SAFETY DATA SHEET

1. Identification

Product identifier **UVGEL 356C INK YELLOW**

Other means of identification

Article Number 1070092857

Product code 1965C031AA

Recommended use of the chemical and restrictions on use

Recommended use Inkjet printing ink.

Recommended restrictions Other uses not recommended.

Manufacturer/Importer/Supplier/Distributor information

Company name Not available.

Address Not available.

Telephone Not available.

E-mail Not available.

Emergency phone number Not available.

2. Hazards identification

GHS classification

Physical hazards	Not classified.	
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2
	Sensitization, skin	Category 1
	Reproductive toxicity	Category 1B
Environmental hazards	Hazardous to the aquatic environment, long-term hazard	Category 2

GHS label elements, including precautionary statements

Pictograms

Signal word Danger

Hazard statements Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. May damage fertility or the unborn child. Toxic to aquatic life with long lasting effects.

Precautionary statement

Prevention Avoid release to the environment. Wear eye/face protection.

Response If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed or concerned: Get medical advice/attention. IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention.

Storage Not assigned.

Disposal Not assigned.

Other hazards which do not result in classification None known.

Supplemental information 33.73706 % of the mixture consists of component(s) of unknown acute hazards to the aquatic environment.

3. Composition/information on ingredients

Substance or mixture Mixture

Chemical name	Common name and synonyms	CAS Number	Concentration (%)
DI(TRIMETHYLOLPROPANE) TETRAACRYLATE		94108-97-1	25 - < 50
Neopentylglycol Hydroxypivalate Diacrylate		30145-51-8	10 - < 30
(4-tert-butylcyclohexyl) Prop-2-enoate		84100-23-2	5 - <10

Chemical name	Common name and synonyms	CAS Number	Concentration (%)
PROPOXYLATED NEOPENTYL GLYCOL DIACRYLATE		84170-74-1	5 - <10
Propylidynetrimethanol, Ethoxylated, Esters With Acrylic Acid, Reaction Products With Diethylamine		159034-91-0	5 - <10
Ethyl 4-dimethylaminobenzoate		10287-53-3	1 - < 5
Neopentyl Glycol Diacrylate		2223-82-7	1 - < 5
Phenylbis(2,4,6-trimethylbenzoyl) phosphine-oxide		162881-26-7	< 1
GLYCEROL PROPOXYLATE TRIACRYLATE		52408-84-1	< 0.25
Trimethylolpropane Triacrylate, Ethoxylated		28961-43-5	< 0.25

4. First-aid measures

Inhalation 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 Not applicable. Not likely, due to the form of the product.

Most important symptoms/effects, 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.

Indication of immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

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.

5. Fire-fighting measures

Suitable extinguishing media Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

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

Specific hazards arising from the chemical During fire, gases hazardous to health may be formed.

Fire fighting equipment/instructions Move containers from fire area if you can do so without risk.

Special protective equipment and precautions for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

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

General fire hazards No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. 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.

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.

Methods and materials 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. For waste disposal, see section 13 of the SDS.

7. Handling and storage

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. Provide adequate ventilation. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.
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).

8. Exposure controls/personal protection

Control parameters/Occupational exposure limits	No exposure limits noted for ingredient(s).
Appropriate engineering control measures	Provide adequate ventilation. See operator manual or safety data sheet of the printer.

Individual protection measures, such as 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. Glove material: Nitrile.. Use gloves with breakthrough time of 10 minutes. Minimum glove thickness 0.12 mm. Glove material: Nitril. Use gloves with breakthrough time of 480 minutes. Minimum glove thickness 0,4 mm. Ansell Microflex ® 93-260 (60 minutes)
Other	Not required during normal intended use of this product.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment. Not required during normal intended use of this product.
Thermal hazards	Not normally needed. Not applicable.
General hygiene considerations	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.

9. Physical and chemical properties

Appearance	Liquid.
Physical state	Liquid.
Form	Liquid.
Colour	Yellow
Odour	Slight.
Odour threshold	Not available.
pH	Not available.
Melting point/freezing point	-67 °C (-88.6 °F) / -82.9 °C (-117.21 °F) estimated
Initial boiling point and boiling range	225.36 °C (437.66 °F) estimated
Flash point	143.2 °C (289.8 °F)
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit – upper (%)	Not available.
Vapour pressure	8.2 hPa estimated
Vapour density	Not available.

Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	351 °C (663.8 °F)
Decomposition temperature	Not available.
Viscosity	498 mPa·s (17 °C (62.6 °F))
Other data	
Density	1.07 g/cm3 (25 °C (77 °F))
Explosive properties	Not explosive.
Oxidising properties	Not oxidising.
VOC	0.01 % estimated

10. Stability and reactivity

Reactivity	Not applicable.
Chemical stability	Stable at normal conditions.
Possibility of hazardous reactions	Hazardous polymerisation does not occur.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong oxidising agents.
Hazardous decomposition products	No hazardous decomposition products are known.
Other information	Not available.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Under normal conditions of intended use, this material is not expected to be an inhalation hazard.
Skin contact	Causes skin irritation. May cause an allergic skin reaction.
Eye contact	Causes serious eye irritation.
Ingestion	Not applicable. However, ingestion is not likely to be a primary route of occupational exposure.

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

Components	Species	Test Results
(4-tert-butylcyclohexyl) Prop-2-enoate (CAS 84100-23-2)		
Acute		
Oral		
LD50	Rat	> 2000 mg/kg bw/day, 14 days
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 OECD401
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

Components	Species	Test Results
GLYCEROL PROPOXYLATE TRIACRYLATE (CAS 52408-84-1)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg, 24 Hours
Oral		
LD50	Rat	> 2000 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, Ethoxylated (CAS 28961-43-5)		
Acute		
Dermal		
LD50	Rabbit	> 13200 mg/kg
Oral		
LD50	Rat	> 500 mg/kg

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.

Skin corrosion/irritation Causes skin irritation.

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

PROPOXYLATED NEOPENTYL GLYCOL DIACRYLATE	OECD 405 Result: Not irritating
Ethyl 4-dimethylaminobenzoate	OECD 405 Result: Not irritating Species: Rabbit
Phenylbis(2,4,6-trimethylbenzoyl) phosphine-oxide	OECD 405 Result: Not irritating Species: Rabbit

Irritation Corrosion - Eye

Phenylbis(2,4,6-trimethylbenzoyl) phosphine-oxide	OECD 405 Result: Not irritating
DI(TRIMETHYLOLPROPANE) TETRAACRYLATE	OECD405 Result: irritating

Respiratory or skin sensitisation Not applicable.

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
DI(TRIMETHYLOLPROPANE) TETRAACRYLATE	OECD 429 Result: positive Species: Mouse
PROPOXYLATED NEOPENTYL GLYCOL DIACRYLATE	OECD 429 Result: sensitising Severity: EC3=4,6%

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

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
(4-tert-butylcyclohexyl) Prop-2-enoate	OECD471, (similar product) 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.
Ethyl 4-dimethylaminobenzoate	OECD 473, with metabolic activation Result: positive
(4-tert-butylcyclohexyl) Prop-2-enoate	OECD473, (similar product) Result: Negative

Germ cell mutagenicity: Micronucleus

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.

Mutagenicity

PROPOXYLATED NEOPENTYL GLYCOL DIACRYLATE	OECD 467 Result: Negative.
Phenylbis(2,4,6-trimethylbenzoyl) phosphine-oxide	OECD 476 Result: Negative.

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

Reproductive toxicity May damage fertility or the unborn child.

Developmental effects

Phenylbis(2,4,6-trimethylbenzoyl) phosphine-oxide	OECD 414 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.

Reproductivity

DI(TRIMETHYLOLPROPANE) TETRAACRYLATE	OECD 422, (similar product) Result: Negative. Species: Rat
Phenylbis(2,4,6-trimethylbenzoyl) phosphine-oxide	OECD414 Result: Negative.

Specific target organ toxicity - single exposure Based on available data, the classification criteria are not met.

Specific target organ toxicity - repeated exposure Not classified.

PROPOXYLATED NEOPENTYL GLYCOL DIACRYLATE	OECD 407 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.

Chronic effects Not available.

12. Ecological information

Ecotoxicity Toxic to aquatic life with long lasting effects.

Components		Species	Test Results
DI(TRIMETHYLOLPROPANE) TETRAACRYLATE (CAS 94108-97-1)			
Aquatic			
Acute			
Fish	LC50	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
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

Persistence and degradability No data is available on the degradability of this product.

Biodegradability

Percent Degradation (Aerobic Biodegradation)

Ethyl 4-dimethylaminobenzoate	OECD 301B, Not readily biodegradable Result: 40
PROPOXYLATED NEOPENTYL GLYCOL DIACRYLATE	Result: Inherently biodegradable

Bioaccumulative potential

Bioconcentration factor

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

Octanol/water partition coefficient log Kow

Phenylbis(2,4,6-trimethylbenzoyl) phosphine-oxide	5.8
PROPOXYLATED NEOPENTYL GLYCOL DIACRYLATE	2.41 - 3.87, Log Kow

Mobility in soil No data available.

Adsorption

Soil/Sediment Sorption - Log Koc

Ethyl 4-dimethylaminobenzoate	Result: 2,8
Phenylbis(2,4,6-trimethylbenzoyl) phosphine-oxide	3.85

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.

13. Disposal considerations

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.

14. Transport information

ADR

UN number	UN3082
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DI(TRIMETHYLOLPROPANE) TETRAACRYLATE, (4-tert-butylcyclohexyl) Prop-2-enoate)
Transport hazard class(es)	
Class	9
Subsidiary risk	-
Label(s)	9
Hazard No. (ADR)	90
Tunnel restriction code	E
Packing group	III
Environmental hazards	Yes
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

RID

UN number	UN3082
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DI(TRIMETHYLOLPROPANE) TETRAACRYLATE, (4-tert-butylcyclohexyl) Prop-2-enoate)
Transport hazard class(es)	
Class	9
Subsidiary risk	-
Label(s)	9
Packing group	III
Environmental hazards	Yes
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

ADN

UN number	UN3082
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DI(TRIMETHYLOLPROPANE) TETRAACRYLATE, (4-tert-butylcyclohexyl) Prop-2-enoate)
Transport hazard class(es)	
Class	9
Subsidiary risk	-
Label(s)	9
Packing group	III
Environmental hazards	Yes
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IATA

UN number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s. (DI(TRIMETHYLOLPROPANE) TETRAACRYLATE, (4-tert-butylcyclohexyl) Prop-2-enoate)
Transport hazard class(es)	
Class	9
Subsidiary risk	-
Packing group	III
Environmental hazards	Yes
ERG Code	9L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

Other information

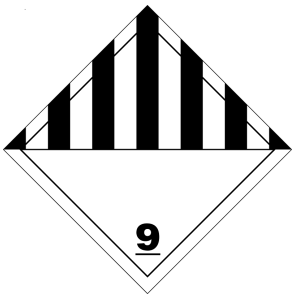
Passenger and cargo aircraft	Allowed with restrictions.
Cargo aircraft only	Allowed with restrictions.

IMDG

UN number	UN3082
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DI(TRIMETHYLOLPROPANE) TETRAACRYLATE, (4-tert-butylcyclohexyl) Prop-2-enoate), MARINE POLLUTANT
Transport hazard class(es)	
Class	9
Subsidiary risk	-
Packing group	III
Environmental hazards	
Marine pollutant	Yes
EmS	F-A, S-F
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

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.

15. Regulatory information

Safety, health and environmental regulations specific for the product in question

Controlled Narcotic Drugs (Misuse of Drugs Act, First Schedule, Part I, II & III)

Not regulated.

Controlled Specified Drugs (Misuse of Drugs Act, Fourth Schedule)

Not regulated.

Prior Informed Consent (PIC) Substances (Environment Protection and Management Act, 2nd Schedule, Part 1, Jul. 1, 2013)

Not regulated.

Chemical Weapons Prohibition (Act)

Not applicable.

Environmental Protection and Management (Hazardous Substances) Regulations

Phenylbis(2,4,6-trimethylbenzoyl) phosphine-oxide (CAS 162881-26-7)	0 kg

Environmental Public Health Act

Not applicable.

International regulations

Montreal Protocol

Not applicable.

Stockholm Convention

Not applicable.

Rotterdam Convention

Not applicable.

Kyoto Protocol

Not applicable.

Basel Convention

Not applicable.

16. Other information

References	Not available.
Issued by	Not available.
Prepared by	Not available.
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.
Issue date	01-November-2019
Revision date	10-June-2020
Key/legend	Not applicable.
Revision information	Product and Company Identification: Physical States Hazards identification: Disposal Hazards identification: Response Hazards identification: Storage Composition / Information on Ingredients: Disclosure Overrides Handling and storage: Precautions for safe handling Handling and storage: Specific uses Physical & Chemical Properties: Multiple Properties Transport Information: Hazreg Values Transportation Material Attributes & Uses; Experimental Data: Product Uses HazReg Data: Pacific Rim