SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended.

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

1.1 Product identifier

Product name: ANUVIA 250 CYAN LIGHT INK **Product No.:** 000001016187

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

Identified uses: Printing ink
Uses advised against: Reserved for industrial and professional use.

1.3 Details of the supplier of the safety data sheet

Manufacturer

Agfa Graphics NV
Septestraat 27
2640 Mortsel
Belgium

Telephone: +32 3 4442111
Fax: +32 3 4447094

E-mail: electronic.sds@agfa.com

National Supplier

Agfa-Gevaert Ltd.
Vantage West
Great West Road
Brentford, Middlesex TW8 9AX
United Kingdom

Telephone: +44 (0)20 8 231 4616
Fax: +44 (0)20 8 231 4951

E-mail: electronic.sds@agfa.com

1.4 Emergency telephone number:

Emergency telephone number (Belgium) : +32 3 4443333 (24h/24h)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

The product has been classified according to the legislation in force.

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

Health Hazards

Skin irritation	Category 2	H315: Causes skin irritation.
Serious eye damage	Category 1	H318: Causes serious eye damage.
Skin sensitizer	Category 1	H317: May cause an allergic skin reaction.

Toxic to reproduction	Category 1B	H360FD: May damage fertility. May damage the unborn child.
Specific Target Organ Toxicity - Single Exposure	Category 3	H335: May cause respiratory irritation.
Environmental Hazards		
Chronic hazards to the aquatic environment	Category 3	H412: Harmful to aquatic life with long lasting effects.

2.2 Label Elements

Contains: ethoxylated trimethylolpropane triacrylate
2-(2-Vinyloxyethoxy) ethyl acrylate
Oxybis(methyl-2,1-ethanediyl) diacrylate
4-(1,1-Dimethylethyl)cyclohexyl acrylate
2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one

Signal Words: Danger

Hazard Statement(s):
H315: Causes skin irritation.
H317: May cause an allergic skin reaction.
H318: Causes serious eye damage.
H335: May cause respiratory irritation.
H360FD: May damage fertility. May damage the unborn child.
H412: Harmful to aquatic life with long lasting effects.

Precautionary Statements

Prevention:
P201: Obtain special instructions before use.
P261: Avoid breathing dust/fume/gas/mist/vapors/spray.
P273: Avoid release to the environment.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P281: Use personal protective equipment as required.

Response:
P333+P313: If skin irritation or rash occurs: Get medical advice/attention.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310: Immediately call a POISON CENTER/doctor/…
P308+P313: IF exposed or concerned: Get medical advice/attention.

2.3 Other hazards

Not fulfilling PBT (persistent/bioaccumulative/toxic) criteria Not fulfilling vPvB (very persistent/very bioaccummulative) criteria

SECTION 3: Composition/information on ingredients

3.2 Mixtures

General information: No data available.

Chemical name	Concentration	CAS-No.	EC No.	REACH Registration No.	M-Factor:	Notes
ethoxylated trimethylolpropane triacrylate	20 - <50%	28961-43-5		01-2119489900-30-XXXX	No data available.	
2-(2-Vinyloxyethoxy) ethyl acrylate	10 - <20%	86273-46-3		01-2119441302-54-XXXX	No data available.	
Oxybis(methyl-2,1-ethanediyl) diacrylate	10 - <20%	57472-68-1	260-754-3	01-2119484629-21-XXXX	No data available.	
4-(1,1-Dimethylethyl) cyclohexyl acrylate	10 - <20%	84100-23-2	282-104-8	No data available.	No data available.	
2-[[(Butylamino) carbonyl]oxy]ethyl acrylate	5 - <10%	63225-53-6	264-036-0	No data available.	No data available.	
2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	5 - <10%	71868-10-5	400-600-6	01-2119472306-39	No data available.	
Hydroxycyclohexyl phenyl ketone	1 - <5%	947-19-3	213-426-9	No data available.	No data available.	
2,6-bis(1,1-dimethylethyl)-4-methyl-phenol	0.1 - <0.25%	128-37-0	204-881-4	01-2119565113-46-0000	1	#

Cetrimonium chloride	0.01 - <1%	112-02-7	203-928-6	No data available.	10	

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

Classification

Chemical name	Classification	Notes
ethoxylated trimethylolpropane triacrylate	Eye Irrit.: 2: H319 Skin Sens.: 1: H317	
2-(2-Vinyloxyethoxy) ethyl acrylate	Acute Tox.: 4: H302 Skin Sens.: 1: H317 Aquatic Chronic: 3: H412	
Oxybis(methyl-2,1-ethanediyl) diacrylate	Skin Sens.: 1: H317 Eye Dam.: 1: H318 Skin Irrit.: 2: H315	
4-(1,1-Dimethylethyl)cyclohexyl acrylate	STOT SE: 3: H335 Skin Irrit.: 2: H315 Eye Irrit.: 2: H319 Aquatic Chronic: 2: H411	Note A
2-[[(Butylamino)carbonyl]oxy]ethyl acrylate	Eye Irrit.: 2: H319 Skin Irrit.: 2: H315	
2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	Repr.: 1B: H360FD Acute Tox.: 4: H302 Aquatic Chronic: 2: H411 Aquatic Chronic: 2: H411	No data available.
Hydroxycyclohexyl phenyl ketone	No data available.	
2,6-bis(1,1-dimethylethyl)-4-methyl-phenol	Aquatic Acute: 1: H400 Aquatic Chronic: 1: H410	No data available.
Cetrimonium chloride	Acute Tox.: 4: H302 Acute Tox.: 3: H311 Skin Corr.: 1: H314 Eye Dam.: 1: H318 Aquatic Acute: 1: H400 Aquatic Chronic: 1: H410	

CLP: Regulation No. 1272/2008.

SECTION 4: First aid measures

4.1 Description of first aid measures

Inhalation: Move to fresh air.

Eye contact: Rinse immediately with plenty of water.

Skin Contact: Destroy or thoroughly clean contaminated shoes. Immediately remove contaminated clothing and shoes and wash skin with soap and plenty of water. If skin irritation or an allergic skin reaction develops, get medical attention.

Ingestion: Rinse mouth thoroughly.

4.2 Most important symptoms and effects, both acute and delayed: See section 11 of the SDS for additional information on health hazards.

4.3 Indication of any immediate medical attention and special treatment needed

Hazards:	See section 11 of the SDS for additional information on health hazards.
Treatment:	Get medical attention if symptoms occur.

SECTION 5: Firefighting measures

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

5.1 Extinguishing media

Suitable extinguishing media:	Use fire-extinguishing media appropriate for surrounding materials. Use fire-extinguishing media appropriate for surrounding materials.
Unsuitable extinguishing media:	Do not use water jet as an extinguisher, as this will spread the fire.
5.2 Special hazards arising from the substance or mixture:	During fire, gases hazardous to health may be formed.

5.3 Advice for firefighters

Special 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.

SECTION 6: Accidental release measures

6.1 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.
6.2 Environmental Precautions:	Avoid release to the environment. Prevent further leakage or spillage if safe to do so.
6.3 Methods and material for containment and cleaning up:	Stop the flow of material, if this is without risk. Absorb with sand or other inert absorbent.
6.4 Reference to other sections:	For personal protection see section 8. For waste disposal, see section 13 of the SDS.

SECTION 7: Handling and storage:

7.1 Precautions for safe 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 eyes, skin, and clothing. Wash hands thoroughly after handling.

7.2 Conditions for safe storage, including any incompatibilities: Store locked up.

7.3 Specific end use(s): Reserved for industrial and professional use.

SECTION 8: Exposure controls/personal protection

8.1 Control Parameters

Occupational Exposure Limits

Chemical name	type	Exposure Limit Values	Source
2,6-bis(1,1-dimethylethyl)-4-methyl-phenol	TWA	10 mg/m3	UK. EH40 Workplace Exposure Limits (WELs) (12 2011)

Biological Limit Values

None.

DNEL-Values

Critical component	type	Route of Exposure		Remarks
ethoxylated trimethylolpropane triacrylate	General population	Oral	1.4 mg/kg	Repeated dose toxicity
	Workers	Dermal	0.8 mg/kg	Repeated dose toxicity
	General population	Inhalation	4.9 mg/m3	Repeated dose toxicity
	General population	Dermal	0.5 mg/kg	Repeated dose toxicity
	Workers	Inhalation	16.2 mg/m3	Repeated dose toxicity
2-(2-Vinyloxyethoxy) ethyl acrylate	General population	Inhalation	0.005 mg/m3	
	General population	Oral	0.5 mg/kg	
	General population	Dermal	20 mg/kg	
Oxybis(methyl-2,1-ethanediyl) diacrylate	General population	Dermal	1.66 mg/kg	Repeated dose toxicity
	General population	Oral	2.08 mg/kg	Repeated dose toxicity
	Workers	Inhalation	24.48 mg/m3	Repeated dose toxicity
	Workers	Dermal	2.77 mg/kg	Repeated dose toxicity
	General population	Inhalation	7.24 mg/m3	Repeated dose toxicity
2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	General population	Dermal	0.1 mg/kg	Repeated dose toxicity
	Workers	Dermal	20 mg/kg	Acute toxicity
	General population	Inhalation	0.16 mg/m3	Repeated dose toxicity
	Workers	Dermal	0.1 mg/kg	Repeated dose toxicity
	General population	Dermal	0.09 mg/kg	Repeated dose toxicity
	Workers	Inhalation	0.32 mg/m3	Repeated dose toxicity
	Workers	Dermal	0.18 mg/kg	Repeated dose toxicity
	Workers	Inhalation	5.38 mg/m3	Acute toxicity
	General population	Oral	0.05 mg/kg	Repeated dose toxicity
Hydroxycyclohexyl phenyl ketone	General population	Oral	1.25 mg/kg	Repeated dose toxicity
	Workers	Dermal	2.5 mg/kg	Repeated dose toxicity
	General population	Inhalation	1.7 mg/m3	Repeated dose toxicity
	General population	Dermal	1.25 mg/kg	Repeated dose toxicity
	General population	Inhalation	1.7 mg/m3	Repeated dose toxicity

	Workers	Inhalation	7 mg/m3	Repeated dose toxicity
	Workers	Inhalation	7 mg/m3	Repeated dose toxicity
	General population	Dermal	1.25 mg/kg	Repeated dose toxicity
	General population	Oral	1.25 mg/kg	Repeated dose toxicity
	Workers	Dermal	2.5 mg/kg	Repeated dose toxicity
blue organic pigment	Workers	Inhalation	4 mg/m3	Repeated dose toxicity
	General population	Dermal	225 mg/kg	Repeated dose toxicity
	General population	Oral	45 mg/kg	Repeated dose toxicity
	Workers	Dermal	450 mg/kg	Repeated dose toxicity
2,6-bis(1,1-dimethylethyl)-4-methyl-phenol	General population	Dermal	0.25 mg/kg	Repeated dose toxicity
	Workers	Dermal	8.3 mg/kg	
	General population	Inhalation	1.74 mg/m3	
	Workers	Dermal	0.3 mg/kg	
	Workers	Dermal	0.5 mg/kg	Repeated dose toxicity
	General population	Dermal	0.17 mg/kg	
	General population	Oral	0.17 mg/kg	
	General population	Inhalation	2.5 mg/m3	
	Workers	Dermal	166 mg/kg	
	General population	Inhalation	0.86 mg/m3	Repeated dose toxicity
	General population	Dermal	100 mg/kg	
	Workers	Inhalation	3.5 mg/m3	Repeated dose toxicity
	General population	Oral	100 mg/kg	
	Workers	Inhalation	5.8 mg/m3	
	General population	Dermal	5 mg/kg	
Phenol, 4-methoxy-	Workers	Inhalation	10 mg/m3	Acute toxicity
	Workers	Inhalation	3 mg/m3	Repeated dose toxicity
Cetrimonium chloride	General population	Inhalation	0.98 mg/m3	Repeated dose toxicity
	Workers	Dermal	4.7 mg/kg	Repeated dose toxicity
	Workers	Inhalation	3.32 mg/m3	Repeated dose toxicity
octamethylcyclotetrasiloxane	Workers	Inhalation	73 mg/m3	Repeated dose toxicity
	General population	Inhalation	13 mg/m3	Repeated dose toxicity
	General population	Oral	3.7 mg/kg	Repeated dose toxicity
	General population	Inhalation	13 mg/m3	Irritating to respiratory system.
	General population	Inhalation	2.6 mg/m3	Irritating to respiratory system.
	General population	Oral	3.7 mg/kg	Repeated dose toxicity
	General population	Inhalation	13 mg/m3	Repeated dose toxicity
	Workers	Inhalation	14.6 mg/m3	Irritating to respiratory system.

PNEC-Values

Critical component	Environmental compartment		Remarks
ethoxylated trimethylolpropane triacrylate	Aquatic (marine water)	0.000195 mg/l	
	Aquatic (intermit. releases)	0.0195 mg/l	
	Aquatic (freshwater)	0.00195 mg/l	
	Sewage treatment plant	10 mg/l	
	soil	0.00587 mg/kg	

	Marine sediments	0.00082 mg/kg	
	Predator	5.6 mg/kg	
	freshwater sediment	0.0082 mg/kg	
2-(2-Vinyloxyethoxy) ethyl acrylate	Aquatic (freshwater)	0.0078 mg/l	
	Aquatic (marine water)	0.00078 mg/l	
	Sewage treatment plant	7.41 mg/l	
	Aquatic (intermit. releases)	0.068 mg/l	
	soil	0.00569 mg/kg	
	freshwater sediment	0.012 mg/kg	
Oxybis(methyl-2,1-ethanediyl) diacrylate	soil	0.0013 mg/kg	
	Sewage treatment plant	100 mg/l	
	Aquatic (marine water)	0.00034 mg/l	
	Aquatic (intermit. releases)	0.034 mg/l	
	freshwater sediment	0.00884 mg/kg	
	Aquatic (freshwater)	0.0034 mg/l	
Hydroxycyclohexyl phenyl ketone	soil	0.0284 mg/kg	
	Aquatic (marine water)	0.00144 mg/l	
	Marine sediments	0.0186 mg/kg	
	Sewage treatment plant	10 mg/l	
	Aquatic (intermit. releases)	0.144 mg/l	
	Aquatic (freshwater)	0.0144 mg/l	
	freshwater sediment	0.186 mg/kg	
blue organic pigment	soil	1 mg/kg	
	freshwater sediment	10 mg/kg	
	Marine sediments	1 mg/kg	
2,6-bis(1,1-dimethylethyl)-4-methyl-phenol	Aquatic (marine water)	0.0041 mg/l	
	Aquatic (freshwater)	0.1 mg/l	
	soil	1.04 mg/kg	
	Predator	8.33 mg/kg	
	Aquatic (marine water)	0.01 mg/l	
	Predator	16.7 mg/kg	
	Aquatic (intermit. releases)	1 mg/l	
	Marine sediments	0.731 mg/kg	
	Sewage treatment plant	10 mg/l	
	Sewage treatment plant	100 mg/l	
	freshwater sediment	0.731 mg/kg	
	Sewage treatment plant	0.17 mg/l	

	freshwater sediment	1.29 mg/kg	
	soil	0.35 mg/kg	
	Aquatic (freshwater)	0.0041 mg/l	
Phenol, 4-methoxy-	freshwater sediment	0.125 mg/kg	
	Aquatic (freshwater)	0.0136 mg/l	
	Aquatic (marine water)	0.00136 mg/l	
	Sewage treatment plant	10 mg/l	
	soil	0.017 mg/kg	
	Marine sediments	0.0125 mg/kg	
Cetrimonium chloride	soil	7 mg/kg	
	Aquatic (intermit. releases)	0.0008 mg/l	
	Sewage treatment plant	0.4 mg/l	
	Aquatic (marine water)	0.000068 mg/l	
	freshwater sediment	9.27 mg/kg	
	Aquatic (freshwater)	0.00068 mg/l	
	Marine sediments	0.927 mg/kg	
octamethylcyclotetrasiloxane	freshwater sediment	0.59 mg/kg	
	Predator	1.7 mg/kg	
	Aquatic (freshwater)	0.44 µg/l	
	Sewage treatment plant	10 mg/l	
	soil	0.15 mg/kg	
	Marine sediments	0.059 mg/kg	
	Aquatic (marine water)	0.044 µg/l	

8.2 Exposure controls

Appropriate Engineering Controls: Provide adequate ventilation.

Individual protection measures, such as personal protective equipment

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

Eye/face protection: Safety goggles. EN 166.

Skin protection

Hand Protection: Protective gloves should be used if there is a risk of direct contact or splash.(EN374) Chemical resistant gloves required for prolonged or repeated contact. Butyl rubber. Glove thickness: > 0.70 mm Break-through time: > 480 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.

Other:	Safety clothes : long sleeved clothing EN13688
Respiratory Protection:	In case of inadequate ventilation use suitable respirator (EN14387). Seek advice from local supervisor.
Hygiene measures:	Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Contaminated work clothing should not be allowed out of the workplace. Avoid contact with skin. Observe good industrial hygiene practices.
Environmental Controls:	Do not empty into drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	
Physical state:	liquid
Form:	liquid
Color:	Cyan
Odor:	Sweetish
Odor Threshold:	No data available.
pH:	No data available.
Freezing point:	< 0 °C
Boiling Point:	> 100 °C
Flash Point:	> 100 °C
Evaporation Rate:	No data available.
Flammability (solid, gas):	No data available.
Flammability Limit - Upper (%):	No data available.
Flammability Limit - Lower (%):	No data available.
Vapor pressure:	No data available.
Vapor density (air=1):	No data available.
Relative density:	1.06
Solubility(ies)	
Solubility in Water:	No data available.
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Autoignition Temperature:	No data available.
Decomposition Temperature:	No data available.
Viscosity:	No data available.
Explosive properties:	No data available.
Oxidizing properties:	No data available.

9.2 Other information

VOC Content:	EC Directive 1999/13: 0.02 g/l ~0 % (calculated) EC Directive 2004/42: 373.12 g/l ~37.31 % (calculated)

SECTION 10: Stability and reactivity

10.1 Reactivity:	Material is stable under normal conditions.
10.2 Chemical Stability:	Material is stable under normal conditions.
10.3 Possibility of hazardous reactions:	No data available.
10.4 Conditions to avoid:	Avoid heat or contamination.
10.5 Incompatible Materials:	No data available.
10.6 Hazardous Decomposition Products:	By heating and fire, harmful vapors/gases may be formed.

SECTION 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.
Ingestion:	May be ingested by accident. Ingestion may cause irritation and malaise.
Skin Contact:	May cause an allergic skin reaction.
Eye contact:	Eye contact is possible and should be avoided.

11.1 Information on toxicological effects

Acute toxicity

Oral

Product:	ATEmix: 7,476.69 mg/kg

Specified substance(s)

ethoxylated trimethylolpropane triacrylate	LD 50 (Rat): > 2,000 mg/kg
2-(2-Vinyloxyethoxy) ethyl acrylate	LD 50 (Rat): 1,790 mg/kg
Oxybis(methyl-2,1-ethanediyl) diacrylate	LD 50 (Rat): 4,626 mg/kg
4-(1,1-Dimethylethyl)cyclohexyl acrylate	LD 50 (Rat): > 2,000 mg/kg
2-[[(Butylamino)carbonyl]oxy]ethyl acrylate	LD 50 (Rat): > 2,000 mg/kg
2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	LD 50 (Rat): 1,984 mg/kg
Hydroxycyclohexyl	LD 50 (Rat): > 2,500 mg/kg

phenyl ketone	
2,6-bis(1,1-dimethylethyl)-4-methyl-phenol	LD 50 (Rat): > 6,000 mg/kg
Cetrimonium chloride	LD 50 (Rat): 861 mg/kg

Dermal

Product: Not classified for acute toxicity based on available data.

Specified substance(s)

ethoxylated trimethylolpropane triacrylate	LD 50 (Rabbit): > 13,200 mg/kg
2-(2-Vinyloxyethoxy) ethyl acrylate	LD 50 (Rat): > 2,000 mg/kg
Oxybis(methyl-2,1-ethanediyl) diacrylate	LD 50 (Rabbit): > 2,000 mg/kg
4-(1,1-Dimethylethyl)cyclohexyl acrylate	No data available.
2-[[(Butylamino)carbonyl]oxy]ethyl acrylate	No data available.
2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	LD 50: > 2,000 mg/kg
Hydroxycyclohexyl phenyl ketone	LD 50 (Rat): > 5,000 mg/kg
2,6-bis(1,1-dimethylethyl)-4-methyl-phenol	LD 50 (Rat): > 2,000 mg/kg
Cetrimonium chloride	LD 50 (Rabbit): 1,900 mg/kg

Inhalation

Product: ATEmix76.67 mg/l Dusts, mists and fumes

Specified substance(s)

ethoxylated trimethylolpropane triacrylate	No data available.
2-(2-Vinyloxyethoxy) ethyl acrylate	LC 50 (Rat, 4 h): > 5.04 mg/l
Oxybis(methyl-2,1-ethanediyl) diacrylate	No data available.
4-(1,1-Dimethylethyl)cyclohexyl acrylate	No data available.

2-[[(Butylamino)carbonyl]oxy]ethyl acrylate	No data available.
2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	No data available.
Hydroxycyclohexyl phenyl ketone	LC 50 (Rat, 4 h): > 1,000 mg/m3
2,6-bis(1,1-dimethylethyl)-4-methyl-phenol	No data available.
Cetrimonium chloride	No data available.

Repeated dose toxicity

Product: No data available.

Specified substance(s)

ethoxylated trimethylolpropane triacrylate	NOAEL (Rat(Female, Male), Oral, 28 - 52 d): 250 mg/kg NOAEL (Mouse, Rat(Female, Male), Dermal, 16 d): >= 200 mg/kg NOAEL (Mouse, Rat(Female, Male), Dermal, 16 d): 25 mg/kg
2-(2-Vinyloxyethoxy) ethyl acrylate	NOAEL (Rat(Female, Male), Oral, 28 d): 160 mg/kg
Oxybis(methyl-2,1-ethanediyl) diacrylate	NOAEL (Rat(Female, Male), Oral, 28 - 52 d): 250 mg/kg
4-(1,1-Dimethylethyl)cyclohexyl acrylate	No data available.
2-[[(Butylamino)carbonyl]oxy]ethyl acrylate	No data available.
2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	NOAEL (Rat, Oral, 90 d): 10 mg/kg NOAEL (Rat, Oral, 90 d): 75 mg/kg
Hydroxycyclohexyl phenyl ketone	NOAEL (Rat(Female, Male), Oral, 28 d): 50 mg/kg NOAEL (Rat(Female, Male), Oral, 28 d): 300 mg/kg NOAEL (Rat(Female, Male), Oral, 91 - 92 d): 300 mg/kg
2,6-bis(1,1-dimethylethyl)-4-methyl-phenol	NOAEL (Rat(Male), Oral, 1.25 - 22.75 Months): 25 mg/kg
Cetrimonium chloride	NOAEL (Rat(Female, Male), Oral, 90 d): 113 mg/kg NOAEL (Rat(Female, Male), Oral, 90 d): 22 mg/kg NOAEL (Rabbit(Female, Male), Dermal, 6.5 - 7 h): 10 mg/kg NOAEL (Rat(Female, Male), Oral, 28 d): 300 mg/kg

Skin Corrosion/Irritation:

Product: Causes skin irritation.

Specified substance(s)

ethoxylated trimethylolpropane triacrylate	in vivo (Rabbit): Not irritating

2-(2-Vinyloxyethoxy) ethyl acrylate	in vivo (Rabbit): Not irritating
Oxybis(methyl-2,1-ethanediyl) diacrylate	in vivo (Rabbit): Category 2
4-(1,1-Dimethylethyl)cyclohexyl acrylate	Draize (Rabbit): Irritating to skin.
2-[[(Butylamino)carbonyl]oxy]ethyl acrylate	Irritating to skin.
2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	No data available.
Hydroxycyclohexyl phenyl ketone	in vivo (Rabbit): Not irritating in vivo (Rabbit): Not irritating in vivo (Rabbit): Not irritating in vivo (Rabbit): Not irritating in vivo (Rabbit): Not irritating in vivo (Rabbit): Not irritating in vivo (Rabbit): Not irritating in vivo (Rabbit): Not irritating in vivo (Rabbit): Not irritating in vivo (Rabbit): Not irritating in vivo (Rabbit): Not irritating
2,6-bis(1,1-dimethylethyl)-4-methyl-phenol	in vivo (Rabbit): Not irritating
Cetrimonium chloride	Irritating

Serious Eye Damage/Eye Irritation:

Product: Causes serious eye damage.

Specified substance(s)

ethoxylated trimethylolpropane triacrylate	in vivo (Rabbit, 24 - 72 hrs): Irritating
2-(2-Vinyloxyethoxy) ethyl acrylate	in vivo (Rabbit): Not irritating EU
Oxybis(methyl-2,1-ethanediyl) diacrylate	in vivo (Rabbit, 24 - 72 hrs): Category 1 OECD GHS
4-(1,1-Dimethylethyl)cyclohexyl acrylate	Draize (Rabbit): Irritating to eyes.
2-[[(Butylamino)carbonyl]oxy]ethyl acrylate	Causes serious eye irritation.

2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	in vivo (24 - 72 hrs): Not an irritant EU
Hydroxycyclohexyl phenyl ketone	in vivo (Rabbit, 1 - 7 d): Not irritating EU
2,6-bis(1,1-dimethylethyl)-4-methyl-phenol	in vivo (Rabbit, 24 - 72 hrs): Not irritating EU
Cetrimonium chloride	Irritating

Respiratory or Skin Sensitization:

Product: May cause an allergic skin reaction.

Specified substance(s)

ethoxylated trimethylolpropane triacrylate	No data available.
2-(2-Vinyloxyethoxy) ethyl acrylate	No data available.
Oxybis(methyl-2,1-ethanediyl) diacrylate	No data available.
4-(1,1-Dimethylethyl)cyclohexyl acrylate	Prolonged or repeated contact may cause skin sensitization in susceptible individuals.
2-[[(Butylamino)carbonyl]oxy]ethyl acrylate	No data available.
2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	No data available.
Hydroxycyclohexyl phenyl ketone	No data available.
2,6-bis(1,1-dimethylethyl)-4-methyl-phenol	No data available.
Cetrimonium chloride	No data available.

Germ Cell Mutagenicity

In vitro

Product: No data available.

Specified substance(s)

ethoxylated trimethylolpropane triacrylate	No data available.
2-(2-Vinyloxyethoxy) ethyl acrylate	No data available.

Oxybis(methyl-2,1-ethanediyl) diacrylate	No data available.
4-(1,1-Dimethylethyl)cyclohexyl acrylate	No data available.
2-[[(Butylamino)carbonyl]oxy]ethyl acrylate	No data available.
2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	No data available.
Hydroxycyclohexyl phenyl ketone	No data available.
2,6-bis(1,1-dimethylethyl)-4-methyl-phenol	No data available.
Cetrimonium chloride	No data available.

In vivo

Product:	No data available.

Specified substance(s)

ethoxylated trimethylolpropane triacrylate	No data available.
2-(2-Vinyloxyethoxy) ethyl acrylate	No data available.
Oxybis(methyl-2,1-ethanediyl) diacrylate	No data available.
4-(1,1-Dimethylethyl)cyclohexyl acrylate	No data available.
2-[[(Butylamino)carbonyl]oxy]ethyl acrylate	No data available.
2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	No data available.
Hydroxycyclohexyl phenyl ketone	No data available.
2,6-bis(1,1-dimethylethyl)-4-methyl-phenol	No data available.
Cetrimonium chloride	No data available.

Carcinogenicity

Product:	No data available.

Specified substance(s)

ethoxylated trimethylolpropane triacrylate	No data available.
2-(2-Vinyloxyethoxy) ethyl acrylate	No data available.
Oxybis(methyl-2,1-ethanediyl) diacrylate	No data available.
4-(1,1-Dimethylethyl)cyclohexyl acrylate	No data available.
2-[[(Butylamino)carbonyl]oxy]ethyl acrylate	No data available.
2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	No data available.
Hydroxycyclohexyl phenyl ketone	No data available.
2,6-bis(1,1-dimethylethyl)-4-methyl-phenol	No data available.
Cetrimonium chloride	No data available.

Reproductive toxicity

Product: May damage fertility or the unborn child.

Specified substance(s)

ethoxylated trimethylolpropane triacrylate	No data available.
2-(2-Vinyloxyethoxy) ethyl acrylate	No data available.
Oxybis(methyl-2,1-ethanediyl) diacrylate	No data available.
4-(1,1-Dimethylethyl)cyclohexyl acrylate	No data available.
2-[[(Butylamino)carbonyl]oxy]ethyl acrylate	No data available.
2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	No data available.
Hydroxycyclohexyl phenyl ketone	No data available.
2,6-bis(1,1-dimethylethyl)-4-methyl-phenol	No data available.
Cetrimonium chloride	No data available.

Specific Target Organ Toxicity - Single Exposure

Product:	No data available.

Specified substance(s)

ethoxylated trimethylolpropane triacrylate	No data available.
2-(2-Vinyloxyethoxy) ethyl acrylate	No data available.
Oxybis(methyl-2,1-ethanediyl) diacrylate	No data available.
4-(1,1-Dimethylethyl)cyclohexyl acrylate	No data available.
2-[[(Butylamino)carbonyl]oxy]ethyl acrylate	No data available.
2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	No data available.
Hydroxycyclohexyl phenyl ketone	No data available.
2,6-bis(1,1-dimethylethyl)-4-methyl-phenol	No data available.
Cetrimonium chloride	No data available.

Specific Target Organ Toxicity - Repeated Exposure

Product:	No data available.

Specified substance(s)

ethoxylated trimethylolpropane triacrylate	No data available.
2-(2-Vinyloxyethoxy) ethyl acrylate	No data available.
Oxybis(methyl-2,1-ethanediyl) diacrylate	No data available.
4-(1,1-Dimethylethyl)cyclohexyl acrylate	No data available.
2-[[(Butylamino)carbonyl]oxy]ethyl acrylate	No data available.
2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	No data available.
Hydroxycyclohexyl phenyl ketone	No data available.
2,6-bis(1,1-dimethylethyl)-4-methyl-phenol	No data available.

Cetrimonium chloride	No data available.

Aspiration Hazard

Product: No data available.

Specified substance(s)

ethoxylated trimethylolpropane triacrylate	No data available.
2-(2-Vinyloxyethoxy) ethyl acrylate	No data available.
Oxybis(methyl-2,1-ethanediyl) diacrylate	No data available.
4-(1,1-Dimethylethyl)cyclohexyl acrylate	No data available.
2-[[(Butylamino)carbonyl]oxy]ethyl acrylate	No data available.
2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	No data available.
Hydroxycyclohexyl phenyl ketone	No data available.
2,6-bis(1,1-dimethylethyl)-4-methyl-phenol	No data available.
Cetrimonium chloride	No data available.

SECTION 12: Ecological information

General information: Contains a substance which causes risk of hazardous effects to the environment.

12.1 Toxicity

Acute toxicity

Fish

Product: No data available.

Specified substance(s)

ethoxylated trimethylolpropane triacrylate	LC 50 (Danio rerio, 96 h): 1.95 mg/l (Static) experimental result
2-(2-Vinyloxyethoxy) ethyl acrylate	LC 50 (Danio rerio, 96 h): 6.8 mg/l (semi-static) experimental result NOAEL (Danio rerio, 96 h): 2.2 mg/l (semi-static) experimental result
Oxybis(methyl-2,1-ethanediyl) diacrylate	LC 50 (Leuciscus idus, 96 h): 2.2 - 4.64 mg/l (Static) experimental result

4-(1,1-Dimethylethyl)cyclohexyl acrylate	No data available.
2-[[(Butylamino)carbonyl]oxy]ethyl acrylate	No data available.
2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	LC 50 (Danio rerio, 96 h): 9 mg/l (semi-static) experimental result
Hydroxycyclohexyl phenyl ketone	LC 50 (Danio rerio, 96 h): 24 mg/l (Static) experimental result
2,6-bis(1,1-dimethylethyl)-4-methyl-phenol	LC 50 (Danio rerio, 96 h): > 100 mg/l (Static) experimental result
Cetrimonium chloride	No data available.

Aquatic Invertebrates

Product:	No data available.

Specified substance(s)

ethoxylated trimethylolpropane triacrylate	EC 50 (48 h): 70.7 mg/l (Static) experimental result
2-(2-Vinyloxyethoxy) ethyl acrylate	EC 50 (48 h): 55 mg/l (Static) experimental result NOAEL (48 h): 25 mg/l (Static) experimental result
Oxybis(methyl-2,1-ethanediyl) diacrylate	EC 50 (48 h): 22.3 mg/l (Static) experimental result
4-(1,1-Dimethylethyl)cyclohexyl acrylate	No data available.
2-[[(Butylamino)carbonyl]oxy]ethyl acrylate	No data available.
2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	EC 50 (24 h): 15.3 mg/l (semi-static) experimental result
Hydroxycyclohexyl phenyl ketone	EC 50 (48 h): 53.9 mg/l (semi-static) experimental result
2,6-bis(1,1-dimethylethyl)-4-methyl-phenol	EC 50 (48 h): 0.48 mg/l (Static) experimental result
Cetrimonium chloride	No data available.

Chronic Toxicity

Fish

Product:	No data available.

Specified substance(s)

ethoxylated trimethylolpropane	No data available.

triacrylate	
2-(2-Vinyloxyethoxy) ethyl acrylate	No data available.
Oxybis(methyl-2,1-ethanediyl) diacrylate	No data available.
4-(1,1-Dimethylethyl)cyclohexyl acrylate	LC 50 (Brachidanio rerio (zebra fish), 96 h): 1 - 10 mg/l
2-[[(Butylamino)carbonyl]oxy]ethyl acrylate	No data available.
2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	No data available.
Hydroxycyclohexyl phenyl ketone	No data available.
2,6-bis(1,1-dimethylethyl)-4-methyl-phenol	No data available.
Cetrimonium chloride	No data available.

Aquatic Invertebrates

Product:	No data available.

Specified substance(s)

ethoxylated trimethylolpropane triacrylate	No data available.
2-(2-Vinyloxyethoxy) ethyl acrylate	No data available.
Oxybis(methyl-2,1-ethanediyl) diacrylate	No data available.
4-(1,1-Dimethylethyl)cyclohexyl acrylate	EC 50 (Water Flea, 48 h): 0.772 mg/l
2-[[(Butylamino)carbonyl]oxy]ethyl acrylate	No data available.
2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	No data available.
Hydroxycyclohexyl phenyl ketone	No data available.
2,6-bis(1,1-dimethylethyl)-4-methyl-phenol	No data available.
Cetrimonium chloride	No data available.

Toxicity to Aquatic Plants

Product:	No data available.

Specified substance(s)

ethoxylated trimethylolpropane triacrylate	No data available.
2-(2-Vinyloxyethoxy) ethyl acrylate	No data available.
Oxybis(methyl-2,1-ethanediyl) diacrylate	No data available.
4-(1,1-Dimethylethyl)cyclohexyl acrylate	EC50 (Alga, 96 h): 0.091 mg/l
2-[[(Butylamino)carbonyl]oxy]ethyl acrylate	No data available.
2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	No data available.
Hydroxycyclohexyl phenyl ketone	No data available.
2,6-bis(1,1-dimethylethyl)-4-methyl-phenol	No data available.
Cetrimonium chloride	No data available.

12.2 Persistence and Degradability

Biodegradation

Product:	No data available.

Specified substance(s)

ethoxylated trimethylolpropane triacrylate	No data available.
2-(2-Vinyloxyethoxy) ethyl acrylate	OECD 301D Readily biodegradable 82 %
Oxybis(methyl-2,1-ethanediyl) diacrylate	No data available.
4-(1,1-Dimethylethyl)cyclohexyl acrylate	No data available.
2-[[(Butylamino)carbonyl]oxy]ethyl acrylate	No data available.
2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	No data available.
Hydroxycyclohexyl phenyl ketone	No data available.
2,6-bis(1,1-dimethylethyl)-4-methyl-phenol	No data available.

Cetrimonium chloride	No data available.

BOD/COD Ratio

Product	No data available.

Specified substance(s)

ethoxylated trimethylolpropane triacrylate	No data available.
2-(2-Vinyloxyethoxy) ethyl acrylate	No data available.
Oxybis(methyl-2,1-ethanediyl) diacrylate	No data available.
4-(1,1-Dimethylethyl)cyclohexyl acrylate	No data available.
2-[[(Butylamino)carbonyl]oxy]ethyl acrylate	No data available.
2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	No data available.
Hydroxycyclohexyl phenyl ketone	No data available.
2,6-bis(1,1-dimethylethyl)-4-methyl-phenol	No data available.
Cetrimonium chloride	No data available.

12.3 Bioaccumulative Potential

Product:	No data available.

Specified substance(s)

ethoxylated trimethylolpropane triacrylate	No data available.
2-(2-Vinyloxyethoxy) ethyl acrylate	No data available.
Oxybis(methyl-2,1-ethanediyl) diacrylate	No data available.
4-(1,1-Dimethylethyl)cyclohexyl acrylate	No data available.
2-[[(Butylamino)carbonyl]oxy]ethyl acrylate	No data available.
2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	No data available.
Hydroxycyclohexyl phenyl ketone	No data available.

2,6-bis(1,1-dimethylethyl)-4-methyl-phenol	No data available.
Cetrimonium chloride	No data available.

12.4 Mobility in Soil: No data available.

Known or predicted distribution to environmental compartments

ethoxylated trimethylolpropane triacrylate	No data available.
2-(2-Vinyloxyethoxy) ethyl acrylate	No data available.
Oxybis(methyl-2,1-ethanediyl) diacrylate	No data available.
4-(1,1-Dimethylethyl)cyclohexyl acrylate	No data available.
2-[[(Butylamino)carbonyl]oxy] ethyl acrylate	No data available.
2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	No data available.
Hydroxycyclohexyl phenyl ketone	No data available.
2,6-bis(1,1-dimethylethyl)-4-methyl-phenol	No data available.
Cetrimonium chloride	No data available.

12.5 Results of PBT and vPvB assessment: Not fulfilling PBT (persistent/bioaccumulative/toxic) criteria Not fulfilling vPvB (very persistent/very bioaccummulative) criteria

ethoxylated trimethylolpropane triacrylate	No data available.
2-(2-Vinyloxyethoxy) ethyl acrylate	No data available.
Oxybis(methyl-2,1-ethanediyl) diacrylate	No data available.
4-(1,1-Dimethylethyl)cyclohexyl acrylate	No data available.
2-[[(Butylamino)carbonyl]oxy]ethyl acrylate	No data available.
2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	No data available.
Hydroxycyclohexyl phenyl ketone	No data available.
2,6-bis(1,1-dimethylethyl)-4-methyl-phenol	No data available.
Cetrimonium chloride	No data available.

12.6 Other Adverse Effects: Harmful to aquatic life with long lasting effects.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

General information:	Disposal considerations (including disposal of contaminated containers or packaging) Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.
Disposal methods:	Discharge, treatment, or disposal may be subject to national, state, or local laws.

SECTION 14: Transport information

ADR

14.1 UN Number:	Not regulated.
14.2 UN Proper Shipping Name:	Not regulated.
14.3 Transport Hazard Class(es)	Not regulated.
14.4 Packing Group:	Not regulated.
14.5 Environmental Hazards:	Not regulated.
14.6 Special precautions for user:	Not regulated.

RID

14.1 UN Number:	Not regulated.
14.2 UN Proper Shipping Name:	Not regulated.
14.3 Transport Hazard Class(es)	Not regulated.
14.4 Packing Group:	Not regulated.
14.5 Environmental Hazards:	Not regulated.
14.6 Special precautions for user:	Not regulated.

IMDG

14.1 UN Number:	Not regulated.
14.2 UN Proper Shipping Name:	Not regulated.
14.3 Transport Hazard Class(es)	Not regulated.
14.4 Packing Group:	Not regulated.
14.5 Environmental Hazards:	Not regulated.
14.6 Special precautions for user:	Not regulated.

IATA

14.1 UN Number:	Not regulated.
14.2 UN Proper Shipping Name:	Not regulated.
14.3 Transport Hazard Class(es)	Not regulated.
14.4 Packing Group:	Not regulated.
14.5 Environmental Hazards:	Not regulated.
14.6 Special precautions for user:	Not regulated.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code: not applicable.

SECTION 15: Regulatory information

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

EU Regulations

Regulation (EC) No. 2037/2000 Substances that deplete the ozone layer: none

Regulation (EC) No. 850/2004 on persistent organic pollutants: none

Regulation (EC) No. 689/2008 Import and export of dangerous chemicals: none

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorisation, as amended: none

Regulation (EC) No. 1907/2006 Annex XVII Substances subject to restriction on marketing and use: none

Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens and mutagens at work.: none

Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breast feeding.: none

Directive 96/82/EC (Seveso III): on the control of major accident hazards involving dangerous substances:

Chemical name	CAS-No.	Concentration
4-(1,1-Dimethylethyl)cyclohexyl acrylate	84100-23-2	10 - 20%
2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	71868-10-5	1.0 - 10%

EU. Regulation No. 166/2006 PRTR (Pollutant Release and Transfer Registry), Annex II: Pollutants:

Chemical name	CAS-No.	Concentration
blue organic pigment	147-14-8	0.1 - 1.0%

Directive 98/24/EC on the protection of workers from the risks related to chemical agents at work:

Chemical name	CAS-No.	Concentration
4-(1,1-Dimethylethyl)cyclohexyl acrylate	84100-23-2	10 - 20%
2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	71868-10-5	1.0 - 10%
octamethylcyclotetrasiloxane	556-67-2	0 - <0.1%
Phenol, 4-methoxy-	150-76-5	0 - <0.1%

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

SECTION 16: Other information

Revision Information: Not relevant.Not relevant.

Key literature references and sources for data: Safety Data Sheet from the supplier.
ECHA

Wording of the H-statements in section 2 and 3

H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H316	Causes mild skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H360FD	May damage fertility. May damage the unborn child.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Training information: No data available.

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

Skin Irrit. 2, H315

Eye Dam. 1, H318

Skin Sens. 1, H317

Repr. 1B, H360FD

STOT SE 3, H335

Aquatic Chronic 3, H412

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Disclaimer: This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.