Crustacea [2]	3,85 mg/l (24 h)
EC50 - Other aquatic organisms [1]	24h
EC50 72h - Algae [1]	4,4 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
EC50 72h - Algae [2]	1,7 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)

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2-phenoxyethyl acrylate (48145-04-6)		
EC50 96h - Algae [1]	4,1 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)	
EC50 96h - Algae [2]	1,33 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)	
tetrahydrofurfuryl acrylate (2399-48-6)		
LC50 - Fish [1]	7,32 mg/l	
EC50 - Crustacea [1]	37,7 mg/l	
EC50 72h - Algae [1]	3,92 mg/l	
EC50 72h - Algae [2]	2,71 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)	
1-vinylhexahydro-2H-azepin-2-one (2235-	00-9)	
LC50 - Fish [1]	307 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)	
EC50 - Crustacea [1]	> 100 mg/l Test organisms (species): Daphnia magna	
EC50 72h - Algae [1]	<ul> <li>&gt; 100 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)</li> </ul>	
NOEC (chronic)	5,75 mg/l Test organisms (species): Daphnia magna Duration: '21 d'	
NOEC chronic fish	215 mg/l (96h)	
NOEC chronic algae	25 mg/l (72h)	
diphenyl(2,4,6-trimethylbenzoyl)phosphir	ne oxide (75980-60-8)	
LC50 - Fish [1]	1,4 mg/l Test organisms (species): Cyprinus carpio	
LC50 - Fish [2]	6,53 mg/l (48h)	
EC50 - Crustacea [1]	3,53 mg/l Test organisms (species): Daphnia magna	
EC50 72h - Algae [1]	> 2,01 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)	
phenyl bis(2,4,6-trimethylbenzoyl)-phosp	hine oxide (162881-26-7)	
LC50 - Fish [1]	> 0,09 mg/l Test organisms (species): other:Zebra Fish Brachydanio rerio	
EC50 - Crustacea [1]	> 1,175 mg/l Test organisms (species): other aquatic crustacea:Daphnia Magna	
EC50 - Crustacea [2]	> 1175 mg/l Test organisms (species): Daphnia magna	
EC50 72h - Algae [1]	> 0,26 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)	
NOEC chronic crustacea	8,1 μg/L (21 d)	
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl	acrylate (5888-33-5)	
LC50 - Fish [1]	0,704 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)	
EC50 72h - Algae [1]	1,98 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)	
EC50 72h - Algae [2]	0,596 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)	
LOEC (chronic)	0,277 mg/l Test organisms (species): Daphnia magna Duration: '21 d'	
NOEC (acute)	0,153 – 0,405	
NOEC (chronic)	0,092 mg/l Test organisms (species): Daphnia magna Duration: '21 d'	

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12.2. Persistence and degradability			
LUS-170 INK MAGENTA			
Persistence and degradability	May cause long-term adverse effects in the environment.		
12.3. Bioaccumulative potential			
LUS-170 INK MAGENTA			
Bioaccumulative potential	Not established.		
2-phenoxyethyl acrylate (48145-04-6)			
Partition coefficient n-octanol/water (Log Pow)	2,58 @ 25°C		
tetrahydrofurfuryl acrylate (2399-48-6)			
Partition coefficient n-octanol/water (Log Pow)	0,81 @ 21.7 °C		
1-vinylhexahydro-2H-azepin-2-one (2235-00-9)	1-vinylhexahydro-2H-azepin-2-one (2235-00-9)		
Partition coefficient n-octanol/water (Log Pow)	1,2 – 1,242 @ 23 - 25 °C and pH 7.2		
diphenyl(2,4,6-trimethylbenzoyl)phosphine ox	ide (75980-60-8)		
Partition coefficient n-octanol/water (Log Pow)	3,1 – 3,87 @ 23 °C and pH 6.4		
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide (162881-26-7)			
Partition coefficient n-octanol/water (Log Pow)	4,65 – 5,8 @ 20 - 22 °C and pH 7 - 8.3		
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate (5888-33-5)			
Partition coefficient n-octanol/water (Log Pow)	4,52 @ 20°C		

## 12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment	
Component	
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (75980-60-8)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
12.6. Endocrine disrupting properties	
No additional information available	
12.7. Other adverse effects	

Additional information

: Avoid release to the environment.

SECTION 13: Disposal considerations	
13.1. Waste treatment methods	
Regional legislation (waste) Product/Packaging disposal recommendations Ecology - waste materials European List of Waste (LoW) code	<ul> <li>Disposal must be done according to official regulations.</li> <li>Dispose in a safe manner in accordance with local/national regulations.</li> <li>Avoid release to the environment.</li> <li>08 03 12* - waste ink containing dangerous substances</li> </ul>

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HP Code SECTION 14: Transpo	sp ac HF ad HF Se HF or or	25 - "Specific Target Organ Tox ecific target organ toxicity eithe ute toxic effects following aspir. 26 - "Acute Toxicity:" waste whi ministration, or inhalation expo 28 - "Corrosive:" waste which o 213 - "Sensitising:" waste which nsitising effects to the skin or th 214 - "Ecotoxic:" waste which p more sectors of the environme	er from a single or repeated et ation. ch can cause acute toxic effe sure. n application can cause skin n contains one or more substa ne respiratory organs. resents or may present imme	xposure, or which cause acts following oral or dermal corrosion. ances known to cause
ADR	IMDG	ΙΑΤΑ	ADN	RID
14.1. UN number or ID r	number			
UN 3082	UN 3082 UN 3082 UN 3082 UN 3082			
14.2. UN proper shippin	ig name	'		1
ENVIRONMENTALLY	ENVIRONMENTALLY	Environmentally hazardous	ENVIRONMENTALLY	ENVIRONMENTALLY

ADR	IMDG	ΙΑΤΑ	ADN	RID
14.1. UN number or ID n	umber			
UN 3082	UN 3082	UN 3082	UN 3082	UN 3082
14.2. UN proper shippin	g name			
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.	Environmentally hazardous substance, liquid, n.o.s.	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Transport document descr	iption			
UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (exo-1,7,7- trimethylbicyclo[2.2.1]hept- 2-yl acrylate ; 2- phenoxyethyl acrylate), 9, III, (-)	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (exo-1,7,7- trimethylbicyclo[2.2.1]hept- 2-yl acrylate ; 2- phenoxyethyl acrylate), 9, III, MARINE POLLUTANT	UN 3082 Environmentally hazardous substance, liquid, n.o.s. (exo-1,7,7- trimethylbicyclo[2.2.1]hept- 2-yl acrylate ; 2- phenoxyethyl acrylate), 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (exo-1,7,7- trimethylbicyclo[2.2.1]hept- 2-yl acrylate ; 2- phenoxyethyl acrylate), 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (exo-1,7,7- trimethylbicyclo[2.2.1]hep 2-yl acrylate ; 2- phenoxyethyl acrylate), 9 III
14.3. Transport hazard o	class(es)			
9	9	9	9	9
14.4. Packing group				
Ш	Ш	III	III	Ш
14.5. Environmental haz	zards			
Dangerous for the environment: Yes	Dangerous for the environment: Yes Marine pollutant: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes
No supplementary informatic	n available	·	·	·
4.6. Special precaution				

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Packing instructions (ADR)	: P001, IBC03, LP01, R001
• · · · ·	: PP1
Special packing provisions (ADR)	
Mixed packing provisions (ADR)	: MP19
Portable tank and bulk container instructions (ADR)	: T4
Portable tank and bulk container special provisions	: TP1, TP29
(ADR)	
Tank code (ADR)	: LGBV
Vehicle for tank carriage	: AT
Transport category (ADR)	: 3
Special provisions for carriage - Packages (ADR)	: V12
Special provisions for carriage - Loading, unloading	: CV13
and handling (ADR)	
Hazard identification number (Kemler No.)	: 90
, , , , , , , , , , , , , , , , , , ,	
Orange plates	90 3082
	3082
	3082
Tunnel restriction code (ADR)	: -
EAC code	: •3Z
T	
Transport by sea	074 005 000
Special provisions (IMDG)	: 274, 335, 969
Limited quantities (IMDG)	: 5 L
Excepted quantities (IMDG)	: E1
Packing instructions (IMDG)	: LP01, P001
Special packing provisions (IMDG)	: PP1
IBC packing instructions (IMDG)	: IBC03
Tank instructions (IMDG)	: T4
Tank special provisions (IMDG)	: TP2, TP29
EmS-No. (Fire)	: F-A
EmS-No. (Spillage)	: S-F
	: A
Stowage category (IMDG)	. A
Air transport	
PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y964
PCA limited quantity max net quantity (IATA)	: 30kgG
PCA packing instructions (IATA)	: 964
PCA max net quantity (IATA)	: 450L
CAO packing instructions (IATA)	: 964
CAO max net quantity (IATA)	: 450L
Special provisions (IATA)	: A97, A158, A197
ERG code (IATA)	: 9L
	. 52
Inland waterway transport	. 140
Classification code (ADN)	: M6
Special provisions (ADN)	: 274, 335, 375, 601
Limited quantities (ADN)	: 5 L
Excepted quantities (ADN)	: E1
Carriage permitted (ADN)	: Т
Equipment required (ADN)	: PP
Number of blue cones/lights (ADN)	: 0
,	
Rail transport	
-	: M6
Classification code (RID)	
Special provisions (RID)	: 274, 335, 375, 601
Limited quantities (RID)	: 5L
Excepted quantities (RID)	: E1
Packing instructions (RID)	: P001, IBC03, LP01, R001
Special packing provisions (RID)	: PP1
Mixed packing provisions (RID)	
mixed packing provisions (IND)	: MP19
Portable tank and bulk container instructions (RID)	: MP19 : T4

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Portable tank and bulk container special provisions (RID)	:	TP1, TP29
Tank codes for RID tanks (RID)	:	LGBV
Transport category (RID)	:	3
Special provisions for carriage – Packages (RID)	:	W12
Special provisions for carriage - Loading, unloading	:	CW13, CW31
and handling (RID)		
Colis express (express parcels) (RID)	:	CE8
Hazard identification number (RID)	:	90

#### 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

#### 15.1.1. EU-Regulations

### **REACH Annex XVII (Restriction List)**

EU restriction list (REACH Annex XVII)		
Reference code	Applicable on	Entry title or description
З(b)	LUS-170 INK MAGENTA ; 2-phenoxyethyl acrylate ; tetrahydrofurfuryl acrylate ; 1-vinylhexahydro-2H- azepin-2-one ; exo-1,7,7- trimethylbicyclo[2.2.1]hept -2-yl acrylate	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10
3(c)	LUS-170 INK MAGENTA ; 2-phenoxyethyl acrylate ; tetrahydrofurfuryl acrylate ; exo-1,7,7- trimethylbicyclo[2.2.1]hept -2-yl acrylate	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard class 4.1

#### **REACH Annex XIV (Authorisation List)**

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

#### REACH Candidate List (SVHC)

Contains substance(s) listed on the REACH Candidate List in concentrations  $\geq 0.1$  % or SCL: diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (EC 278-355-8, CAS 75980-60-8)

#### PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

### **POP Regulation (Persistent Organic Pollutants)**

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

### Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

#### VOC Directive (2004/42)

VOC content

: < 30 %

#### Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

#### Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

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### 15.1.2. National regulations

No additional information available

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## **SECTION 16: Other information**

Indication of changes			
Section	Changed item	Change	Comments
	Supersedes	Modified	
	Revision date	Modified	
15		Added	

Abbreviations an	d acronyms:
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC50	Median effective concentration
IARC	International Agency for Research on Cancer
ΙΑΤΑ	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
РВТ	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
STP	Sewage treatment plant
TLM	Median Tolerance Limit
SDS	Safety Data Sheet
vPvB	Very Persistent and Very Bioaccumulative

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Data sources

: REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Full text of H- and EUH-statements:			
Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4		
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4		
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1		
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard, Category 1		
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2		
Aquatic Chronic 4	Hazardous to the aquatic environment – Chronic Hazard, Category 4		
Eye Dam. 1	Serious eye damage/eye irritation, Category 1		
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2		
H302	Harmful if swallowed.		
H312	Harmful in contact with skin.		
H314	Causes severe skin burns and eye damage.		
H315	Causes skin irritation.		
H317	May cause an allergic skin reaction.		
H318	Causes serious eye damage.		
H319	Causes serious eye irritation.		
H335	May cause respiratory irritation.		
H360Df	May damage the unborn child. Suspected of damaging fertility.		
H361d	Suspected of damaging the unborn child.		
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.		
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.		
Repr. 1B	Reproductive toxicity, Category 1B		
Repr. 2	Reproductive toxicity, Category 2		
Skin Corr. 1C	Skin corrosion/irritation, Category 1, Sub-Category 1C		
Skin Irrit. 2	Skin corrosion/irritation, Category 2		
Skin Sens. 1	Skin sensitisation, Category 1		
Skin Sens. 1A	Skin sensitisation, category 1A		
Skin Sens. 1B	Skin sensitisation, category 1B		
STOT RE 1	Specific target organ toxicity – Repeated exposure, Category 1		
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation		

PC18 Ink and Toners	Full text of use descriptors		
	PC18	Ink and Toners	

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Full text of use descriptors		
PROC1	Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions	
SU0	Other	

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:				
Acute Tox. 4 (Oral)	H302	Calculation method		
Skin Irrit. 2	H315	Expert judgement		
Eye Dam. 1	H318	Calculation method		
Skin Sens. 1	H317	Calculation method		
Repr. 1B	H360Df	Expert judgement		
STOT RE 1	H372	Calculation method		
Aquatic Chronic 2	H411	Calculation method		

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.