

Safety data sheet in accordance with regulation (EC) No 1907/2006

Trade name: KRONES multicroma W 2202

Version: 3 / GB

Date revised: 22.02.2021

Substance number: 0905894127

Replaces Version: 2 / GB

Print date: 23.02.21

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

1.1. Product identifier

KRONES multicroma W 2202

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

Use of the substance/preparation

Digital ink

Identified Uses

SU3	Industrial uses: Uses of substances as such or in preparations at industrial sites
PROC1	Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.
PROC2	Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
PROC3	Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
PROC4	Chemical production where opportunity for exposure arises
PROC5	Mixing or blending in batch processes
PROC8a	Transfer of substance or mixture (charging and discharging) at nondedicated facilities
PROC8b	Transfer of substance or mixture (charging and discharging) at dedicated facilities
PROC10	Roller application or brushing
PROC11	Non industrial spraying
PROC13	Treatment of articles by dipping and pouring
PROC19	Manual activities involving hand contact
ERC4	Industrial use of processing aids in processes and products, not becoming part of articles
ERC8a	Wide dispersive indoor use of processing aids in open systems
ERC8d	Wide dispersive outdoor use of processing aids in open systems

Uses advised against

SU21 Consumer uses: Private households (= general public = consumers)

1.3. Details of the supplier of the safety data sheet

Address/Manufacturer

KIC KRONES Internationale Cooperationsgesellschaft mbH
Böhmerwaldstraße 5
93073 Neutraubling
Germany
Telephone no. +49 9401 70-3020
Fax no. +49 9401 70-3696
Information provided by / telephone Quality Management
E-mail address of person responsible for this SDS quality.management@kic-krones.com

1.4. Emergency telephone number

For medical advice (in German and English language): +49 (0) 551 192 40 (Giftinformationszentrum Nord). In case of transport accidents and other emergencies. +44 (0) 1235 239 670 (NCECV, National Chemical Emergency Center)

SECTION 2: Hazards identification ***

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2.1. Classification of the substance or mixture

Classification (Regulation (EC) No. 1272/2008)

Classification (Regulation (EC) No. 1272/2008)

Skin Irrit. 2	H315
Eye Irrit. 2	H319
Skin Sens. 1A	H317
Repr. 2	H361fd
Aquatic Acute 1	H400
Aquatic Chronic 2	H411

No classification as "carcinogen by inhalation" according to note 10 in annex VI of the Regulation (EU) Nr. 1272/2008: The classification as "carcinogen by inhalation" applies only to mixtures in powder form containing 1 % or more of titanium dioxide which is in the form of or incorporated in particles with aerodynamic diameter $\leq 10 \mu\text{m}$.

2.2. Label elements

Labelling according to regulation (EC) No 1272/2008

Hazard pictograms



Signal word

Warning

Hazard statements

H315	Causes skin irritation.
H319	Causes serious eye irritation.
H317	May cause an allergic skin reaction.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements

P201	Obtain special instructions before use.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/ attention.

Hazardous component(s) to be indicated on label (Regulation (EC) No. 1272/2008)

contains	2-Phenoxyethyl acrylate; Trimethylolpropane ethoxylated, triacrylate; (octahydro-4,7-methano-1H-indenediyl)bis(methylene) diacrylate; Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide; Hexamethylene diacrylate; Dipropylene glycol diacrylate; Glycerol, propoxylated, esters with acrylic acid
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Supplemental information

EUH211	Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.
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2.3. Other hazards

No special hazards have to be mentioned.

SECTION 3: Composition/information on ingredients ***

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3.2. Mixtures

Chemical characterization

UV - curing ink based on reactive acrylates

Hazardous ingredients ***

Hexamethylene diacrylate

CAS No.	13048-33-4				
EINECS no.	235-921-9				
Registration no.	01-2119484737-22				
Concentration	>= 25	<	50	%	

Classification (Regulation (EC) No. 1272/2008)

Eye Irrit. 2	H319
Skin Irrit. 2	H315
Skin Sens. 1	H317
Aquatic Chronic 2	H411
Aquatic Acute 1	H400

Trimethylolpropane ethoxylated, triacrylate

CAS No.	28961-43-5				
EINECS no.	500-066-5				
Registration no.	01-2119489900-30				
Concentration	>= 10	<	25	%	

Classification (Regulation (EC) No. 1272/2008)

Eye Irrit. 2	H319
Skin Sens. 1	H317

2-Phenoxyethyl acrylate

CAS No.	48145-04-6				
EINECS no.	256-360-6				
Registration no.	01-2119980532-35				
Concentration	>= 10	<	25	%	

Classification (Regulation (EC) No. 1272/2008)

Skin Sens. 1A	H317
Aquatic Chronic 2	H411
Repr. 2	H361d

titanium dioxide

CAS No.	13463-67-7				
EINECS no.	236-675-5				
Registration no.	01-2119489379-17				
Concentration	>= 10	<	25	%	

Classification (Regulation (EC) No. 1272/2008)

Carc. 2	H351
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Additional remarks:

CLP Regulation (EC) No 1272/2008, Annex VI, Note V, W, 10

Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide

CAS No.	75980-60-8				
EINECS no.	278-355-8				
Registration no.	01-2119972295-29				
Concentration	>= 3	<	10	%	

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Classification (Regulation (EC) No. 1272/2008)

Repr. 2	H361f
Skin Sens. 1B	H317
Aquatic Chronic 2	H411

Route of exposure: dermal

(octahydro-4,7-methano-1H-indenediyl)bis(methylene) diacrylate

CAS No.	42594-17-2				
EINECS no.	255-901-3				
Registration no.	01-2120051112-76				
Concentration	>=	2,5	<	10	%

Classification (Regulation (EC) No. 1272/2008)

Skin Sens. 1B	H317
Aquatic Chronic 2	H411

Dipropylene glycol diacrylate

CAS No.	57472-68-1				
EINECS no.	260-754-3				
Registration no.	01-2119484629-21				
Concentration	>=	0,1	<	1	%

Classification (Regulation (EC) No. 1272/2008)

Skin Irrit. 2	H315
Eye Dam. 1	H318
Skin Sens. 1	H317

Glycerol, propoxylated, esters with acrylic acid

CAS No.	52408-84-1				
EINECS no.	500-114-5				
Registration no.	01-2119487948-12				
Concentration	>=	0,1	<	1	%

Classification (Regulation (EC) No. 1272/2008)

Eye Irrit. 2	H319
Skin Sens. 1	H317

2,6-Di-tert-butyl-p-cresol

CAS No.	128-37-0				
EINECS no.	204-881-4				
Registration no.	01-2119565113-46				
Concentration	>=	0,1	<	0,25	%

Classification (Regulation (EC) No. 1272/2008)

Aquatic Acute 1	H400
Aquatic Chronic 1	H410

Cyclohexane

CAS No.	110-82-7				
EINECS no.	203-806-2				
Concentration	>=	0,1	<	0,25	%

Classification (Regulation (EC) No. 1272/2008)

Skin Irrit. 2	H315
Aquatic Chronic 1	H410
STOT SE 3	H336
Asp. Tox. 1	H304

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Flam. Liq. 2 H225
Aquatic Acute 1 H400

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. If unconscious place in recovery position and seek medical advice.

After inhalation

Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, administer artificial respiration.

After skin contact

Remove contaminated clothing. Wash skin thoroughly with soap and water or use recognised skin cleanser. Do NOT use solvents or thinners. In case of accidental skin contact avoid concurrent exposure to the sun or other sources of UV light, which may increase the sensitivity of skin.

After eye contact

Remove contact lenses, irrigate copiously with clean, fresh water, holding the eyelids apart for at least 10 minutes and seek immediate medical advice.

After ingestion

If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.

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

Until now no symptoms known so far.

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

Hints for the physician / treatment

Treat symptomatically

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Recommended: alcohol resistant foam, CO2-blanket, powders, water spray/mist, Not be used for safety reasons: water jet

5.2. Special hazards arising from the substance or mixture

In the event of fire the following can be released: Carbon dioxide (CO₂); Carbon monoxide (CO); dense black smoke

5.3. Advice for firefighters

Special protective equipment for fire-fighting

Cool closed containers exposed to fire with water. Do not allow run-off from fire fighting to enter drains or water courses.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Exclude sources of ignition and ventilate the area. Avoid breathing vapours. Refer to protective measures listed in Sections 7 and 8.

6.2. Environmental precautions

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Do not allow to enter drains or waterways. If the product contaminates lakes, rivers or sewage, inform appropriate authorities in accordance with local regulations.

6.3. Methods and material for containment and cleaning up

Contain and collect spillage with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth and place in container for disposal according to local regulations (see section 13). Clean preferably with a detergent - avoid use of solvents.

6.4. Reference to other sections

Information regarding Safe handling, see Section 7. Information regarding personal protective measures, see Section 8. Information regarding waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Skin and eye contact constitutes the principal hazard. Persons with a history of skin sensitisation problems should not be employed in any process in which this mixture is used. Use only in well-ventilated areas. Isolate from sources of heat, sparks and open flame. Avoid skin and eye contact. Avoid the inhalation of dust, particulates and spray mist arising from the application of this mixture. Avoid inhalation of dust from sanding. Smoking, eating and drinking shall be prohibited in application area. For personal protection see Section 8. Never use pressure to empty: container is not a pressure vessel. Always keep in containers of same material as the original one. Comply with the health and safety at work laws. Do not allow to enter drains or water courses.

Classification of fires / temperature class / Ignition group / Dust explosion class

Classification of fires B (Combustible liquid substances)
Temperature class T3

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Store in accordance with national regulation

Hints on storage assembly

Store away from oxidising agents, from strongly alkaline and strongly acid materials.

Further information on storage conditions

Observe label precautions. Store between 15 and 30 °C in a dry, well ventilated place away from sources of heat and direct sunlight. Keep container tightly closed. Keep away from sources of ignition. No smoking. Prevent unauthorised access. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

7.3. Specific end use(s)

Digital ink

SECTION 8: Exposure controls/personal protection ***

8.1. Control parameters

Derived No/Minimal Effect Levels (DNEL/DMEL) ***

2-Phenoxyethyl acrylate

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	12	mg/m ³

Type of value Derived No Effect Level (DNEL)

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Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	77	mg/m ³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	3,5	mg/kg/d
Trimethylolpropane ethoxylated, triacrylate		
Type of value	Derived No Effect Level (DNEL)	
Reference group	General Population	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	4,9	mg/kg/d
Type of value	Derived No Effect Level (DNEL)	
Reference group	General Population	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	0,5	mg/kg/d
Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	0,5	mg/kg/d
Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	4,9	mg/kg/d
Type of value	Derived No Effect Level (DNEL)	
Reference group	Industrial use	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	0,8	mg/kg/d
Type of value	Derived No Effect Level (DNEL)	
Reference group	Industrial use	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	16,2	mg/m ³
Type of value	Derived No Effect Level (DNEL)	

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Reference group Professional use
 Duration of exposure Long term
 Route of exposure dermal
 Mode of action Systemic effects
 Concentration 0,48 mg/kg/d

Type of value Derived No Effect Level (DNEL)
 Reference group Professional use
 Duration of exposure Long term
 Route of exposure inhalative
 Mode of action Systemic effects
 Concentration 4,9 mg/m³

Type of value Derived No Effect Level (DNEL)
 Reference group Professional use
 Duration of exposure Long term
 Route of exposure oral
 Mode of action Systemic effects
 Concentration 1,39 mg/kg/d

Type of value Derived No Effect Level (DNEL)
 Reference group General Population
 Duration of exposure Long term
 Route of exposure oral
 Mode of action Systemic effects
 Concentration 1,4 mg/kg

Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide

Type of value Derived No Effect Level (DNEL)
 Reference group Worker
 Duration of exposure Long term
 Route of exposure dermal
 Mode of action Systemic effects
 Concentration 1 mg/kg

Type of value Derived No Effect Level (DNEL)
 Reference group Worker
 Duration of exposure Long term
 Route of exposure inhalative
 Mode of action Systemic effects
 Concentration 3,5 mg/m³

Hexamethylene diacrylate

Type of value Derived No Effect Level (DNEL)
 Reference group Consumer
 Duration of exposure Long term
 Route of exposure oral
 Mode of action Systemic effects
 Concentration 2,1 mg/kg/d

Type of value Derived No Effect Level (DNEL)
 Reference group Consumer
 Duration of exposure Long term
 Route of exposure dermal
 Mode of action Systemic effects
 Concentration 1,66 mg/kg/d

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Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	7,2	mg/m ³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	2,77	mg/kg/d
Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	24,5	mg/m ³
Dipropylene glycol diacrylate		
Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	2,77	mg/kg/d
Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	24,48	mg/m ³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	1,66	mg/kg/d
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	7,24	mg/m ³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	oral	
Mode of action	Systemic effects	
Concentration	2,08	mg/kg/d

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Glycerol, propoxylated, esters with acrylic acid

Type of value	Derived No Effect Level (DNEL)	
Reference group	Industrial use	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	1,92	mg/kg/d

Type of value	Derived No Effect Level (DNEL)	
Reference group	Industrial use	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	16,2	mg/m ³

Type of value	Derived No Effect Level (DNEL)	
Reference group	Professional use	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	1,15	mg/kg/d

Type of value	Derived No Effect Level (DNEL)	
Reference group	Professional use	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	4,87	mg/m ³

Type of value	Derived No Effect Level (DNEL)	
Reference group	Professional use	
Duration of exposure	Long term	
Route of exposure	oral	
Mode of action	Systemic effects	
Concentration	1,39	mg/kg/d

2,6-Di-tert-butyl-p-cresol

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	3,5	mg/m ³

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	0,5	mg/kg/d

Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	0,86	mg/m ³

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Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	0,25	mg/kg/d

Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	oral	
Mode of action	Systemic effects	
Concentration	0,25	mg/kg/d

titanium dioxide

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	10	mg/m ³

Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	oral	
Mode of action	Systemic effects	
Concentration	700	mg/kg/d

Predicted No Effect Concentration (PNEC) ***

2-Phenoxyethyl acrylate

Type of value	PNEC	
Type	Freshwater	
Concentration	0,002	mg/l

Type of value	PNEC	
Type	Saltwater	
Concentration	0,0002	mg/l

Type of value	PNEC	
Type	Water (intermittent release)	
Concentration	0,0121	mg/l

Type of value	PNEC	
Type	Soil	
Concentration	0,006	mg/kg

Type of value	PNEC	
Type	Marine sediment	
Concentration	0,002	mg/kg

Type of value	PNEC	
Type	Freshwater sediment	
Concentration	0,02	mg/kg

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Trimethylolpropane ethoxylated, triacrylate

Type of value	PNEC		
Type	Soil		
Concentration	0,00587		mg/kg
Type of value	PNEC		
Type	Freshwater sediment		
Concentration	0,0082		mg/kg
Type of value	PNEC		
Type	Marine sediment		
Concentration	0,00082		mg/kg
Type of value	PNEC		
Type	Freshwater		
Concentration	0,00195		mg/l
Type of value	PNEC		
Type	Saltwater		
Concentration	0,000195		mg/l
Type of value	PNEC		
Type	Sewage treatment plant (STP)		
Concentration	10		mg/l
Type of value	PNEC		
Type	Water (intermittent release)		
Concentration	0,0195		mg/l

(octahydro-4,7-methano-1H-indenediyl)bis(methylene) diacrylate

Type of value	PNEC		
Type	Freshwater		
Concentration	1,6		µg/l
Type of value	PNEC		
Type	Saltwater		
Concentration	0,16		µg/l
Type of value	PNEC		
Type	Water (intermittent release)		
Concentration	16		µg/l
Type of value	PNEC		
Type	Freshwater sediment		
Concentration	0,6576		mg/kg
Type of value	PNEC		
Type	Marine sediment		
Concentration	0,06576		mg/kg
Type of value	PNEC		
Type	Sewage treatment plant (STP)		
Concentration	10		mg/l
Type of value	PNEC		
Type	Soil		
Concentration	0,1306		mg/kg

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Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide

Type of value	PNEC	
Type	Soil	
Concentration	0,0557	mg/kg
Type of value	PNEC	
Type	Freshwater	
Concentration	0,00353	mg/l
Type of value	PNEC	
Type	Freshwater sediment	
Concentration	0,29	mg/kg
Type of value	PNEC	
Type	Saltwater	
Concentration	0,000353	mg/l
Type of value	PNEC	
Type	Marine sediment	
Concentration	0,029	mg/kg
Type of value	PNEC	
Type	Water (intermittent release)	
Concentration	0,0353	mg/l

Hexamethylene diacrylate

Type of value	PNEC	
Type	Soil	
Concentration	0,094	mg/kg
Type of value	PNEC	
Type	Freshwater sediment	
Concentration	0,493	mg/kg
Type of value	PNEC	
Type	Freshwater	
Concentration	0,007	mg/l
Type of value	PNEC	
Type	Saltwater	
Concentration	0,001	mg/l
Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	2,7	mg/l
Type of value	PNEC	
Type	Marine sediment	
Concentration	0,049	mg/kg

Dipropylene glycol diacrylate

Type of value	PNEC	
Type	Freshwater	
Concentration	0,0034	mg/l
Type of value	PNEC	

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Type	Saltwater	
Concentration	0,00034	mg/l
Type of value	PNEC	
Type	Water (intermittent release)	
Concentration	0,034	mg/l
Type of value	PNEC	
Type	Sediment	
Concentration	0,00884	mg/kg
Type of value	PNEC	
Type	Soil	
Concentration	0,0013	mg/kg
Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	100	mg/l

Glycerol, propoxylated, esters with acrylic acid

Type of value	PNEC	
Type	Freshwater	
Concentration	0,00574	mg/l
Type of value	PNEC	
Type	Saltwater	
Concentration	0,000574	mg/l
Type of value	PNEC	
Type	Water (intermittent release)	
Concentration	0,0574	mg/kg
Type of value	PNEC	
Type	Sediment	
Concentration	0,01697	mg/kg
Type of value	PNEC	
Type	Soil	
Concentration	0,0011	mg/kg
Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	10	mg/l
Type of value	PNEC	
Type	Marine sediment	
Concentration	0,001697	mg/kg
Type of value	PNEC	
Type	Secondary poisoning	
Concentration	5,6	%(m)

2,6-Di-tert-butyl-p-cresol

Type of value	PNEC	
Type	Freshwater	
Concentration	0,199	µg/l

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Type of value	PNEC	
Type	Saltwater	
Concentration	0,02	µg/l
Type of value	PNEC	
Type	Water (intermittent release)	
Concentration	1,99	µg/l
Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	0,17	mg/l
Type of value	PNEC	
Type	Freshwater sediment	
Concentration	0,0996	mg/kg
Type of value	PNEC	
Type	Marine sediment	
Concentration	0,00996	mg/kg
Type of value	PNEC	
Type	Soil	
Concentration	0,04769	mg/kg
Type of value	PNEC	
Type	Secondary poisoning	
Route of exposure	oral	
Concentration	8,33	mg/kg
titanium dioxide		
Type of value	PNEC	
Type	Freshwater	
Concentration	0,184	mg/l
Type of value	PEC	
Type	Saltwater	
Concentration	0,0184	mg/l
Type of value	PNEC	
Type	Water (intermittent release)	
Concentration	0,193	mg/l
Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	100	mg/l
Type of value	PNEC	
Type	Freshwater sediment	
Concentration	1000	mg/kg
Type of value	PNEC	
Type	Marine sediment	
Concentration	100	mg/kg
Type of value	PNEC	
Type	Soil	
Concentration	100	mg/kg

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Type of value	PNEC	
Type	Secondary poisoning	
Route of exposure	oral	
Concentration	1667	mg/kg

8.2. Exposure controls

Exposure controls

Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction.

Respiratory protection

In situations where misting or flying may occur use appropriate certified respirators.

Hand protection

There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals.

For prolonged or repeated handling nitrile rubber gloves with textile undergloves are required.

Material thickness > 0,5 mm

Breakthrough time < 30 min

PVC or rubber gloves are not recommended.

The breakthrough time must be greater than the end use time of the product.

The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed.

Gloves should be replaced regularly and if there is any sign of damage to the glove material.

Always ensure that gloves are free from defects and that they are stored and used correctly.

The performance or effectiveness of the glove may be reduced by physical/ chemical damage and poor maintenance.

Barrier creams may help to protect the exposed areas of the skin, they should however not be applied once exposure has occurred.

Eye protection

Use safety eyewear designed to protect against splash of liquids.

Body protection

Personnel should wear protective clothing.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Form	liquid, viscous
Colour	white
Odour	of acrylic monomers
Odour threshold	
Remarks	No data available
pH value	
Remarks	Not applicable
Melting point	
Remarks	not determined
Freezing point	
Remarks	not determined
Initial boiling point and boiling range	
Value	appr. 132 °C
Pressure	1.013 hPa
Source	Literature value

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Flash point

Value > 100 °C
Method ASTM D 6450 (CCCFP)

Evaporation rate (ether = 1) :

Remarks not determined

Flammability (solid, gas)

Not applicable

Upper/lower flammability or explosive limits

Remarks not determined

Vapour density

Remarks not determined

Density

Value 1,21 g/cm³
Temperature 20 °C
Method DIN EN ISO 2811

Solubility in water

Remarks partially miscible

Partition coefficient: n-octanol/water

Remarks Not applicable

Ignition temperature

Value appr. 235 °C
Source Literature value

Viscosity

Remarks
Remarks not determined

Explosive properties

evaluation no

Oxidising properties

evaluation None known

9.2. Other information

Other information

The physical specifications are approximate values and refer to the used safety relevant component(s).

SECTION 10: Stability and reactivity

10.1. Reactivity

No hazardous reactions when stored and handled according to prescribed instructions.

10.2. Chemical stability

This mixture contains materials which are unstable under the following conditions: exposure to heat (>50°C), strong UV sources.

10.3. Possibility of hazardous reactions

Keep away from free radical initiators, peroxides, strong alkalis or reactive metals.

10.4. Conditions to avoid

These could cause the product to polymerise exothermically. Unintentional contact with them should be avoided. When exposed to high temperatures may produce hazardous decomposition products.

10.5. Incompatible materials

No hazardous reactions when stored and handled according to prescribed instructions.

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10.6. Hazardous decomposition products

See chapter 5.2 (Firefighting measures - Special hazards arising from the substance or mixture).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute oral toxicity

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

Acute oral toxicity (Components)

2-Phenoxyethyl acrylate

Species	rat	
LD50	> 5000	mg/kg
Method	OECD 401	

Acute dermal toxicity

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

Acute dermal toxicity (Components)

Trimethylolpropane ethoxylated, triacrylate

Species	rabbit	
LD50	> 13200	mg/kg

Acute inhalational toxicity

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

Skin corrosion/irritation

evaluation	irritant
Remarks	The classification criteria are met.

Skin corrosion/irritation (Components)

Hexamethylene diacrylate

Species	rabbit
evaluation	irritant
Method	OECD 404

Serious eye damage/irritation

evaluation	irritant
Remarks	The classification criteria are met.

Serious eye damage/irritation (Components)

Trimethylolpropane ethoxylated, triacrylate

Species	rabbit
evaluation	irritant
Method	OECD 405

Glycerol, propoxylated, esters with acrylic acid

evaluation	strongly irritant
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Hexamethylene diacrylate

Species	rabbit
evaluation	irritant
Method	OECD 405

Sensitization

evaluation	May cause sensitization by skin contact.
Remarks	The classification criteria are met.

Sensitization (Components)

Trimethylolpropane ethoxylated, triacrylate

Species	guinea pig
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evaluation sensitizing
Method OECD 406

Hexamethylene diacrylate

Species guinea pig
evaluation sensitizing
Method OECD 406

Glycerol, propoxylated, esters with acrylic acid

Route of exposure dermal
Species guinea pig
evaluation sensitizing
Method OECD 406

Mutagenicity

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

Reproductive toxicity

evaluation Suspected of damaging fertility. Suspected of damaging the unborn child.
Remarks The classification criteria are met.

Carcinogenicity

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

Specific Target Organ Toxicity (STOT)

Single exposure

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

Repeated exposure

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

Aspiration hazard

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

Experience in practice

This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact. Acrylate components of the mixture have irritating properties. Prolonged or repeated contact with skin or mucous membrane may result in irritation symptoms such as redness, blistering, dermatitis, etc. Cases of allergic skin reactions have been observed. The liquid splashed in the eyes may cause irritation. The inhalation of airborne droplets or aerosols may cause irritation of the respiratory tract. Ingestion may cause nausea, weakness and central nervous system effects.

Other information

There are no data available on the mixture itself.

The mixture has been assessed following the additivity method of the CLP Regulation (EC) No 1272/2008 and classified for toxicological hazards accordingly.

SECTION 12: Ecological information

12.1. Toxicity

General information

There are no data available on the mixture itself. Do not allow to enter drains or water courses. The mixture has been assessed following the summation method of the CLP Regulation (EC) No 1272/2008 and is classified for eco-toxicological properties accordingly. See Sections 2 and 3 for details.

Fish toxicity (Components)

2-Phenoxyethyl acrylate

LC50	10	mg/l
Duration of exposure	24	h
Method	OECD 203	

Hexamethylene diacrylate

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Species	golden orfe (Leuciscus idus)			
EC50	1,6	to	10	mg/l
Duration of exposure	96	h		

(octahydro-4,7-methano-1H-indenediyl)bis(methylene) diacrylate

Species	zebra fish (Brachydanio rerio)			
LC50	1,65			mg/l
Duration of exposure	96	h		
Method	OECD 203			

Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide

Species	zebra fish (Brachydanio rerio)			
LC50	< 10			mg/l
Duration of exposure	96	h		

2,6-Di-tert-butyl-p-cresol

LC50	0,199			mg/l
Duration of exposure	96	h		

Daphnia toxicity (Components)

2-Phenoxyethyl acrylate

Species	Daphnia magna			
EC50	1,21			mg/l
Duration of exposure	48	h		
Method	OECD 202			

2-Phenoxyethyl acrylate

Species	Daphnia magna			
EC10	> 0,1			mg/l
Duration of exposure	21	Days		
Method	OECD 211			

Hexamethylene diacrylate

Species	Daphnia magna			
EC50	2,6			mg/l
Duration of exposure	48	h		

(octahydro-4,7-methano-1H-indenediyl)bis(methylene) diacrylate

Species	Daphnia magna			
EC50	2,36			mg/l
Duration of exposure	48	h		
Method	OECD 202			

Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide

Species	Daphnia magna			
EC50	< 10			mg/l
Duration of exposure	48	h		

2,6-Di-tert-butyl-p-cresol

Species	Daphnia magna			
EC50	0,48			mg/l
Duration of exposure	48	h		
Method	OECD 202			

Algae toxicity (Components)

2-Phenoxyethyl acrylate

Species	Desmodesmus			
	4,4			mg/l
Duration of exposure	72	h		
Method	ISO 8692			

2-Phenoxyethyl acrylate

Species	Desmodesmus			
EC10	0,71			mg/l
Duration of exposure	72	h		

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Hexamethylene diacrylate

Species	Desmodesmus		
EC50	1,5		mg/l
Duration of exposure	72	h	

Hexamethylene diacrylate

Species	Desmodesmus		
NOEC	0,5		mg/l
Duration of exposure	72	h	

(octahydro-4,7-methano-1H-indenediyl)bis(methylene) diacrylate

Species	Pseudokirchneriella subcapitata		
EC50	1,6		mg/l
Duration of exposure	72	h	
Method	OECD 201		

Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide

Species	Pseudokirchneriella subcapitata		
ErC50	< 10		mg/l
Duration of exposure	72	h	

2,6-Di-tert-butyl-p-cresol

EC50	0,758		mg/l
Duration of exposure	96	h	

Bacteria toxicity (Components)**2-Phenoxyethyl acrylate**

Species	activated sludge		
EC50	177		mg/l
Duration of exposure	3	h	
Method	OECD 209		

12.2. Persistence and degradability**General information**

No data available

Biodegradability (Components)**2-Phenoxyethyl acrylate**

Value	22,3		%
Duration of test	28	Days	
Method	OECD 301 D		

12.3. Bioaccumulative potential**General information**

There are no data available on the mixture itself.

Partition coefficient: n-octanol/water

Remarks Not applicable

Octanol/water partition coefficient (log Pow) (Components)**2-Phenoxyethyl acrylate**

log Pow	2,58		
Temperature	25	°C	
Method	OECD 117		

12.4. Mobility in soil**General information**

There are no data available on the mixture itself.

12.5. Results of PBT and vPvB assessment

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General information

There are no data available on the mixture itself.

12.6. Other adverse effects

General information

There are no data available on the mixture itself.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations for the product

Do not allow to enter drains or water courses.

Wastes and emptied containers should be classified in accordance with relevant national regulation.

The European Waste Catalogue classification of this product, when disposed of as waste is

EWC waste code 08 03 12* waste ink containing dangerous substances

If this product is mixed with other wastes, the original waste product code may no longer apply and the appropriate code should be assigned.

For further information contact your local waste authority.

Disposal recommendations for packaging

Using information provided in this safety data sheet, advice should be obtained from the relevant waste authority on the classification of empty containers.

Empty containers must be scrapped or reconditioned.

Not emptied containers are hazardous waste (waste code number 150110).

SECTION 14: Transport information

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	Land transport ADR/RID	Marine transport IMDG/GGVSee	Air transport ICAO/IATA
Tunnel restriction code	-		
14.1. UN number	3082	3082	3082
14.2. UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Hexamethylene diacrylate)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Hexamethylene diacrylate)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Hexamethylene diacrylate)
14.3. Transport hazard class(es)	9	9	9
Label			
14.4. Packing group	III	III	III
Limited Quantity	5 L		
Transport category	3		
14.5. Environmental hazards	 ENVIRONMENTALLY HAZARDOUS	Marine Pollutant 	 ENVIRONMENTALLY HAZARDOUS

Information for all modes of transport

14.6. Special precautions for user

Transport within the user's premises:

Always transport in closed containers that are upright and secure.

Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Other information

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

no

SECTION 15: Regulatory information

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

Major-accident categories acc. 96/82/EC

Category	9.1	Dangerous for environment	100.000	kg	200.000	kg
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VOC

VOC (EU)	0,04	%	
VOC (EU)		0,4	g/l

Other information

The product does not contain substances of very high concern (SVHC).

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Other information

All components are contained in the TSCA inventory or exempted.

15.2. Chemical safety assessment

For this preparation a chemical safety assessment has not been carried out.

SECTION 16: Other information

Hazard statements listed in Chapter 3

H225	Highly flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H361d	Suspected of damaging the unborn child.
H361f	Suspected of damaging fertility.
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.

CLP categories listed in Chapter 3

Aquatic Acute 1	Hazardous to the aquatic environment, acute, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment, chronic, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic, Category 2
Asp. Tox. 1	Aspiration hazard, Category 1
Carc. 2	Carcinogenicity, Category 2
Eye Dam. 1	Serious eye damage, Category 1
Eye Irrit. 2	Eye irritation, Category 2
Flam. Liq. 2	Flammable liquid, Category 2
Repr. 2	Reproductive toxicity, Category 2
Skin Irrit. 2	Skin irritation, Category 2
Skin Sens. 1	Skin sensitization, Category 1
Skin Sens. 1A	Skin sensitization, Category 1A
Skin Sens. 1B	Skin sensitization, Category 1B
STOT SE 3	Specific target organ toxicity - single exposure, Category 3

Supplemental information

Relevant changes compared with the previous version of the safety data sheet are marked with: ***
This information is based on our present state of knowledge. However, it should not constitute a guarantee for any specific product properties and shall not establish a legally valid relationship.
The information in this Safety Data Sheet is based on the present state of knowledge and current legislation.

It provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular applications.

The product should not be used for purposes other than those shown in Section 1 without first referring to the supplier and obtaining written handling instructions.

As the specific conditions of use of the product are outside the supplier's control, the user is responsible for ensuring that the requirements of relevant legislation are complied with.

The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation.