SAFETY DATA SHEET

Classified in accordance 29 CFR 1910.1200

1. Identification

Product identifier: ARISTA UV U YELLOW INK

Recommended restrictions

Recommended use: Printing ink
Restrictions on use: Reserved for industrial and professional use.

Manufactured for:

Distributor

LTD "ARISTA INK TECHNOLOGIES"
Aglonas 11-11
LV-1057
Riga
Latvia

Telephone: +371 22334368
Contact Person:
E-mail: office@arista.lv

Emergency telephone number:

Transport Emergency	Non-transportation
Chemtrec: +1 800 4249300	Health Emergency Phone: +1 303 6235716

International: +32 3 4442111

2. Hazard(s) identification

Hazard Classification

Health Hazards

Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 1
Skin sensitizer	Category 1
Toxic to reproduction	Category 1B
Specific Target Organ Toxicity - Single Exposure	Category 3 (Respiratory tract irritation.)
Specific Target Organ Toxicity - Repeated Exposure	Category 1

Environmental Hazards

Acute hazards to the aquatic environment	Category 2
Chronic hazards to the aquatic environment	Category 2

Label Elements

Hazard Symbol:

Signal Word: Danger

Hazard Statement:
Causes skin irritation.
Causes serious eye damage.
May cause an allergic skin reaction.
May damage fertility or the unborn child.
May cause respiratory irritation.
Causes damage to organs through prolonged or repeated exposure.
Toxic to aquatic life with long lasting effects.

Precautionary Statements

Prevention: Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Contaminated work clothing should not be allowed out of the workplace. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Use only outdoors or in a well-ventilated area. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Avoid release to the environment.

Response: IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Immediately call a POISON CENTER/doctor. Specific treatment (see on this label). Wash contaminated clothing before reuse. Collect spillage.

Storage: Store locked up. Store in a well-ventilated place. Keep container tightly closed.

Disposal: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Hazard(s) not otherwise classified (HNOC): None.

3. Composition/information on ingredients

Mixtures

Chemical Identity	Common name and synonyms	CAS number	Content in percent (%)*
Isobornyl acrylate	No data available.	5888-33-5	10 - <20%
Phenoxyethylacrylate	No data available.	48145-04-6	10 - <20%
Tetrahydrofurfuryl acrylate	No data available.	2399-48-6	10 - <16.591%
Oxybis(methyl-2,1-ethanediyl) diacrylate	No data available.	57472-68-1	10 - <20%
N-vinyl caprolactam	No data available.	2235-00-9	5 - <10%
2-Propenoic acid ,1-6-hexanediyl ester, polymer with 2-aminoethanol	No data available.	67906-98-3	5 - <10%
Isodecyl acrylate	No data available.	1330-61-6	5 - <10%
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	No data available.	75980-60-8	1 - <3%
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	No data available.	68511-62-6	1 - <5%
Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	No data available.	162881-26-7	1 - <5%
Ethoxylated phenyl acrylate	No data available.	56641-05-5	1 - <2.5%
hexamethylene diacrylate; hexane-1,6-diol diacrylate	No data available.	13048-33-4	1 - <5%
Tetrahydrofurfuryl alcohol	No data available.	97-99-4	0.1 - <0.3%
caprolactam	No data available.	105-60-2	0.01 - <1%
Heptane	No data available.	142-82-5	0 - <0.1%
2,6-di-tert-Butyl-p-cresol	No data available.	128-37-0	0 - <0.1%
Hydroquinone	No data available.	123-31-9	0.01 - <0.1%
Phenol, 4-methoxy-	No data available.	150-76-5	0 - <0.1%
Tris(N-hydroxy-N-nitrosophenylaminato-O,O')aluminium	No data available.	15305-07-4	0 - <0.1%

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

The exact concentration has been withheld as a trade secret.

4. First-aid measures

Description of necessary first-aid measures

General information: Get medical attention if symptoms occur.

Inhalation: Move into fresh air and keep at rest. Get medical attention immediately. Show this safety data sheet to the doctor in attendance.

Skin Contact:	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if symptoms occur. Wash contaminated clothing before reuse.
Eye contact:	Flush thoroughly with water for at least 15 minutes. Get medical assistance.
Ingestion:	Rinse mouth with plenty of water. Call a physician immediately. Show this safety data sheet to the doctor in attendance.
Personal Protection for First-aid Responders:	CAUTION! First aid personnel must be aware of own risk during rescue! See Section 8 of the SDS for Personal Protective Equipment.

Most important symptoms/effects, acute and delayed

Symptoms:	See section 11 of the SDS for additional information on health hazards.
Hazards:	See section 11 of the SDS for additional information on health hazards.

Indication of immediate medical attention and special treatment needed

Treatment:	Treat symptomatically.

5. Fire-fighting measures

General Fire Hazards: No unusual fire or explosion hazards noted.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media:	Extinguish with foam, carbon dioxide, dry powder or water fog.
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.

Special protective equipment and precautions for firefighters

Special fire fighting procedures:	No data available.
Special protective equipment for fire-fighters:	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: See Section 8 of the SDS for Personal Protective Equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep unauthorized personnel away.

For emergency responders: Warn everybody of potential hazards and evacuate if necessary. Use personal protective equipment.

For non-emergency personnel: Use personal protective equipment.

Methods and material for containment and cleaning up: Prevent further leakage or spillage if safe to do so. Stop the flow of material, if this is without risk. Small Spillages: Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Containers with collected spillage must be properly labelled with correct contents and hazard symbol. Clean surface thoroughly to remove residual contamination. Large Spillages: Dike far ahead of larger spill for later recovery and disposal.

Environmental Precautions: Avoid release to the environment. Prevent entry into waterways, sewer, basements or confined areas. Contact local authorities in case of spillage to drain/aquatic environment. Do not contaminate water sources or sewer.

7. Handling and storage

Handling

Technical measures (e.g. Local and general ventilation): Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Emergency showers and eye wash stations should be available.

Safe handling advice: Do not get in eyes. Wash hands thoroughly after handling. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Use personal protective equipment as required. Avoid contact with skin. Avoid contact with eyes, skin, and clothing.

Contact avoidance measures: Contact with incompatible materials.

Storage

Safe storage conditions: Store locked up.

Safe packaging materials: Keep in original container.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	Type	Exposure Limit Values	Source
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes - as Ni	REL	0.015 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2010)
	PEL	1 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006)
	TWA	1 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)
caprolactam - Inhalable fraction and vapor.	TWA	5 mg/m3	US. ACGIH Threshold Limit Values, as amended (03 2014)
caprolactam - Dust.	REL	1 mg/m3	US. NIOSH: Pocket Guide to Chemical

				Hazards, as amended (2010)
caprolactam - Vapor.	STEL	0.66 ppm	3 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2010)
	REL	0.22 ppm	1 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2010)
caprolactam - Dust.	STEL		3 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2010)
caprolactam - Vapor.	TWA	5 ppm	20 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)
	STEL	10 ppm	40 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)
caprolactam - Dust.	STEL		3 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)
	TWA		1 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)
Heptane	STEL	500 ppm		US. ACGIH Threshold Limit Values, as amended (03 2014)
	TWA	400 ppm		US. ACGIH Threshold Limit Values, as amended (03 2014)
	REL	85 ppm	350 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2010)
	Ceil_Time	440 ppm	1,800 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2010)
	PEL	500 ppm	2,000 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006)
	TWA	400 ppm	1,600 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)
	STEL	500 ppm	2,000 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)
2,6-di-tert-Butyl-p-cresol - Inhalable fraction and vapor.	TWA		2 mg/m3	US. ACGIH Threshold Limit Values, as amended (03 2014)
2,6-di-tert-Butyl-p-cresol	REL		10 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2010)
	TWA		10 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)
Hydroquinone	TWA		1 mg/m3	US. ACGIH Threshold Limit Values, as amended (03 2014)
	Ceil_Time		2 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2010)
	PEL		2 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006)
	TWA		2 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)
Phenol, 4-methoxy-	TWA		5 mg/m3	US. ACGIH Threshold Limit Values, as amended (03 2014)
	REL		5 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2010)
	TWA		5 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)
Tris(N-hydroxy-N-nitrosophenylaminato-O,O')aluminium - Respirable fraction.	TWA		1 mg/m3	US. ACGIH Threshold Limit Values, as amended (03 2014)

Appropriate Engineering Controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Emergency showers and eye wash stations should be available.

Individual protection measures, such as personal protective equipment

General information:	Educate and train employees in the safe use and handling of this product. Do not eat, drink or smoke when using the product. Eye wash facilities and emergency shower must be available when handling this product. Wash at the end of each work shift and before eating, smoking and using the toilet.
Eye/face protection:	Safety goggles
Skin Protection	
Hand Protection:	Protective gloves should be used if there is a risk of direct contact or splash., Chemical resistant gloves required for prolonged or repeated contact., Butyl rubber., Glove thickness: > 0.70 mm, Break-through time: > 480 min, Glove thickness: > 0.35 mm, Break-through time: > 60 min, Risk of splashes:, Nitrile rubber., Nitrile gloves are recommended, but be aware that the liquid may penetrate the gloves. Frequent change is advisable., The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material.
Skin and Body Protection:	Wear suitable protective clothing as protection against splashing or contamination.
Respiratory Protection:	Under normal conditions of use, respirator protection is not required. In case of inadequate ventilation, use respiratory protection. If respirators are used, OSHA requires compliance with its respiratory protection program (29 CFR 1910.134).
Hygiene measures:	Employees should wash their hands and face before eating, drinking, or using tobacco products. Keep away from foodstuffs, drinks and tobacco.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance	
Physical state:	liquid
Form:	liquid
Color:	Yellow
Odor:	acrylic odor
Odor Threshold:	No data available.
Freezing point:	< 32 °F/< 0 °C
Boiling Point:	> 212 °F/> 100 °C
Flammability:	Not flammable.
Upper/lower limit on flammability or explosive limits	
Explosive limit - upper:	not applicable
Explosive limit - lower:	not applicable
Flash Point:	> 199 °F/> 93 °C
Self Ignition Temperature:	Not determined.
Decomposition Temperature:	No data available.
pH:	substance/mixture is non-soluble (in water) Not applicable
Viscosity	
Dynamic viscosity:	9 - 11 mPa.s (113 °F/ 45 °C)
Kinematic viscosity:	8.5 - 10.4 mm2/s (113 °F/ 45 °C)

Flow Time:	not applicable
Solubility(ies)	
Solubility in Water:	Insoluble in water
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	Not applicable Mixture
Vapor pressure:	< 1 hPa (77 °F/25 °C)
Relative density:	1.058 (QSAR)
Density:	not applicable
Bulk density:	not applicable
Relative vapor density:	No data available.
Particle characteristics	
Particle Size Distribution:	not applicable
Specific surface area:	not applicable
Surface charge/Zeta potential:	not applicable
Assessment:	not applicable
Shape:	not applicable
Crystallinity:	not applicable
Surface treatment:	not applicable

Other information	
Minimum ignition temperature:	> 392 °F/> 200 °C
VOC Content:	175.6 g/l ~16.6 % (calculated)

10. Stability and reactivity

Reactivity: Material is stable under normal conditions.

Chemical Stability: Material is stable under normal conditions.

Possibility of hazardous reactions: Not known.

Conditions to avoid: Avoid heat or contamination.

Incompatible Materials: None known.

Hazardous Decomposition Products: By heating and fire, harmful vapors/gases may be formed.

11. Toxicological information

Information on likely routes of exposure

Inhalation: Inhalation is the primary route of exposure. In high concentrations, vapors, fumes or mists may irritate nose, throat and mucus membranes.

Skin Contact: Causes skin irritation. May cause an allergic skin reaction.

Eye contact: Causes serious eye damage.

Ingestion: May be ingested by accident. Ingestion may cause irritation and malaise.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral

Product:	ATEmix: 2,545.55 mg/kg
Components:	
Isobornyl acrylate	LD 50 (Rat): 4,350 mg/kg Experimental result, Key study
Phenoxyethylacrylate	LD 50 (Rat): 5,000 mg/kg Experimental result, Key study
Tetrahydrofurfuryl acrylate	LD50 (rat): 928 mg/kg
Oxybis(methyl-2,1-ethanediyl) diacrylate	LD 50 (Rat): 4,626 mg/kg Experimental result, Supporting study
N-vinyl caprolactam	LD 50 (Rat): 1,732 mg/kg Experimental result, Key study
2-Propenoic acid ,1-6-hexanediyl ester, polymer with 2-aminoethanol	No data available.
Isodecyl acrylate	No data available.
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	LD 50 (Rat): > 5,000 mg/kg Experimental result, Key study
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	No data available.
Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	No data available.
Ethoxylated phenyl acrylate	No data available.
hexamethylene diacrylate; hexane-1,6-diol diacrylate	LD 50 (Rat): > 5,000 mg/kg Experimental result, Key study
Tetrahydrofurfuryl alcohol	LD 50 (Rat): > 2,000 mg/kg Experimental result, Key study
caprolactam	No data available.
Heptane	LD50 (rat): > 15,000 mg/kg
2,6-di-tert-Butyl-p-cresol	LD 50 (Rat): > 6,000 mg/kg Experimental result, Key study
Hydroquinone	LD 50 (Rat): 367.3 mg/kg Experimental result, Key study
Phenol, 4-methoxy-	LD50 (rat): 1,600 mg/kg
Tris(N-hydroxy-N-nitrosophenylaminato-O,O')aluminium	No data available.

Dermal

Product:	ATEmix: 14,019.89 mg/kg
Components:	
Isobornyl acrylate	LD 50 (Rabbit): > 3,000 mg/kg Experimental result, Key study
Phenoxyethylacrylate	No data available.

Tetrahydrofurfuryl acrylate	No data available.
Oxybis(methyl-2,1-ethanediyl) diacrylate	LD 50 (Rabbit): > 2,000 mg/kg Experimental result, Key study
N-vinyl caprolactam	LD 50 (Rabbit): 1,700 mg/kg Experimental result, Key study
2-Propenoic acid ,1-6-hexanediyl ester, polymer with 2-aminoethanol	No data available.
Isodecyl acrylate	No data available.
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	No data available.
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	No data available.
Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	No data available.
Ethoxylated phenyl acrylate	No data available.
hexamethylene diacrylate; hexane-1,6-diol diacrylate	LD 50 (Rabbit): 3,650 mg/kg Experimental result, Key study
Tetrahydrofurfuryl alcohol caprolactam	No data available. No data available.
Heptane	LD 50 (Rabbit): > 2,000 mg/kg Read-across based on grouping of substances (category approach), Key study LD50 (rabbit): > 2,000 mg/kg
2,6-di-tert-Butyl-p-cresol	LD 50 (Rat): > 2,000 mg/kg Experimental result, Key study
Hydroquinone	LD 50 (Rabbit): > 2,000 mg/kg Experimental result, Key study
Phenol, 4-methoxy-	LD 50 (Rat): > 2,000 mg/kg Experimental result, Key study
Tris(N-hydroxy-N-nitrosophenylaminato-O,O')aluminium	No data available.

Inhalation

Product:	Not classified for acute toxicity based on available data.
Components:	
Isobornyl acrylate	
Phenoxyethylacrylate	
Tetrahydrofurfuryl acrylate	
Oxybis(methyl-2,1-ethanediyl) diacrylate	
N-vinyl caprolactam	
2-Propenoic acid ,1-6-hexanediyl ester, polymer with 2-aminoethanol	
Isodecyl acrylate	LC 50 (Rat): > 1.19 mg/l Vapor, Read-across from supporting substance (structural analogue or surrogate), Key study

Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	
Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	
Ethoxylated phenyl acrylate	
hexamethylene diacrylate; hexane-1,6-diol diacrylate	LC 0 (Rat): 0.41 mg/l Vapor, Experimental result, Key study
Tetrahydrofurfuryl alcohol caprolactam	LC 50 (Rat): 0.3 mg/l
Heptane	LC50 (rat): 103 mg/l
2,6-di-tert-Butyl-p-cresol	Vapor, Experimental result, Supporting study
Hydroquinone	LC 0 (Rat): >= 7,800 mg/m3 Aerosol, Read-across from supporting substance (structural analogue or surrogate), Supporting study
Phenol, 4-methoxy-	
Tris(N-hydroxy-N-nitrosophenylaminato-O,O')aluminium	

Repeated dose toxicity

Product:	No data available.
Components:	
Isobornyl acrylate	NOAEL (Rat(Female, Male), Oral, 28 - 53 d): 100 mg/kg Oral Experimental result, Key study
Phenoxyethylacrylate	NOAEL (Rat(Female, Male), Oral, 43 - 53 d): 300 mg/kg Oral Experimental result, Key study
Tetrahydrofurfuryl acrylate	No data available.
Oxybis(methyl-2,1-ethanediyl) diacrylate	NOAEL (Rat(Female, Male), Oral, 28 - 52 d): 250 mg/kg Oral Read-across from supporting substance (structural analogue or surrogate), Key study
N-vinyl caprolactam	NOAEL (Rat(Female, Male), Inhalation): 0.058 mg/l Inhalation Experimental result, Key study
2-Propenoic acid ,1-6-hexanediyl ester, polymer with 2-aminoethanol	No data available.
Isodecyl acrylate	NOAEL (Rat(Female, Male), Inhalation): 0.075 mg/l Inhalation Read-across from supporting substance (structural analogue or surrogate), Key study NOAEL (Rat(Female, Male), Inhalation): 0.226 mg/l Inhalation Read-across from supporting substance (structural analogue or surrogate), Key study
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	No data available NOAEL (Rat(Female, Male), Oral, 28 d): 50 mg/kg Oral Experimental result, Key study
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	No data available.
Phenyl bis(2,4,6-trimethylbenzoyl)-	No data available.

phosphine oxide	
Ethoxylated phenyl acrylate	No data available.
hexamethylene diacrylate; hexane-1,6-diol diacrylate	No data available.
Tetrahydrofurfuryl alcohol	No data available.
caprolactam	NOAEL (Rat(male), Oral, 13 Weeks): 29 mg/kg Experimental result, Key study
Heptane	No data available.
2,6-di-tert-Butyl-p-cresol	NOAEL (Rat(Male), Oral, 76 - 110 Weeks): 70 mg/kg Oral Experimental result, Weight of Evidence study
Hydroquinone	LOAEL (Rat(Female, Male), Oral, 13 Weeks): 64 mg/kg Oral Experimental result, Key study
Phenol, 4-methoxy-	No data available NOAEL (Rat(Female, Male), Oral, >= 28 d): 150 mg/kg Oral Experimental result, Key study
Tris(N-hydroxy-N-nitrosophenylaminato-O,O')aluminium	No data available.

Skin Corrosion/Irritation

Product: Irritating. The health hazard evaluation is based on the toxicological properties of a similar material.

Components:

Isobornyl acrylate	No data available.
Phenoxyethylacrylate	(Rabbit): Not irritant , 24 h
Tetrahydrofurfuryl acrylate	No data available.
Oxybis(methyl-2,1-ethanediyl) diacrylate	No data available.
N-vinyl caprolactam	in vivo (Rabbit): Not irritant
2-Propenoic acid ,1-6-hexanediyl ester, polymer with 2-aminoethanol	No data available.
Isodecyl acrylate	No data available.
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	in vivo (Rabbit): Not irritant
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	No data available.
Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	No data available.
Ethoxylated phenyl acrylate	No data available.
hexamethylene diacrylate; hexane-1,6-diol diacrylate	in vivo (Rabbit): Category 2 , 24 - 72 h
Tetrahydrofurfuryl alcohol	in vivo (Rabbit): Not irritant
caprolactam	Irritating
Heptane	in vivo (Rabbit): Irritating
2,6-di-tert-Butyl-p-cresol	in vivo (Rabbit): Not irritant , 24 - 72 h
Hydroquinone	in vivo (Rabbit): Not irritant , 24 h
Phenol, 4-methoxy-	in vivo (Rabbit): Slightly irritating QSAR

Tris(N-hydroxy-N-nitrosophenylaminato-O,O')aluminium	No data available.

Serious Eye Damage/Eye Irritation

Product:	No data available.
Components:	
Isobornyl acrylate	No data available.
Phenoxyethylacrylate	No data available.
Tetrahydrofurfuryl acrylate	No data available.
Oxybis(methyl-2,1-ethanediyl) diacrylate	Category 1 in vivo Rabbit, 24 - 72 hrs: OECD GHS
N-vinyl caprolactam	No data available.
2-Propenoic acid ,1-6-hexanediyl ester, polymer with 2-aminoethanol	No data available.
Isodecyl acrylate	Mildly Irritating
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	No data available.
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	No data available.
Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	No data available.
Ethoxylated phenyl acrylate	No data available.
hexamethylene diacrylate; hexane-1,6-diol diacrylate	Irritating
Tetrahydrofurfuryl alcohol	Severely Irritating
caprolactam	Irritating
Heptane	Not irritating in vivo Rabbit, 24 - 72 hrs: GHS, EU, 2007
2,6-di-tert-Butyl-p-cresol	Not irritating in vivo Rabbit, 24 - 72 hrs: EU
Hydroquinone	No data available.
Phenol, 4-methoxy-	No data available.
Tris(N-hydroxy-N-nitrosophenylaminato-O,O')aluminium	No data available.

Respiratory or Skin Sensitization

Product:	No data available.
Components:	
Isobornyl acrylate	No data available.
Phenoxyethylacrylate	No data available.
Tetrahydrofurfuryl acrylate	No data available.
Oxybis(methyl-2,1-ethanediyl) diacrylate	No data available.
N-vinyl caprolactam	No data available.
2-Propenoic acid ,1-6-hexanediyl ester, polymer with 2-aminoethanol	No data available.
Isodecyl acrylate	No data available.

Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	No data available.
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	No data available.
Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	No data available.
Ethoxylated phenyl acrylate	No data available.
hexamethylene diacrylate; hexane-1,6-diol diacrylate	Skin sensitization:, in vivo (Guinea pig): Sensitising
Tetrahydrofurfuryl alcohol	No data available.
caprolactam	Skin sensitization:, in vivo (Guinea pig): Non sensitising
Heptane	Skin sensitization:, in vivo (Guinea pig): Non sensitising
2,6-di-tert-Butyl-p-cresol	Skin sensitization:, in vivo (Guinea pig): Non sensitising
Hydroquinone	Skin sensitization:, in vivo (Guinea pig): Sensitising
Phenol, 4-methoxy-	Skin sensitization:, in vivo (Guinea pig): Sensitising
Tris(N-hydroxy-N-nitrosophenylaminato-O,O')aluminium	No data available.

Carcinogenicity

Product: Not classified The yellow pigment in this product is embedded in a matrix which minimizes the likelihood of exposure to the pigment.

Components:

Isobornyl acrylate	No data available.
Phenoxyethylacrylate	No data available.
Tetrahydrofurfuryl acrylate	No data available.
Oxybis(methyl-2,1-ethanediyl) diacrylate	No data available.
N-vinyl caprolactam	No data available.
2-Propenoic acid ,1-6-hexanediyl ester, polymer with 2-aminoethanol	No data available.
Isodecyl acrylate	No data available.
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	No data available.
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	No data available.
Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	No data available.
Ethoxylated phenyl acrylate	No data available.
hexamethylene diacrylate; hexane-1,6-diol diacrylate	No data available.
Tetrahydrofurfuryl alcohol	No data available.
caprolactam	No data available.

Heptane	No data available.
2,6-di-tert-Butyl-p-cresol	No data available.
Hydroquinone	No data available.
Phenol, 4-methoxy-	No data available.
Tris(N-hydroxy-N-nitrosophenylaminato-O,O')aluminium	No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	Overall evaluation: 1. Carcinogenic to humans.

US. National Toxicology Program (NTP) Report on Carcinogens:

Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	Known To Be Human Carcinogen.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050), as amended:
No carcinogens present or none present in regulated quantities

Germ Cell Mutagenicity

In vitro

Product:	No data available.
Components:	
Isobornyl acrylate	No data available.
Phenoxyethylacrylate	No data available.
Tetrahydrofurfuryl acrylate	No data available.
Oxybis(methyl-2,1-ethanediyl) diacrylate	No data available.
N-vinyl caprolactam	No data available.
2-Propenoic acid ,1-6-hexanediyl ester, polymer with 2-aminoethanol	No data available.
Isodecyl acrylate	No data available.
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	No data available.
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	No data available.
Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	No data available.
Ethoxylated phenyl acrylate	No data available.
hexamethylene diacrylate; hexane-1,6-diol diacrylate	No data available.
Tetrahydrofurfuryl alcohol	No data available.
caprolactam	No data available.

Heptane	No data available.
2,6-di-tert-Butyl-p-cresol	No data available.
Hydroquinone	No data available.
Phenol, 4-methoxy-	No data available.
Tris(N-hydroxy-N-nitrosophenylaminato-O,O')aluminium	No data available.

In vivo

Product:	No data available.
Components:	
Isobornyl acrylate	No data available.
Phenoxyethylacrylate	No data available.
Tetrahydrofurfuryl acrylate	No data available.
Oxybis(methyl-2,1-ethanediyl) diacrylate	No data available.
N-vinyl caprolactam	No data available.
2-Propenoic acid ,1-6-hexanediyl ester, polymer with 2-aminoethanol	No data available.
Isodecyl acrylate	No data available.
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	No data available.
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	No data available.
Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	No data available.
Ethoxylated phenyl acrylate	No data available.
hexamethylene diacrylate; hexane-1,6-diol diacrylate	No data available.
Tetrahydrofurfuryl alcohol	No data available.
caprolactam	No data available.
Heptane	No data available.
2,6-di-tert-Butyl-p-cresol	No data available.
Hydroquinone	No data available.
Phenol, 4-methoxy-	No data available.
Tris(N-hydroxy-N-nitrosophenylaminato-O,O')aluminium	No data available.

Reproductive toxicity

Product:	No data available.
Components:	
Isobornyl acrylate	No data available.
Phenoxyethylacrylate	No data available.
Tetrahydrofurfuryl acrylate	No data available.
Oxybis(methyl-2,1-ethanediyl) diacrylate	No data available.

N-vinyl caprolactam	No data available.
2-Propenoic acid ,1-6-hexanediyl ester, polymer with 2-aminoethanol	No data available.
Isodecyl acrylate	No data available.
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	No data available.
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	No data available.
Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	No data available.
Ethoxylated phenyl acrylate	No data available.
hexamethylene diacrylate; hexane-1,6-diol diacrylate	No data available.
Tetrahydrofurfuryl alcohol	No data available.
caprolactam	No data available.
Heptane	No data available.
2,6-di-tert-Butyl-p-cresol	No data available.
Hydroquinone	No data available.
Phenol, 4-methoxy-	No data available.
Tris(N-hydroxy-N-nitrosophenylaminato-O,O')aluminium	No data available.

Specific Target Organ Toxicity - Single Exposure

Product:	No data available.
Components:	
Isobornyl acrylate	No data available.
Phenoxyethylacrylate	No data available.
Tetrahydrofurfuryl acrylate	No data available.
Oxybis(methyl-2,1-ethanediyl) diacrylate	No data available.
N-vinyl caprolactam	No data available.
2-Propenoic acid ,1-6-hexanediyl ester, polymer with 2-aminoethanol	No data available.
Isodecyl acrylate	No data available.
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	No data available.
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	No data available.
Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	No data available.
Ethoxylated phenyl acrylate	No data available.

hexamethylene diacrylate; hexane-1,6-diol diacrylate	No data available.
Tetrahydrofurfuryl alcohol	No data available.
caprolactam	No data available.
Heptane	No data available.
2,6-di-tert-Butyl-p-cresol	No data available.
Hydroquinone	No data available.
Phenol, 4-methoxy-	No data available
Tris(N-hydroxy-N-nitrosophenylaminato-O,O')aluminium	No data available.

Specific Target Organ Toxicity - Repeated Exposure

Product:	No data available.
Components:	
Isobornyl acrylate	No data available.
Phenoxyethylacrylate	No data available.
Tetrahydrofurfuryl acrylate	No data available.
Oxybis(methyl-2,1-ethanediyl) diacrylate	No data available.
N-vinyl caprolactam	No data available.
2-Propenoic acid ,1-6-hexanediyl ester, polymer with 2-aminoethanol	No data available.
Isodecyl acrylate	No data available.
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	No data available.
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	No data available.
Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	No data available.
Ethoxylated phenyl acrylate	No data available.
hexamethylene diacrylate; hexane-1,6-diol diacrylate	No data available.
Tetrahydrofurfuryl alcohol	No data available.
caprolactam	No data available.
Heptane	No data available.
2,6-di-tert-Butyl-p-cresol	No data available.
Hydroquinone	No data available.
Phenol, 4-methoxy-	No information available.
Tris(N-hydroxy-N-nitrosophenylaminato-O,O')aluminium	No data available.

Aspiration Hazard

Product:	No data available.
Components:	
Isobornyl acrylate	No data available.
Phenoxyethylacrylate	No data available.

Tetrahydrofurfuryl acrylate	No data available.
Oxybis(methyl-2,1-ethanediyl) diacrylate	No data available.
N-vinyl caprolactam	No data available.
2-Propenoic acid ,1-6-hexanediyl ester, polymer with 2-aminoethanol	No data available.
Isodecyl acrylate	No data available.
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	No data available.
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	No data available.
Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	No data available.
Ethoxylated phenyl acrylate	No data available.
hexamethylene diacrylate; hexane-1,6-diol diacrylate	No data available.
Tetrahydrofurfuryl alcohol	No data available.
caprolactam	No data available.
Heptane	No data available.
2,6-di-tert-Butyl-p-cresol	No data available.
Hydroquinone	No data available.
Phenol, 4-methoxy-	No data available
Tris(N-hydroxy-N-nitrosophenylaminato-O,O')aluminium	No data available.

Information on health hazards

Other hazards

Product:	No data available.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish

Product:	No data available.
Components:	
Isobornyl acrylate	LC50 (Pisces (fish), 96 h): 0.704 mg/l
Phenoxyethylacrylate	No data available.
Tetrahydrofurfuryl acrylate	No data available.
Oxybis(methyl-2,1-ethanediyl) diacrylate	NOAEL (Leuciscus idus, 96 h): 1 mg/l Experimental result, Key study LC 50 (Leuciscus idus, 96 h): 2.2 mg/l
N-vinyl caprolactam	LC 50 (Danio rerio, 96 h): 318 mg/l Experimental result, Key study NOAEL (Danio rerio, 96 h): 215 mg/l Experimental result, Key study
2-Propenoic acid ,1-6-hexanediyl ester,	No data available.

polymer with 2-aminoethanol	
Isodecyl acrylate	No data available.
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	LC 50 (Oryzias latipes, 48 h): +/- 6.53 mg/l Experimental result, Key study
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	No data available.
Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	No data available.
Ethoxylated phenyl acrylate	No data available.
hexamethylene diacrylate; hexane-1,6-diol diacrylate	No data available.
Tetrahydrofurfuryl alcohol	LC 50 (Oryzias latipes, 96 h): > 101 mg/l Experimental result, Key study
caprolactam	LC 50 (Oryzias latipes, 96 h): > 100 mg/l Experimental result, Key study
Heptane	LC50 (Leuciscus idus (golden orfe), 48 h): > 270 mg/l
2,6-di-tert-Butyl-p-cresol	LC 50 (96 h): 0.199 mg/l QSAR QSAR, Key study
Hydroquinone	LC 50 (Oncorhynchus mykiss, 96 h): 0.638 mg/l Experimental result, Key study
Phenol, 4-methoxy-	LC 50 (Oncorhynchus mykiss, 96 h): 28.5 mg/l Experimental result, Key study
Tris(N-hydroxy-N-nitrosophenylaminato-O,O')aluminium	No data available.

Aquatic Invertebrates

Product:	No data available.
Components:	
Isobornyl acrylate	No data available.
Phenoxyethylacrylate	EC 50 (Daphnia magna, 48 h): 1.21 mg/l Experimental result, Key study
Tetrahydrofurfuryl acrylate	No data available.
Oxybis(methyl-2,1-ethanediyl) diacrylate	No data available.
N-vinyl caprolactam	EC 50 (Daphnia magna, 48 h): > 100 mg/l Experimental result, Key study
2-Propenoic acid ,1-6-hexanediyl ester, polymer with 2-aminoethanol	No data available.
Isodecyl acrylate	No data available.
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	EC 50 (Daphnia magna, 48 h): 3.53 mg/l Experimental result, Key study
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	No data available.
Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	No data available.
Ethoxylated phenyl acrylate	No data available.

hexamethylene diacrylate; hexane-1,6-diol diacrylate	No data available.
Tetrahydrofurfuryl alcohol	EC 50 (Daphnia magna, 48 h): > 91.7 mg/l Experimental result, Key study
caprolactam	No data available.
Heptane	EC 50 (Daphnia magna, 48 h): 1.5 mg/l Experimental result, Key study EC50 (Daphnia magna (water flea), 24 h): > 10 mg/l EC 50 (Daphnia magna, 48 h): 3.9 mg/l Experimental result, Key study
2,6-di-tert-Butyl-p-cresol	EC 50 (Daphnia magna, 48 h): 0.48 mg/l Experimental result, Key study
Hydroquinone	EC 50 (Daphnia magna, 48 h): 0.134 mg/l Experimental result, Key study
Phenol, 4-methoxy-	NOAEL (Daphnia magna, 48 h): 1.32 mg/l Experimental result, Key study EC 50 (Daphnia magna, 48 h): 3 mg/l Experimental result, Key study
Tris(N-hydroxy-N-nitrosophenylaminato-O,O')aluminium	No data available.

Toxicity to Aquatic Plants

Product:	No data available.
Components:	
Isobornyl acrylate	No data available.
Phenoxyethylacrylate	No data available.
Tetrahydrofurfuryl acrylate	No data available.
Oxybis(methyl-2,1-ethanediyl) diacrylate	No data available.
N-vinyl caprolactam	No data available.
2-Propenoic acid ,1-6-hexanediyl ester, polymer with 2-aminoethanol	No data available.
Isodecyl acrylate	No data available.
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	No data available.
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	No data available.
Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	No data available.
Ethoxylated phenyl acrylate	No data available.
hexamethylene diacrylate; hexane-1,6-diol diacrylate	No data available.
Tetrahydrofurfuryl alcohol	No data available.
caprolactam	EC 50 (Alga, 72 h): 130 mg/l
Heptane	No data available.
2,6-di-tert-Butyl-p-cresol	No data available.
Hydroquinone	No data available.
Phenol, 4-methoxy-	No data available.
Tris(N-hydroxy-N-nitrosophenylaminato-O,O')aluminium	No data available.

Toxicity to microorganisms

Product:	No data available.

Components:

Isobornyl acrylate	No data available.
Phenoxyethylacrylate	No data available.
Tetrahydrofurfuryl acrylate	No data available.
Oxybis(methyl-2,1-ethanediyl) diacrylate	No data available.
N-vinyl caprolactam	No data available.
2-Propenoic acid ,1-6-hexanediyl ester, polymer with 2-aminoethanol	No data available.
Isodecyl acrylate	No data available.
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	No data available.
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	No data available.
Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	No data available.
Ethoxylated phenyl acrylate	No data available.
hexamethylene diacrylate; hexane-1,6-diol diacrylate	No data available.
Tetrahydrofurfuryl alcohol	No data available.
caprolactam	No data available.
Heptane	No data available.
2,6-di-tert-Butyl-p-cresol	No data available.
Hydroquinone	No data available.
Phenol, 4-methoxy-	No data available.
Tris(N-hydroxy-N-nitrosophenylaminato-O,O')aluminium	No data available.

Chronic hazards to the aquatic environment:

Fish

Product:	No data available.
Components:	
Isobornyl acrylate	No data available.
Phenoxyethylacrylate	No data available.
Tetrahydrofurfuryl acrylate	No data available.
Oxybis(methyl-2,1-ethanediyl) diacrylate	No data available.
N-vinyl caprolactam	No data available.
2-Propenoic acid ,1-6-hexanediyl ester, polymer with 2-aminoethanol	No data available.
Isodecyl acrylate	No data available.
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	No data available.
Nickel, 5,5'-azobis-	No data available.

2,4,6(1H,3H,5H)-pyrimidinetrione complexes	
Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	No data available.
Ethoxylated phenyl acrylate	No data available.
hexamethylene diacrylate; hexane-1,6-diol diacrylate	No data available.
Tetrahydrofurfuryl alcohol	No data available.
caprolactam	No data available.
Heptane	No data available.
2,6-di-tert-Butyl-p-cresol	No data available.
Hydroquinone	No data available.
Phenol, 4-methoxy-	No data available.
Tris(N-hydroxy-N-nitrosophenylaminato-O,O')aluminium	No data available.

Aquatic Invertebrates

Product:	No data available.
Components:	
Isobornyl acrylate	No data available.
Phenoxyethylacrylate	No data available.
Tetrahydrofurfuryl acrylate	No data available.
Oxybis(methyl-2,1-ethanediyl) diacrylate	No data available.
N-vinyl caprolactam	No data available.
2-Propenoic acid ,1-6-hexanediyl ester, polymer with 2-aminoethanol	No data available.
Isodecyl acrylate	No data available.
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	No data available.
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	No data available.
Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	No data available.
Ethoxylated phenyl acrylate	No data available.
hexamethylene diacrylate; hexane-1,6-diol diacrylate	No data available.
Tetrahydrofurfuryl alcohol	No data available.
caprolactam	No data available.
Heptane	No data available.
2,6-di-tert-Butyl-p-cresol	No data available.
Hydroquinone	No data available.

Phenol, 4-methoxy-	No data available.
Tris(N-hydroxy-N-nitrosophenylaminato-O,O')aluminium	No data available.

Toxicity to Aquatic Plants

Product:	No data available.
Components:	
Isobornyl acrylate	No data available.
Phenoxyethylacrylate	No data available.
Tetrahydrofurfuryl acrylate	No data available.
Oxybis(methyl-2,1-ethanediyl) diacrylate	No data available.
N-vinyl caprolactam	No data available.
2-Propenoic acid ,1-6-hexanediyl ester, polymer with 2-aminoethanol	No data available.
Isodecyl acrylate	No data available.
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	No data available.
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	No data available.
Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	No data available.
Ethoxylated phenyl acrylate	No data available.
hexamethylene diacrylate; hexane-1,6-diol diacrylate	No data available.
Tetrahydrofurfuryl alcohol	No data available.
caprolactam	No data available.
Heptane	No data available.
2,6-di-tert-Butyl-p-cresol	No data available.
Hydroquinone	No data available.
Phenol, 4-methoxy-	No data available.
Tris(N-hydroxy-N-nitrosophenylaminato-O,O')aluminium	No data available.

Toxicity to microorganisms

Product:	No data available.
Components:	
Isobornyl acrylate	No data available.
Phenoxyethylacrylate	No data available.
Tetrahydrofurfuryl acrylate	No data available.
Oxybis(methyl-2,1-ethanediyl) diacrylate	No data available.
N-vinyl caprolactam	No data available.
2-Propenoic acid ,1-6-hexanediyl ester, polymer with 2-aminoethanol	No data available.
Isodecyl acrylate	No data available.

Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	No data available.
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	No data available.
Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	No data available.
Ethoxylated phenyl acrylate	No data available.
hexamethylene diacrylate; hexane-1,6-diol diacrylate	No data available.
Tetrahydrofurfuryl alcohol	No data available.
caprolactam	No data available.
Heptane	No data available.
2,6-di-tert-Butyl-p-cresol	No data available.
Hydroquinone	No data available.
Phenol, 4-methoxy-	No data available.
Tris(N-hydroxy-N-nitrosophenylaminato-O,O')aluminium	No data available.

Persistence and Degradability

Biodegradation

Product:	No data available.
Components:	
Isobornyl acrylate	57 % Detected in water. Experimental result, Key study
Phenoxyethylacrylate	22.3 % (28 d) Detected in water. Experimental result, Key study
Tetrahydrofurfuryl acrylate	No data available.
Oxybis(methyl-2,1-ethanediyl) diacrylate	90 - 100 % (28 d) Detected in water. Experimental result, Key study
N-vinyl caprolactam	30 - 40 % (28 d) Detected in water. Experimental result, Key study
2-Propenoic acid ,1-6-hexanediyl ester, polymer with 2-aminoethanol	No data available.
Isodecyl acrylate	70 - 80 % (15 d) Detected in water. Read-across from supporting substance (structural analogue or surrogate), Key study
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	> 0 - 10 % (28 d) Detected in water. Experimental result, Key study
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	No data available.
Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	No data available.
Ethoxylated phenyl acrylate	No data available.
hexamethylene diacrylate; hexane-1,6-diol diacrylate	60 - 70 % (28 d) Detected in water. Experimental result, Key study

Tetrahydrofurfuryl alcohol	92 % (28 d) Detected in water. Experimental result, Key study 0 % (60 d) Detected in water. Experimental result, Supporting study
caprolactam	5 % (28 d) Detected in water. Experimental result, Key study
Heptane	63.2 % Detected in water. Experimental result, Key study 100 % (25 d) Detected in water. Experimental result, Supporting study 28.2 % Detected in water. Experimental result, Key study 100 % (4 d) Detected in water. Experimental result, Supporting study 70 % Detected in water. Experimental result, Key study
2,6-di-tert-Butyl-p-cresol	4.5 % (28 d) Detected in water. Experimental result, Key study
Hydroquinone	70 % (14 d) Detected in water. Experimental result, Supporting study
Phenol, 4-methoxy-	> 90 % (1 Months) Detected in water. Experimental result, Key study
Tris(N-hydroxy-N-nitrosophenylaminato-O,O')aluminium	No data available.

BOD/COD Ratio

Product:	No data available.
Components:	
Isobornyl acrylate	No data available.
Phenoxyethylacrylate	No data available.
Tetrahydrofurfuryl acrylate	No data available.
Oxybis(methyl-2,1-ethanediyl) diacrylate	No data available.
N-vinyl caprolactam	No data available.
2-Propenoic acid ,1-6-hexanediyl ester, polymer with 2-aminoethanol	No data available.
Isodecyl acrylate	No data available.
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	No data available.
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	No data available.
Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	No data available.
Ethoxylated phenyl acrylate	No data available.
hexamethylene diacrylate; hexane-1,6-diol diacrylate	No data available.
Tetrahydrofurfuryl alcohol	No data available.
caprolactam	No data available.
Heptane	No data available.
2,6-di-tert-Butyl-p-cresol	No data available.
Hydroquinone	No data available.
Phenol, 4-methoxy-	No data available.
Tris(N-hydroxy-N-nitrosophenylaminato-O,O')aluminium	No data available.

Bioaccumulative potential

Bioconcentration Factor (BCF)

Product:	No data available.

Components:

Isobornyl acrylate	Danio rerio, Bioconcentration Factor (BCF): 37 Aquatic sediment Read-across from supporting substance (structural analogue or surrogate), Weight of Evidence study
Phenoxyethylacrylate	No data available.
Tetrahydrofurfuryl acrylate	No data available.
Oxybis(methyl-2,1-ethanediyl) diacrylate	No data available.
N-vinyl caprolactam	No data available.
2-Propenoic acid ,1-6-hexanediyl ester, polymer with 2-aminoethanol	No data available.
Isodecyl acrylate	No data available.
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	Cyprinus carpio, Bioconcentration Factor (BCF): 22 - 32 Aquatic sediment Experimental result, Key study
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	No data available.
Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	No data available.
Ethoxylated phenyl acrylate	No data available.
hexamethylene diacrylate; hexane-1,6-diol diacrylate	No data available.
Tetrahydrofurfuryl alcohol	No data available.
caprolactam	No data available.
Heptane	Bioconcentration Factor (BCF): 552 Aquatic sediment Estimated by calculation, Key study
2,6-di-tert-Butyl-p-cresol	Bioconcentration Factor (BCF): 598.4 Aquatic sediment Estimated by calculation, Weight of Evidence study
Hydroquinone	No data available.
Phenol, 4-methoxy-	No data available.
Tris(N-hydroxy-N-nitrosophenylaminato-O,O')aluminium	No data available.

Partition Coefficient n-octanol / water (log Kow)

Product: Log Kow: Not applicable Mixture

Components:

Isobornyl acrylate	No data available.
Phenoxyethylacrylate	No data available.
Tetrahydrofurfuryl acrylate	No data available.
Oxybis(methyl-2,1-ethanediyl) diacrylate	Log Kow: 0.01 - 0.39 24 °C Yes Experimental result, Key study
N-vinyl caprolactam	No data available.
2-Propenoic acid ,1-6-hexanediyl ester, polymer with 2-aminoethanol	No data available.
Isodecyl acrylate	Log Kow: No data available
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	No data available.

Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	No data available.
Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	Log Kow: 5.8 20 - 25 °C
Ethoxylated phenyl acrylate	No data available.
hexamethylene diacrylate; hexane-1,6-diol diacrylate	Log Kow: 2.62 - 3.08 25 °C No Experimental result, Supporting study Log Kow: 3.08 (QSAR) Log Kow: 3.08
Tetrahydrofurfuryl alcohol	No data available.
caprolactam	No data available.
Heptane	Log Kow: 4.66
2,6-di-tert-Butyl-p-cresol	Log Kow: 5.11 - 5.2 No Experimental result, Weight of Evidence study Log Kow: 5.10
Hydroquinone	Log Kow: 0.59
Phenol, 4-methoxy-	Log Kow: 1.41 25 °C Log Kow: 1.34 (QSAR)
Tris(N-hydroxy-N-nitrosophenylaminato-O,O')aluminium	No data available.

Mobility in soil:

Product	No data available.
Components:	
Isobornyl acrylate	No data available.
Phenoxyethylacrylate	No data available.
Tetrahydrofurfuryl acrylate	No data available.
Oxybis(methyl-2,1-ethanediyl) diacrylate	No data available.
N-vinyl caprolactam	No data available.
2-Propenoic acid ,1-6-hexanediyl ester, polymer with 2-aminoethanol	No data available.
Isodecyl acrylate	No data available.
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	No data available.
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	No data available.
Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	No data available.
Ethoxylated phenyl acrylate	No data available.
hexamethylene diacrylate; hexane-1,6-diol diacrylate	No data available.
Tetrahydrofurfuryl alcohol	No data available.
caprolactam	No data available.
Heptane	No data available.
2,6-di-tert-Butyl-p-cresol	No data available.
Hydroquinone	No data available.
Phenol, 4-methoxy-	No data available.

Tris(N-hydroxy-N-nitrosophenylaminato-O,O')aluminium	No data available.

Results of PBT and vPvB assessment:

Product	Not fulfilling PBT (persistent/bioaccumulative/toxic) criteria Not fulfilling vPvB (very persistent/very bioaccummulative) criteria	
Components:		
Isobornyl acrylate	No data available.	No data available.
Phenoxyethylacrylate	No data available.	No data available.
Tetrahydrofurfuryl acrylate	No data available.	No data available.
Oxybis(methyl-2,1-ethanediyl) diacrylate	No data available.	No data available.
N-vinyl caprolactam	No data available.	No data available.
2-Propenoic acid ,1-6-hexanediyl ester, polymer with 2-aminoethanol	No data available.	No data available.
Isodecyl acrylate	No data available.	No data available.
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	No data available.	No data available.
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	No data available.	No data available.
Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	No data available.	No data available.
Ethoxylated phenyl acrylate	No data available.	No data available.
hexamethylene diacrylate; hexane-1,6-diol diacrylate	No data available.	No data available.
Tetrahydrofurfuryl alcohol	No data available.	No data available.
caprolactam	No data available.	No data available.
Heptane	No data available.	No data available.
2,6-di-tert-Butyl-p-cresol	No data available.	No data available.
Hydroquinone	No data available.	No data available.
Phenol, 4-methoxy-	No data available.	No data available.
Tris(N-hydroxy-N-nitrosophenylaminato-O,O')aluminium	No data available.	No data available.

Other adverse effects:

Other hazards

Product:	Toxic to aquatic life with long lasting effects.
Components:	
Isobornyl acrylate	No data available.
Phenoxyethylacrylate	No data available.
Tetrahydrofurfuryl acrylate	No data available.
Oxybis(methyl-2,1-ethanediyl) diacrylate	No data available.
N-vinyl caprolactam	No data available.
2-Propenoic acid ,1-6-hexanediyl ester, polymer with 2-aminoethanol	No data available.
Isodecyl acrylate	No data available.

Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	No data available.
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	No data available.
Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	No data available.
Ethoxylated phenyl acrylate	No data available.
hexamethylene diacrylate; hexane-1,6-diol diacrylate	No data available.
Tetrahydrofurfuryl alcohol	No data available.
caprolactam	No data available.
Heptane	No data available.
2,6-di-tert-Butyl-p-cresol	No data available.
Hydroquinone	No data available.
Phenol, 4-methoxy-	No data available.
Tris(N-hydroxy-N-nitrosophenylaminato-O,O')aluminium	No data available.

13. Disposal considerations

General information: Waste disposal should be in accordance with existing federal, state and local environmental control laws.

Disposal methods: Discharge, treatment, or disposal may be subject to national, state, or local laws.

Since emptied containers retain product residue, follow label warnings even after container is emptied.

Contaminated Packaging: Dispose in accordance with all applicable regulations.

US. RCRA Hazardous Waste Classification (40 CFR 261) If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.

14. Transport information

DOT

UN Number	UN3082
UN Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s.(Acrylate)
Transport Hazard Class(es)	
Class	9
Label(s)	9
Packing Group	III
Environmental Hazards	Yes

Special precautions for user	Not regulated if packaging <= 5L

IATA

UN Number	UN3082
Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s.(Acrylate)
Transport Hazard Class(es)	
Class	9
Label(s)	9MI (Miscellaneous)
Packing Group	III
Excepted quantity	E1
Environmental Hazards	Yes
Special precautions for user	SPECIAL PROVISION A197 if packaging <= 5L or <= 5kg
Other information	
Passenger and cargo aircraft	Allowed.
Cargo aircraft only	Allowed.

IMDG

UN Number	UN3082
UN Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(Acrylate)
Transport Hazard Class(es)	
Class	9
Label(s)	9
EmS No.	F-AS-F
Packing Group	III
Limited quantity	5.00L
Excepted quantity	E1
Environmental Hazards	Yes
Special precautions for user	CODE 2.10.2.7 if packaging <= 5L or <= 5kg

15. Regulatory information

US Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

None present or none present in regulated quantities.

US. Toxic Substances Control Act (TSCA) Section 5(a)(2) Final Significant New Use Rules (SNURs) (40 CFR 721, Subpt E)

None present or none present in regulated quantities.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050), as amended

None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

Chemical Identity

Phenoxyethylacrylate
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes
Ethoxylated phenyl acrylate
2-phenoxyethanol
Heptane

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Skin Corrosion or Irritation, Serious eye damage or eye irritation, Respiratory or Skin Sensitization, Reproductive toxicity, Specific target organ toxicity (single or repeated exposure)

US. EPCRA (SARA Title III) Section 304 Extremely Hazardous Substances Reporting Quantities and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Hazardous Substances

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required

Chemical Identity	% by weight
Phenoxyethylacrylate	1.0%
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes	0.1%
Ethoxylated phenyl acrylate	1.0%

Clean Air Act (CAA) Section 111 SOCMI Intermediate or Final Volatile Organic Compounds (40 CFR 60.489):

Chemical Identity
2-phenoxyethanol
caprolactam
Hydroquinone

Clean Air Act (CAA) Section 112, 1990 Amendments, Statutory Hazardous Air Pollutants:

Chemical Identity
Phenoxyethylacrylate
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes
Ethoxylated phenyl acrylate
2-phenoxyethanol
Hydroquinone

Clean Air Act (CAA) Section 112(i) High-Risk Hazardous Air Pollutants (40 CFR 63.74):

None present.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):

None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)

None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65

WARNING: This product can expose you to chemicals including, Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexeswhich is [are] known to the State of California to cause cancer.

For more information go to www.P65Warnings.ca.gov.

US. New Jersey Worker and Community Right-to-Know Act

Chemical Identity
Phenoxyethylacrylate
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes
Ethoxylated phenyl acrylate

US. Massachusetts RTK - Substance List

No ingredient regulated by MA Right-to-Know Law present.

US. Pennsylvania RTK - Hazardous Substances

Chemical Identity
Phenoxyethylacrylate
Nickel, 5,5'-azobis-2,4,6(1H,3H,5H)-pyrimidinetrione complexes
Ethoxylated phenyl acrylate

US. Rhode Island RTK

No ingredient regulated by RI Right-to-Know Law present.

US. Toxic Substances Control Act (TSCA)

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substance Control Act (U.S, EPA TSCA) 8(b) inventory.

16.Other information, including date of preparation or last revision

Issue Date:	03-31-2021
Version #:	1.1
Further Information:	This information is furnished without warranty, expressed or implied, and is believed to be accurate to the best knowledge of the manufacturer. The data on this SDS relates only to the specific material designated herein. The manufacturer assumes no legal responsibility for use or reliance upon these data.