SAFETY DATA SHEET

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Commission Regulation (EU) 2015/830 - Europe

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

1.1 Product identifier

Product name : Tau UV Ink RCS

Product code : 1690243

Trade name : Yellow
Tau UV Ink RSC

Date of issue/ Date of revision : 31 October 2018

Version : 4.01

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

Identified uses
Colorant; Printing ink related material; Printing ink.

Uses advised against	Reason
Not applicable.	

1.3 Details of the supplier of the safety data sheet

Manufacturer/ Distributor : -Durst Phototechnik AG
Julius-Durst-Strasse 4
39042 Brixen
Italy

Tel: +39 0472 810111
Fax: +39 0472 830980

For Chemical Emergency
Spill, Leak, Fire, Exposure, or Accident
Within USA and Canada: 1-800-424-9300
Outside USA and Canada: +1 703-741-5970

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

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

Skin Irrit. 2, H315
Eye Irrit. 2, H319
Skin Sens. 1, H317
Repr. 2, H361fd (Fertility and Unborn child)
STOT RE 1, H372
Aquatic Chronic 3, H412

SECTION 2: Hazards identification

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : Causes serious eye irritation.
Causes skin irritation.
May cause an allergic skin reaction.
Suspected of damaging fertility. Suspected of damaging the unborn child.
Causes damage to organs through prolonged or repeated exposure.
Harmful to aquatic life with long lasting effects.

Precautionary statements

Prevention : Wear protective gloves. Wear eye or face protection. Obtain special instructions before use. Do not eat, drink or smoke when using this product.

Response : IF exposed or concerned: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazardous ingredients : hexamethylene diacrylate
2-(2-Vinyloxyethoxy)ethyl acrylate
1-vinylhexahydro-2H-azepin-2-one
2-phenoxyethyl acrylate
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide
4-phenylbenzophenone
Glycerol, propoxylated, esters with acrylic acid

Supplemental label elements : Not applicable.

2.3 Other hazards

Other hazards which do not result in classification : None known.

SECTION 3: Composition/information on ingredients

Substance/mixture : Mixture

Product/ingredient name	Identifiers	%	Classification Regulation (EC) No. 1272/2008 [CLP]	Type
hexamethylene diacrylate	REACH #: 01-2119484737-22 EC: 235-921-9 CAS: 13048-33-4 Index: 607-109-00-8	25 < 50	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317	[1]
2-(2-Vinyloxyethoxy)ethyl acrylate	CAS: 86273-46-3	10 < 20	Acute Tox. 4, H302 Skin Sens. 1, H317	[1]
1-vinylhexahydro-2H-azepin-2-one	REACH #: 01-2119977109-27	10 < 20	Acute Tox. 4, H302	[1]

SECTION 3: Composition/information on ingredients

	EC: 218-787-6 CAS: 2235-00-9		Acute Tox. 4, H312 Eye Irrit. 2, H319 Skin Sens. 1, H317 STOT RE 1, H372 (liver) (inhalation)	
2-phenoxyethyl acrylate	REACH #: 01-2119980532-35 EC: 256-360-6 CAS: 48145-04-6	5 < 10	Skin Sens. 1A, H317 Repr. 2, H361fd (Fertility and Unborn child) (oral) Aquatic Chronic 2, H411	[1]
diphenyl(2,4,6-trimethylbenzoyl) phosphine oxide	REACH #: 01-2119972295-29 EC: 278-355-8 CAS: 75980-60-8	3 < 5	Skin Sens. 1, H317 Repr. 2, H361f (Fertility) (oral) Aquatic Chronic 2, H411	[1]
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	REACH #: 01-2119489401-38 EC: 423-340-5 CAS: 162881-26-7 Index: 015-189-00-5	1.0 < 3.0	Skin Sens. 1A, H317 Aquatic Chronic 4, H413	[1]
2-hydroxy-1-[4-(4-(2-hydroxy-2-methylpropionyl)phenoxy)phenyl] -2-methyl propan-1-one	REACH #: 01-0000019786-55 EC: 472-110-0 CAS: 71868-15-0	1.0 < 2.5	Aquatic Chronic 2, H411	[1]
4-phenylbenzophenone	EC: 218-345-2 CAS: 2128-93-0	1.0 < 2.5	Skin Irrit. 2, H315 Skin Sens. 1, H317	[1]
Glycerol, propoxylated, esters with acrylic acid	REACH #: 01-2119487948-12 EC: 500-114-5 CAS: 52408-84-1	0.25 < 1.0	Eye Irrit. 2, H319 Skin Sens. 1, H317	[1]
2,6-di-tert-butyl-p-cresol	REACH #: 01-2119480433-40 EC: 204-881-4 CAS: 128-37-0	0.1 < 0.25	Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1) **See Section 16 for the full text of the H statements declared above.**	[1]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs or vPvBs or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard
[2] Substance with a workplace exposure limit
[3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
[4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
[5] Substance of equivalent concern
[6] Additional disclosure due to company policy

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

General : 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.

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with room temperature water for at least 15 minutes, keeping eyelids open. In case of accidental eye contact, avoid concurrent exposure to the sun or other sources of UV light which may increase the sensitivity of the eyes.

Inhalation : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

Skin contact : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized 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.

Ingestion : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do NOT induce vomiting.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

There are no data available on the mixture itself. Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]. See Sections 2 and 3 for details.

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. May cause allergic skin reactions with repeated exposure.
If splashed in the eyes, the liquid may cause irritation and reversible damage.
The inhalation of airborne droplets or aerosols may cause irritation of the respiratory tract.
Ingestion may cause nausea, weakness and central nervous system effects.

Contains hexamethylene diacrylate, 2-(2-Vinyloxyethoxy)ethyl acrylate, 1-vinylhexahydro-2H-azepin-2-one, 2-phenoxyethyl acrylate, diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide, phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide, 4-phenylbenzophenone, Glycerol, propoxylated, esters with acrylic acid. May produce an allergic reaction.

The following products have sensitizing properties: hexamethylene diacrylate, 2-(2-Vinyloxyethoxy)ethyl acrylate, 1-vinylhexahydro-2H-azepin-2-one, 2-phenoxyethyl acrylate, diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide, phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide, 4-phenylbenzophenone. Cases of hypersensitivity may occur, possibly with cross-sensitization to other acrylate materials.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to medical doctor : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Use dry chemical, CO_2, water spray (fog) or foam.

Unsuitable extinguishing media : Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard.

Hazardous thermal decomposition products : Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.

5.3 Advice for firefighters

Special protective actions for fire-fighters : Cool closed containers exposed to fire with water. Do not release runoff from fire to drains or watercourses.

Special protective equipment for fire-fighters : Appropriate breathing apparatus may be required.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : Exclude sources of ignition and ventilate the area. Avoid breathing vapor or mist. Refer to protective measures listed in sections 7 and 8.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions : Do not allow to enter drains or watercourses. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.

6.3 Methods and materials for containment and cleaning up : Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Preferably clean with a detergent. Avoid using solvents.

6.4 Reference to other sections : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

Persons with a history of skin sensitization problems should not be employed in any process in which this product is used, without Personal Protective Equipment measures.

7.1 Precautions for safe handling : Use only in well-ventilated areas.
Avoid contact with skin and eyes. Avoid the inhalation of dust, particulates, spray or mist arising from the application of this mixture. Keep container tightly closed. Keep away from heat, sparks and flame.
Always keep in containers made from the same material as the original one.
Put on appropriate personal protective equipment (see Section 8).
Never use pressure to empty. Container is not a pressure vessel.
Eating, drinking and smoking should be prohibited in areas where this material is

SECTION 7: Handling and storage

handled, stored and processed.
Comply with the health and safety at work laws.

7.2 Conditions for safe storage, including any incompatibilities : Store between the following temperatures: 5 - 35 °C

Keep away from heat and direct sunlight.

Store in accordance with local regulations.
Notes on joint storage
Keep away from: oxidizing agents, strong alkalis, strong acids.
Additional information on storage conditions
Observe label precautions. Store in a dry, cool and well-ventilated area. Keep away from heat and direct sunlight.
Keep container tightly closed.
Keep away from sources of ignition. No smoking. Prevent unauthorized access. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Keep only in the original container.

Keep away from heat and direct sunlight.

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

No exposure limit value known.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

Product/ ingredient name	Type	Exposure	Value	Population	Effects
hexamethylene diacrylate	DNEL	Long term Inhalation	24.48 mg/m³	Workers	Systemic
	DNEL	Long term Dermal, Inhalation	2.77 mg/kg bw/day	Workers	Systemic
1-vinylhexahydro-2H-azepin-2-one	DNEL	Long term Inhalation	4.9 mg/m³	Workers	Systemic
	DNEL	Long term Inhalation	0.17 mg/m³	Workers	Local
	DNEL	Long term Dermal	0.7 mg/kg bw/day	Workers	Systemic
2-phenoxyethyl acrylate	DNEL	Long term Inhalation	12 mg/m³	Workers	Systemic
	DNEL	Long term Dermal	3.5 mg/kg bw/day	Workers	Systemic
diphenyl(2,4,6-trimethylbenzoyl)	DNEL	Long term Inhalation	3.5 mg/m³	Workers	Systemic

SECTION 8: Exposure controls/personal protection

phosphine oxide	DNEL	Long term Dermal	1 mg/kg bw/day	Workers	Systemic
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	DNEL	Long term Inhalation	21 mg/m³	Workers	Systemic
	DNEL	Long term Dermal	3 mg/kg bw/day	Workers	Systemic
Glycerol, propoxylated, esters with acrylic acid	DNEL	Long term Inhalation	16.22 mg/m³	Workers	Systemic
	DNEL	Long term Dermal	1.92 mg/kg bw/day	Workers	Systemic
2,6-di-tert-butyl-p-cresol	DNEL	Long term Inhalation	3.5 mg/m³	Workers	Systemic
	DNEL	Long term Dermal	0.5 mg/kg bw/day	Workers	Systemic

PNECs

Product/ingredient name	Type	Compartment Detail	Value	Method Detail
hexamethylene diacrylate	-	Fresh water	0.0015 mg/l	-
	-	Marine water	0.00015 mg/l	-
	-	Sewage Treatment Plant	2.7 mg/l	-
	-	Fresh water sediment	0.0243 mg/kg dwt	-
	-	Marine water sediment	0.00243 mg/kg dwt	-
	-	Soil	0.00397 mg/kg dwt	-
1-vinylhexahydro-2H-azepin-2-one	-	Fresh water	0.1 mg/l	-
	-	Marine water	0.01 mg/l	-
	-	Sewage Treatment Plant	262 mg/l	-
	-	Fresh water sediment	0.829 mg/kg	-
	-	Marine water sediment	0.0829 mg/kg	-
	-	Soil	0.107 mg/kg	-
Glycerol, propoxylated, esters with acrylic acid	-	Fresh water	0.00574 mg/l	-
	-	Marine water	0.000574 mg/l	-
	-	Sewage Treatment Plant	10 mg/l	-
	-	Fresh water sediment	0.01687 mg/kg dwt	-
	-	Marine water sediment	0.001687 mg/kg dwt	-
	-	Soil	0.00111 mg/kg dwt	-
	-	Secondary Poisoning	5.6 mg/kg	-
2,6-di-tert-butyl-p-cresol	-	Fresh water	4 µg/l	-
	-	Marine water	0.4 µg/l	-
	-	Sewage Treatment Plant	100 mg/l	-
	-	Fresh water sediment	1.29 mg/kg dwt	-
	-	Soil	1.04 mg/kg dwt	-
	-	Secondary Poisoning	16.7 mg/kg	-

8.2 Exposure controls

Appropriate engineering controls : Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and solvent vapors below the OEL, suitable respiratory protection must be worn.

Individual protection measures

SECTION 8: Exposure controls/personal protection

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Use safety eyewear designed to protect against splash of liquids.

Skin protection

Hand protection : Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.

Gloves : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Gloves : "RadTech recommend use of:
-single use: disposable, unpowdered, nitrile gloves: Use for short duration exposures not exceeding 30 minutes, in situations where only splashes are likely. Do not use where mechanical resistance is required or where puncturing or tearing of the gloves is likely to occur. Replace immediately if punctured, degraded or tearing of the gloves has occurred.
-general use: minimum 0.45mm thick, unlined, unpowdered, natural rubber latex-free nitrile gloves: Use for longer duration exposure (up to 4 hours for most UV/EB curing acrylates) or mechanical handling activities. Replace immediately when punctured or when a change of appearance (colour, elasticity, shape) occurs
- heavy duty: unlined, natural rubber latex-free nitrile gloves: Use when handling solvents. Avoid the use of chlorinated solvents and limit the use of ketones (e.g. acetone, MEK, MIBK) and ethyl and butyl acetates, as they may accelerate glove deterioration."

Body protection : Personnel should wear protective clothing.

Respiratory protection : In situations where misting or flying may occur, use appropriate certified respirators.

Environmental exposure controls : Do not allow to enter drains or watercourses.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	: Liquid.
Color	: Yellow.
Odor	: Characteristic.
Odor threshold	: Not applicable.
Melting point/freezing point	: Not applicable.
Flash point	: 96°C
VOC	: 0%
pH	: Not tested
Explosion limits	: Not available.
Boiling point	: Lowest known value: 132°C (270°F)
Evaporation rate	: <1 (Alkyl Acrylate Ester) compared with butyl acetate
Vapor pressure	: Not tested

SECTION 9: Physical and chemical properties

Vapor density	:	Not tested
Relative density	:	Not tested
Solubility(ies)	:	Not tested
Partition coefficient: n-octanol/ water	:	Not applicable.
Auto-ignition temperature	:	Not applicable.
Decomposition temperature	:	Not applicable.
Viscosity	:	Not tested
Explosive properties	:	Not applicable.
Oxidizing properties	:	Not applicable.

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity	:	No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	:	Hazardous reactions or instability may occur under certain conditions of storage or use.
10.3 Possibility of hazardous reactions	:	Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	:	This mixture contains materials which are unstable under the following conditions: exposure to heat, strong UV sources. These could cause the product to polymerize exothermically. Unintentional contact with them should be avoided.
10.5 Incompatible materials	:	Keep away from: free radical initiators, peroxides, strong alkalis, reactive metals.
10.6 Hazardous decomposition products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hazardous polymerization	:	May polymerize on exposure to sunlight.

SECTION 11: Toxicological information

There are no data available on the mixture itself. Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]. See Sections 2 and 3 for details.

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. May cause allergic skin reactions with repeated exposure.
If splashed in the eyes, the liquid may cause irritation and reversible damage.
The inhalation of airborne droplets or aerosols may cause irritation of the respiratory tract.
Ingestion may cause nausea, weakness and central nervous system effects.

Contains hexamethylene diacrylate, 2-(2-Vinyloxyethoxy)ethyl acrylate, 1-vinylhexahydro-2H-azepin-2-one, 2-phenoxyethyl acrylate, diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide, phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide, 4-phenylbenzophenone, Glycerol, propoxylated, esters with acrylic acid. May produce an allergic reaction.

SECTION 11: Toxicological information

The following products have sensitizing properties: hexamethylene diacrylate, 2-(2-Vinyloxyethoxy)ethyl acrylate, 1-vinylhexahydro-2H-azepin-2-one, 2-phenoxyethyl acrylate, diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide, phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide, 4-phenylbenzophenone. Cases of hypersensitivity may occur, possibly with cross-sensitization to other acrylate materials.

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
hexamethylene diacrylate	LD50 Oral	Rat	5 g/kg	-
1-vinylhexahydro-2H-azepin-2-one	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	1400 mg/kg	-

Irritation/Corrosion

Not determined - Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Sensitization

Not determined - Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Mutagenicity

Not determined - Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Carcinogenicity

Not determined - Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Reproductive toxicity

Not determined - Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Teratogenicity

Not determined - Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Specific target organ toxicity (single exposure)

Not determined - Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
1-vinylhexahydro-2H-azepin-2-one	Category 1	Inhalation	liver

Aspiration hazard

Not determined - Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

SECTION 12: Ecological information

There are no data available on the mixture itself.
Do not allow to enter drains or watercourses.

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]. See Sections 2 and 3 for details.

12.1 Toxicity

Not available.

12.2 Persistence and degradability

Not available.

SECTION 12: Ecological information

12.3 Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
hexamethylene diacrylate	2.81	-	low
2-(2-Vinyloxyethoxy)ethyl acrylate	1.7	-	low
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	5.77	-	high
Glycerol, propoxylated, esters with acrylic acid	2.52	-	low
2,6-di-tert-butyl-p-cresol	5.1	-	high

12.4 Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

PBT : Not applicable.

vPvB : Not applicable.

12.6 Other adverse effects : No known significant effects or critical hazards.

SECTION 13: Disposal considerations

Do not allow to enter drains or watercourses.
Dispose of according to all federal, state and local applicable regulations.
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.

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Packaging

Methods of disposal : The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

European Waste Catalogue (EWC): : 08 03 12 waste ink containing hazardous substances

Special precautions : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.3 Transport hazard class(es)	Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.4 Packing group	-	-	-	-
14.5 Environmental hazards	No.	No.	No.	No.
Additional information	-	The product is only regulated as a dangerous good when transported in tank vessels.	-	-

14.6 Special precautions for user **Transport within 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.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code **:** Not available.

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorization

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles **:** Not applicable.

Other EU regulations

SECTION 15: Regulatory information

Product/ingredient name	Carcinogenic effects	Mutagenic effects	Developmental effects	Fertility effects
2-phenoxyethyl acrylate	-	-	Repr. 2, H361d (Unborn child) (oral)	Repr. 2, H361f (Fertility) (oral)
diphenyl(2,4,6-trimethylbenzoyl) phosphine oxide	-	-	-	Repr. 2, H361f (Fertility) (oral)

Industrial use : 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. The provisions of the national health and safety at work regulations apply to the use of this product at work.

15.2 Chemical Safety Assessment : No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

CEPE code : 4

Indicates information that has changed from previously issued version.

Abbreviations and acronyms : ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Skin Irrit. 2, H315	Calculation method
Eye Irrit. 2, H319	Calculation method
Skin Sens. 1, H317	Calculation method
Repr. 2, H361fd (Fertility and Unborn child)	Calculation method
STOT RE 1, H372	Calculation method
Aquatic Chronic 3, H412	Calculation method

Full text of abbreviated H statements :

H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H361f (oral)	Suspected of damaging fertility if swallowed.
H361fd (oral)	Suspected of damaging fertility if swallowed. Suspected of damaging the unborn child if swallowed.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
H372 (inhalation)	Causes damage to organs through prolonged or repeated exposure if inhaled.
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.
H412	Harmful to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.

SECTION 16: Other information

Full text of classifications [CLP/GHS] :	Acute Tox. 4, H302	ACUTE TOXICITY (oral) - Category 4
	Acute Tox. 4, H312	ACUTE TOXICITY (dermal) - Category 4
	Aquatic Acute 1, H400	AQUATIC HAZARD (ACUTE) - Category 1
	Aquatic Chronic 1, H410	AQUATIC HAZARD (LONG-TERM) - Category 1
	Aquatic Chronic 2, H411	AQUATIC HAZARD (LONG-TERM) - Category 2
	Aquatic Chronic 3, H412	AQUATIC HAZARD (LONG-TERM) - Category 3
	Aquatic Chronic 4, H413	AQUATIC HAZARD (LONG-TERM) - Category 4
	Eye Irrit. 2, H319	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
	Repr. 2, H361f (oral)	TOXIC TO REPRODUCTION (Fertility) (oral) - Category 2
	Repr. 2, H361fd (oral)	TOXIC TO REPRODUCTION (Fertility and Unborn child) (oral) - Category 2
	Repr. 2, H361fd	TOXIC TO REPRODUCTION (Fertility and Unborn child) - Category 2
	Skin Irrit. 2, H315	SKIN CORROSION/IRRITATION - Category 2
	Skin Sens. 1, H317	SKIN SENSITIZATION - Category 1
	Skin Sens. 1A, H317	SKIN SENSITIZATION - Category 1A
	STOT RE 1, H372 (inhalation)	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (inhalation) - Category 1
	STOT RE 1, H372	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1

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Notice to reader

The information in this SDS is based on the present state of our knowledge and on current laws. The product is not to be used for purposes other than those specified under section 1 without first obtaining written handling instructions. It is always the responsibility of the user to take all necessary steps to fulfill the demands set out in the local rules and legislation. The information in this SDS is meant to be a description of the safety requirements for our product. It is not to be considered a guarantee of the product's properties.

Annex