A CANON COMPANY

SAFETY DATA SHEET

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

1.1. Product identifier

Trade name or designation of the mixture	UVgel 460 ink Cyan
Other means of identification	
Article Number	1070104722
Registration number	-
Synonyms	None.
Product code	1965C038AA
Issue date	15-March-2019
Version number	1.3
Revision date	27-September-2019
Supersedes date	21-June-2019

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

Identified uses	Inkjet printing ink.
Uses advised against	Other uses not recommended.

1.3. Details of the supplier of the safety data sheet

Supplier	Océ-Technologies B.V.
Address	St. Urbanusweg 43
City	5914 CA Venlo
Country	The Netherlands
Telephone Number	+31 77 359 2222
E-mail address	sds-hq@oce.com

1.4. Emergency telephone number

National Poison Information Center	111 (Available 24 hours a day.)
NCEC Service	+44 (0) 1235 239 670 For chemical emergencies only. (Available 24 hours a day.)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

Classification according to Regulation (EC) No 1272/2008 as amended

Health hazards

Skin corrosion/irritation	Category 2	H315 - Causes skin irritation.
Serious eye damage/eye irritation	Category 2	H319 - Causes serious eye irritation.
Skin sensitisation	Category 1	H317 - May cause an allergic skin reaction.
Reproductive toxicity	Category 1B	H360 - May damage fertility or the unborn child.

Environmental hazards

Hazardous to the aquatic environment, long-term aquatic hazard	Category 2	H411 - Toxic to aquatic life with long lasting effects.

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Contains:	(5-Ethyl-1,3-dioxan-5-yl)methyl acrylate, 2-Propenoic acid, 1,6-hexanediyl ester, polymer with 2-aminoethanol, Ethyl 4-dimethylaminobenzoate, PROPOXYLATED NEOPENTYL GLYCOL DIACRYLATE

Hazard pictograms

Signal word Danger

Hazard statements

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H360	May damage fertility or the unborn child.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention

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

Response

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.
P363	Wash contaminated clothing before reuse.

Storage Not available.

Disposal Not available.

Supplemental label information None.

2.3. Other hazards Not a PBT or vPvB substance or mixture.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
(5-Ethyl-1,3-dioxan-5-yl)methyl acrylate	40 - < 70	66492-51-1 266-380-7	01-2119976303-36-XXXX	-	
Classification:	Skin Irrit. 2;H315, Skin Sens. 1B;H317, Aquatic Chronic 2;H411				
2-Propenoic acid, 1,6-hexanediyl ester, polymer with 2-aminoethanol	1 - < 5	67906-98-3 -	-	-	
Classification:	Skin Irrit. 2;H315, Skin Sens. 1;H317, Eye Irrit. 2;H319				
Ethyl 4-dimethylaminobenzoate	1 - < 5	10287-53-3 233-634-3	01-2120766020-67-xxxx	-	
Classification:	Repr. 1B;H360, Aquatic Chronic 2;H411				
PROPOXYLATED NEOPENTYL GLYCOL DIACRYLATE	1 - < 5	84170-74-1 -	01-2119970213-43-xxxx	-	
Classification:	Skin Sens. 1B;H317, Aquatic Chronic 2;H411				
Alcohol	1 - <3	Proprietary -	-	-	
Classification:	Eye Irrit. 2;H319				
Trimethylolpropane triacrylate	1 - <3	15625-89-5 239-701-3	-	607-111-00-9	
Classification:	Skin Irrit. 2;H315, Skin Sens. 1;H317, Eye Irrit. 2;H319, Aquatic Acute 1;H400, Aquatic Chronic 1;H410				
DI(TRIMETHYLOLPROPANE) TETRAACRYLATE	1 - <2.5	94108-97-1 302-434-9	01-2119977121-41-XXXX	-	
Classification:	Skin Sens. 1;H317, Eye Irrit. 2;H319, Aquatic Chronic 2;H411				
HEXAMETHYLENE DIACRYLATE (HDDA)	< 1	13048-33-4 235-921-9	-	607-109-00-8	
Classification:	Skin Irrit. 2;H315, Skin Sens. 1;H317, Eye Irrit. 2;H319, Aquatic Acute 1;H400, Aquatic Chronic 1;H410				
Phenylbis(2,4,6-trimethylbenzoyl) phosphine-oxide	< 1	162881-26-7 423-340-5	01-2119489401-38-xxxx	015-189-00-5	
Classification:	Skin Sens. 1;H317, Aquatic Chronic 4;H413				

List of abbreviations and symbols that may be used above

#: This substance has been assigned Union workplace exposure limit(s).
M: M-factor
PBT: persistent, bioaccumulative and toxic substance.
vPvB: very persistent and very bioaccumulative substance.
All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

SECTION 4: First aid measures

General information

IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

4.1. Description of first aid measures

Inhalation

Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact

Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions. Wash contaminated clothing before reuse.

Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Ingestion

Rinse mouth. Get medical attention if symptoms occur.

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

Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.

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

Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

SECTION 5: Firefighting measures

General fire hazards

No unusual fire or explosion hazards noted.

5.1. Extinguishing media

Suitable extinguishing media

Water fog. Foam. Dry chemical powder. Carbon dioxide (CO_2).

Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

During fire, gases hazardous to health may be formed.

5.3. Advice for firefighters

Special protective equipment for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Special fire fighting procedures

Move containers from fire area if you can do so without risk.

Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist/vapours. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

For emergency responders

Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.

6.2. Environmental precautions

Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

6.3. Methods and material for containment and cleaning up

Prevent entry into waterways, sewer, basements or confined areas.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use.

6.4. Reference to other sections For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS.

SECTION 7: Handling and storage

7.1. Precautions for safe handling Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing mist/vapours. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Should be handled in closed systems, if possible. Provide adequate ventilation. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

7.2. Conditions for safe storage, including any incompatibilities Store locked up. Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

7.3. Specific end use(s) Professional and Industrial

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits No exposure limits noted for ingredient(s).

Biological limit values No biological exposure limits noted for the ingredient(s).

Recommended monitoring procedures Follow standard monitoring procedures.

Derived no effect levels (DNELs)

Workers

Components	Value	Assessment factor	Notes
DI(TRIMETHYLOLPROPANE) TETRAACRYLATE (CAS 94108-97-1)			
Long-term, Systemic, Dermal	1.67 mg/kg bw/day	300	Repeated dose toxicity
Long-term, Systemic, Inhalation	5.88 mg/m3	75	Repeated dose toxicity

Predicted no effect concentrations (PNECs)

Components	Value	Assessment factor	Notes
DI(TRIMETHYLOLPROPANE) TETRAACRYLATE (CAS 94108-97-1)			
Freshwater	0.001 mg/l	1000	
Marine water	0 mg/l	10000	
Sediment (freshwater)	0.484 mg/kg		
Sediment (marine water)	0.048 mg/kg		
Soil	0.096 mg/kg		
STP	100 mg/l	10	

8.2. Exposure controls

Appropriate engineering controls Provide adequate ventilation. See operator manual or safety data sheet of the printer.

Individual protection measures, such as personal protective equipment

General information Use personal protective equipment as required. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

Eye/face protection If contact is likely, safety glasses with side shields are recommended.

Skin protection

- Hand protection Wear appropriate chemical resistant gloves.: Ansell Microflex ® 93-260 (240 minutes)

- Other No special protective equipment required.

Respiratory protection Not required during normal intended use of this product.

Thermal hazards Not normally needed.

Hygiene measures Observe any medical surveillance requirements. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

Environmental exposure controls Contain spills and prevent releases and observe national regulations on emissions.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state Liquid.

Form Liquid.

Colour Blue

Odour	Very faint.
Odour threshold	Not available.
pH	Not applicable
Melting point/freezing point	-28.7 °C (-19.66 °F) estimated
Initial boiling point and boiling range	Not available
Flash point	139.0 °C (282.2 °F)
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not applicable
Explosive limit – upper (%)	Not applicable
Vapour pressure	< 70 mbar at 70 C
Vapour density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	300 °C (572 °F)
Decomposition temperature	Not available.
Viscosity	190 - 250 mPa·s
Explosive properties	Not explosive.
Oxidising properties	Not oxidising.
9.2. Other information	
Density	1.07 g/cm3 at 70 1.11 g/cm3 at 25 C
VOC	0 %

SECTION 10: Stability and reactivity

10.1. Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
10.2. Chemical stability	Material is stable under normal conditions.
10.3. Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
10.4. Conditions to avoid	Contact with incompatible materials.
10.5. Incompatible materials	Strong oxidising agents.
10.6. Hazardous decomposition products	No hazardous decomposition products are known.

SECTION 11: Toxicological information

Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation. May cause an allergic skin reaction.
Eye contact	Causes serious eye irritation.
Ingestion	However, ingestion is not likely to be a primary route of occupational exposure. Not available.
Symptoms	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.

11.1. Information on toxicological effects

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

Components	Species	Test Results
(5-Ethyl-1,3-dioxan-5-yl)methyl acrylate (CAS 66492-51-1)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg
Oral		
LD50	Rat	> 2000 mg/kg
DI(TRIMETHYLOLPROPANE) TETRAACRYLATE (CAS 94108-97-1)		
Acute		
Dermal		
LD50	Rat	> 2000 mg/kg, 24 Hours
Inhalation		
Vapour		
LC50	Rat	> 0.41 mg/l, 7 Hours Read across
Oral		
LD50	Rat	> 5000 mg/kg
Ethyl 4-dimethylaminobenzoate (CAS 10287-53-3)		
Acute		
Dermal		
Solid		
LD50	Rabbit	> 2000 mg/kg bw/day
Oral		
Solid		
LD50	Rat	> 2000 mg/kg bw/day
HEXAMETHYLENE DIACRYLATE (HDDA) (CAS 13048-33-4)		
Acute		
Dermal		
LD50	Rabbit	3650 mg/kg, 24 Hours
Oral		
LD50	Rat	> 5000 mg/kg
Phenylbis(2,4,6-trimethylbenzoyl) phosphine-oxide (CAS 162881-26-7)		
Acute		
Dermal		
LD50	Rat	> 2000 ml/kg
Oral		
LD50	Rat	> 2000 mg/kg
PROPOXYLATED NEOPENTYL GLYCOL DIACRYLATE (CAS 84170-74-1)		
Acute		
Dermal		
LD50	Rat	> 2000 mg/kg, 24 Hours
Oral		
LD50	Rat	> 5000 mg/kg
Trimethylolpropane triacrylate (CAS 15625-89-5)		
Acute		
Oral		
LD50	Rat	> 5000 mg/kg

Skin corrosion/irritation Causes skin irritation.

Irritation Corrosion - Skin

HEXAMETHYLENE DIACRYLATE (HDDA)	OECD 404 Result: irritating Species: Rabbit
(5-Ethyl-1,3-dioxan-5-yl)methyl acrylate	OECD 404 Result: irritating Species: Rat
Trimethylolpropane triacrylate	OECD 404 Result: irritating Species: Rat

Irritation Corrosion - Skin

PROPOXYLATED NEOPENTYL GLYCOL DIACRYLATE	OECD 404 Result: Not irritating
DI(TRIMETHYLOLPROPANE) TETRAACRYLATE	OECD 404 Result: Not irritating Species: Rabbit
Ethyl 4-dimethylaminobenzoate	OECD 404 Result: Not irritating Species: Rabbit
Phenylbis(2,4,6-trimethylbenzoyl) phosphine-oxide	OECD 404 Result: Not irritating Species: Rabbit

Serious eye damage/eye irritation Causes serious eye irritation.

Eye

(5-Ethyl-1,3-dioxan-5-yl)methyl acrylate	EU B,5 Result: Not irritating Species: Rabbit
HEXAMETHYLENE DIACRYLATE (HDDA)	OECD 405 Result: irritating Species: Rabbit
PROPOXYLATED NEOPENTYL GLYCOL DIACRYLATE	OECD 405 Result: Not irritating
DI(TRIMETHYLOLPROPANE) TETRAACRYLATE	OECD 405 Result: Not irritating Species: Rabbit
Ethyl 4-dimethylaminobenzoate	OECD 405 Result: Not irritating Species: Rabbit
Phenylbis(2,4,6-trimethylbenzoyl) phosphine-oxide	OECD 405 Result: Not irritating Species: Rabbit
Trimethylolpropane triacrylate	Result: irritating

Respiratory sensitisation Not a respiratory sensitizer.

Skin sensitisation May cause an allergic skin reaction.

Skin sensitisation

Ethyl 4-dimethylaminobenzoate	OECD 406 Result: Not sensitizing Species: Guinea pig
Phenylbis(2,4,6-trimethylbenzoyl) phosphine-oxide	OECD 406 Result: sensitising Species: Guinea pig
PROPOXYLATED NEOPENTYL GLYCOL DIACRYLATE	OECD 406 Result: sensitising Species: Guinea pig
HEXAMETHYLENE DIACRYLATE (HDDA)	OECD 406, GMPT Result: sensitising Species: Guinea pig
DI(TRIMETHYLOLPROPANE) TETRAACRYLATE	OECD 429 Result: positive Species: Mouse
(5-Ethyl-1,3-dioxan-5-yl)methyl acrylate	OECD 429 Result: sensitising Severity: EC3=2,8%
PROPOXYLATED NEOPENTYL GLYCOL DIACRYLATE	OECD 429 Result: sensitising Severity: EC3=4,6%
HEXAMETHYLENE DIACRYLATE (HDDA)	OECD 429, LLNA Result: sensitising Species: Mouse Severity: EC3 = 0,9% Result: sensitising Species: Human
Trimethylolpropane triacrylate	Result: sensitising Species: Human

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Germ cell mutagenicity: Ames test

(5-Ethyl-1,3-dioxan-5-yl)methyl acrylate	OECD 471 Result: Negative.

Germ cell mutagenicity: Ames test

Ethyl 4-dimethylaminobenzoate	OECD 471 Result: Negative.
Phenylbis(2,4,6-trimethylbenzoyl) phosphine-oxide	OECD 471 Result: Negative.
PROPOXYLATED NEOPENTYL GLYCOL DIACRYLATE	OECD 471 Result: Negative.
DI(TRIMETHYLOLPROPANE) TETRAACRYLATE	OECD 471 Result: positive
HEXAMETHYLENE DIACRYLATE (HDDA)	OECD 471, In vitro Result: Negative
Trimethylolpropane triacrylate	OECD 471, In vitro Result: Negative

Germ cell mutagenicity: Chromosome abberation

Ethyl 4-dimethylaminobenzoate	OECD 471, without metabolic activation. Result: Negative.
Phenylbis(2,4,6-trimethylbenzoyl) phosphine-oxide	OECD 473 Result: Negative.
Trimethylolpropane triacrylate	OECD 473, In vitro Result: positive
Ethyl 4-dimethylaminobenzoate	OECD 473, with metabolic activation Result: positive

Germ cell mutagenicity: Micronucleus

(5-Ethyl-1,3-dioxan-5-yl)methyl acrylate	OECD 474 Result: Negative.
DI(TRIMETHYLOLPROPANE) TETRAACRYLATE	OECD 474 Result: Negative.
Ethyl 4-dimethylaminobenzoate	OECD 474 Result: Negative. Species: Mouse
PROPOXYLATED NEOPENTYL GLYCOL DIACRYLATE	OECD 474, (similar product) Result: Negative.
Trimethylolpropane triacrylate	OECD 474, In vivo Result: Negative
HEXAMETHYLENE DIACRYLATE (HDDA)	OECD 487, In vitro Result: Negative

Mutagenicity

PROPOXYLATED NEOPENTYL GLYCOL DIACRYLATE	OECD 467 Result: Negative.
(5-Ethyl-1,3-dioxan-5-yl)methyl acrylate	OECD 476 Result: Negative.
HEXAMETHYLENE DIACRYLATE (HDDA)	OECD 476 Result: Negative.
Phenylbis(2,4,6-trimethylbenzoyl) phosphine-oxide	OECD 476 Result: Negative.
Trimethylolpropane triacrylate	OECD 476, In vitro Result: positive OECD 489, In vivo Result: Negative

Carcinogenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic. Based on available data, the classification criteria are not met.

Reproductive toxicity May damage fertility or the unborn child.

Developmental effects

(5-Ethyl-1,3-dioxan-5-yl)methyl acrylate	OECD 414 Result: Negative. Species: Rat
Phenylbis(2,4,6-trimethylbenzoyl) phosphine-oxide	OECD 414 Result: Negative. Species: Rat
Trimethylolpropane triacrylate	OECD 422 Result: Negative Species: Rat

Fertility effects - Males

Ethyl 4-dimethylaminobenzoate	OECD 421 Result: Adverse effects for fertility Species: Rat Organ: Testes

Fertility effects - Males and females

PROPOXYLATED NEOPENTYL GLYCOL DIACRYLATE	OECD 421 Result: Negative.

Reproductivity

PROPOXYLATED NEOPENTYL GLYCOL DIACRYLATE	OECD 421 Result: Negative.
Trimethylolpropane triacrylate	OECD 422 Result: Negative Species: Rat
(5-Ethyl-1,3-dioxan-5-yl)methyl acrylate	OECD 422 Result: Negative.
HEXAMETHYLENE DIACRYLATE (HDDA)	OECD 422 Result: Negative. Species: Rat
DI(TRIMETHYLOLPROPANE) TETRAACRYLATE	OECD 422, Read across Result: Negative. Species: Rat

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

PROPOXYLATED NEOPENTYL GLYCOL DIACRYLATE	OECD 407 Result: Negative. Species: Rat
HEXAMETHYLENE DIACRYLATE (HDDA)	OECD 422 Result: Negative. Species: Rat
Phenylbis(2,4,6-trimethylbenzoyl) phosphine-oxide	Result: Negative. Species: Rat Test Duration: 90 d

Aspiration hazard Not an aspiration hazard.

Mixture versus substance information No information available.

Other information Not available.

SECTION 12: Ecological information

12.1. Toxicity Toxic to aquatic life with long lasting effects.

Components		Species	Test Results
(5-Ethyl-1,3-dioxan-5-yl)methyl acrylate (CAS 66492-51-1)			
Aquatic			
Acute			
Algae	EC50	Algae	34 mg/l, 72 h
Crustacea	LC50	Daphnia	20 mg/l, 48 h
Fish	LC50	Fish	4 mg/l, 96 h
DI(TRIMETHYLOLPROPANE) TETRAACRYLATE (CAS 94108-97-1)			
Aquatic			
Acute			
Algae	EC50	Algae	12 mg/l, 72 h
Crustacea	EC50	Daphnia	> 10 mg/l, 48 h
Fish	EC50	Fish	1.2 mg/l, 96 h
Ethyl 4-dimethylaminobenzoate (CAS 10287-53-3)			
Aquatic			
Acute			
Algae	EC50	Algae	2.8 mg/l, 72 h
Crustacea	LC50	Daphnia	31.8 mg/l, 48 h
Fish	LC50	Fish	1.9 mg/l, 96 h
HEXAMETHYLENE DIACRYLATE (HDDA) (CAS 13048-33-4)			
Aquatic			
Acute			
Algae	EC50	Algae	1.5 mg/l, 72 h
Crustacea	LC50	Daphnia	2.6 mg/l, 48 h
Fish	LC50	Fish	0.38 mg/l, 96 h

Components		Species	Test Results
Chronic			
Algae	NOEC	Algae	0.5 mg/l, 21 d
Crustacea	NOEC	Daphnia	0.14 mg/l, 21 d
Phenylbis(2,4,6-trimethylbenzoyl) phosphine-oxide (CAS 162881-26-7)			
Aquatic			
Acute			
Algae	EC50	Algae	0.26 mg/l, 72 h Supersaturated suspension
Crustacea	LC50	Daphnia	1.1 mg/l, 48 h Supersaturated suspension
Fish	LC50	Fish	> 90 µg/l, 96 h Supersaturated suspension
Chronic			
Crustacea	NOEC	Crustacea	8.1 µg/l, 21 d
PROPOXYLATED NEOPENTYL GLYCOL DIACRYLATE (CAS 84170-74-1)			
Aquatic			
Acute			
Algae	EC50	Algae	3.4 mg/l, 72 h
Crustacea	LC50	Daphnia	37 mg/l, 48 h
Fish	LC50	Fish	2.7 mg/l, 96 h
Trimethylolpropane triacrylate (CAS 15625-89-5)			
Aquatic			
Acute			
Algae	EC50	Algae	4.9 - 14.5 mg/l, 96 h
Crustacea	EC50	Invertebrates (Invertebrates)	19.9 mg/l, 48 h
Fish	LC50	Fish	0.87 mg/l, 96 h

12.2. Persistence and degradability

Biodegradability

Percent Degradation (Aerobic Biodegradation)

(5-Ethyl-1,3-dioxan-5-yl)methyl acrylate	OECD 301B Result: 28
Ethyl 4-dimethylaminobenzoate	OECD 301B, Not readily biodegradable Result: 40
HEXAMETHYLENE DIACRYLATE (HDDA)	60 - 70 % OECD 310
PROPOXYLATED NEOPENTYL GLYCOL DIACRYLATE	Result: Inherently biodegradable

12.3. Bioaccumulative potential

Partition coefficient n-octanol/water (log Kow)

(5-Ethyl-1,3-dioxan-5-yl)methyl acrylate	> 1.9
HEXAMETHYLENE DIACRYLATE (HDDA)	2.81, Log Kow
Phenylbis(2,4,6-trimethylbenzoyl) phosphine-oxide	5.8
PROPOXYLATED NEOPENTYL GLYCOL DIACRYLATE	2.41 - 3.87, Log Kow
Trimethylolpropane triacrylate	> 3.3

Bioconcentration factor (BCF)

DI(TRIMETHYLOLPROPANE) TETRAACRYLATE	388 % v/w
Phenylbis(2,4,6-trimethylbenzoyl) phosphine-oxide	< 5

12.4. Mobility in soil No data available.

Adsorption

Soil/Sediment Sorption - Log Koc

Ethyl 4-dimethylaminobenzoate	Result: 2,8
HEXAMETHYLENE DIACRYLATE (HDDA)	2.1
Phenylbis(2,4,6-trimethylbenzoyl) phosphine-oxide	3.85
Trimethylolpropane triacrylate	2.24

12.5. Results of PBT and vPvB assessment Not a PBT or vPvB substance or mixture.

12.6. Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. Disposal Considerations: EU waste codes 16 02 13* - discarded equipment containing hazardous components other than those mentioned in 16 02 09 to 16 02 12
EU waste code	
08 03 12*	waste ink containing hazardous substances
Disposal methods/information	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Special precautions	Dispose in accordance with all applicable regulations.

SECTION 14: Transport information

ADR

14.1. UN number	UN3082
14.2. UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. ((5-Ethyl-1,3-dioxan-5-yl)methyl acrylate, Trimethylolpropane triacrylate)
14.3. Transport hazard class(es)	
Class	9
Subsidiary risk	-
Label(s)	9
Hazard No. (ADR)	90
Tunnel restriction code	E
14.4. Packing group	III
14.5. Environmental hazards	Yes
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

RID

14.1. UN number	UN3082
14.2. UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. ((5-Ethyl-1,3-dioxan-5-yl)methyl acrylate, Trimethylolpropane triacrylate)
14.3. Transport hazard class(es)	
Class	9
Subsidiary risk	-
Label(s)	9
14.4. Packing group	III
14.5. Environmental hazards	Yes
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

ADN

14.1. UN number	UN3082
14.2. UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. ((5-Ethyl-1,3-dioxan-5-yl)methyl acrylate, Trimethylolpropane triacrylate)
14.3. Transport hazard class(es)	
Class	9
Subsidiary risk	-
Label(s)	9
14.4. Packing group	III
14.5. Environmental hazards	Yes
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IATA

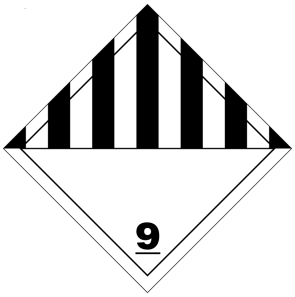
14.1. UN number	UN3082
14.2. UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s. ((5-Ethyl-1,3-dioxan-5-yl)methyl acrylate, TRIMETHYLOLPROPANE TRIACRYLATE)
14.3. Transport hazard class(es)	
Class	9
Subsidiary risk	-

14.4. Packing group	III
14.5. Environmental hazards	Yes
ERG Code	9L
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed with restrictions.
Cargo aircraft only	Allowed with restrictions.

IMDG

14.1. UN number	UN3082
14.2. UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. ((5-Ethyl-1,3-dioxan-5-yl)methyl acrylate, TRIMETHYLOLPROPANE TRIACRYLATE), MARINE POLLUTANT
14.3. Transport hazard class(es)	
Class	9
Subsidiary risk	-
14.4. Packing group	III
14.5. Environmental hazards	
Marine pollutant	Yes
EmS	F-A, S-F
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not established.

ADN; ADR; IATA; IMDG; RID



Marine pollutant

General information	IMDG Regulated Marine Pollutant.

SECTION 15: Regulatory information

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

EU regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended

Not listed.

Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended

Not listed.

Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA

Not listed.

Authorisations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended

Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended

Not listed.

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended.

Not listed.

Other EU regulations

Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended

Not listed.

Other regulations	The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006, as amended.
National regulations	Follow national regulation for work with chemical agents in accordance with Directive 98/24/EC, as amended.
15.2. Chemical safety assessment	This safety data sheet contains an ES in an integrated form. Contents of the exposure scenario have been included into sections 1.2, 8, 9, 12, 15 and 16 of this safety data sheet.

SECTION 16: Other information

List of abbreviations	Not available.
References	Not available.
Information on evaluation method leading to the classification of mixture	The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.
Full text of any H-statements not written out in full under Sections 2 to 15	H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H360 May damage fertility or the unborn child. 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.
Revision information	This document has undergone significant changes and should be reviewed in its entirety.
Training information	Follow training instructions when handling this material.
Disclaimer	The information in this Safety Data Sheet is based on the present state of knowledge and current legislation and is believed to be accurate. It provides guidance on health, safety and environmental aspects of the product and should neither be construed as any guarantee of specific properties nor of technical performance or suitability for particular applications. The product should not be used for purposes other than those shown in Section 1. This document was prepared to the requirements of the jurisdiction in Section 1 and may not meet regulatory requirements in other countries or territories. The information contained in this safety data sheet does not replace the user's own assessment of workplace risks, as required by applicable health and safety legislation.