

# 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:** ANAPURNA 1500 RTR CYAN INK      **Product No.:** 000001015732

### 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 1A	H317: May cause an allergic skin reaction.

Specific Target Organ Toxicity - Single Exposure	Category 3	H335: May cause respiratory irritation.
Specific Target Organ Toxicity - Repeated Exposure	Category 2	H373: May cause damage to organs through prolonged or repeated exposure.

**Environmental Hazards**

Chronic hazards to the aquatic environment	Category 2	H411: Toxic to aquatic life with long lasting effects.
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**2.2 Label Elements**

**Contains:**

Isobornyl acrylate  
 Phenoxyethylacrylate  
 Oxybis(methyl-2,1-ethanediyl) diacrylate  
 N-vinyl caprolactam  
 Isodecyl acrylate  
 Hexamethylene diacrylate



**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.  
 H373: May cause damage to organs through prolonged or repeated exposure.  
 H411: Toxic to aquatic life with long lasting effects.

**Target Organs:**

Liver

**Precautionary Statement**

**Prevention:**

P260: Do not breathe dust/fume/gas/mist/vapors/spray.  
 P280: Wear protective gloves/protective clothing/eye protection/face protection.  
 P273: Avoid release to the environment.

**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/...

**2.3 Other hazards**

Not fulfilling PBT (persistent/bioaccumulative/toxic) criteria Not fulfilling vPvB (very persistent/very bioaccumulative) 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
Isobornyl acrylate	10 - <20%	5888-33-5	227-561-6	01-2119957862-25-XXXX	No data available.	
Phenoxyethyl acrylate	10 - <20%	48145-04-6	256-360-6	01-2119980532-35-XXXX	No data available.	
Tetrahydrofurfuryl acrylate	10 - <20%	2399-48-6	219-268-7	No data available.	No data available.	
Oxybis(methyl-2,1-ethanediyl) diacrylate	10 - <20%	57472-68-1	260-754-3	01-2119484629-21-XXXX	No data available.	
N-vinyl caprolactam	5 - <10%	2235-00-9	218-787-6	01-2119977109-27-XXXX	No data available.	
2-Propenoic acid, 1-6-hexanediyl ester, polymer with 2-aminoethanol	5 - <10%	67906-98-3		No data available.	No data available.	
Isodecyl acrylate	5 - <10%	1330-61-6	215-542-5	01-2119964031-47-XXXX	No data available.	
Hexamethylene diacrylate	1 - <5%	13048-33-4	235-921-9	01-2119484737-22-XXXX	No data available.	
Phosphine oxide, diphenyl(2,4,6	1 - <3%	75980-60-8	278-355-8	01-2119972295-29-XXXX	No data available.	

- trimethylbenzo yl)-						
Penyl bis(2,4,6- trimethylbenzo yl)-phosphine oxide	1 - <5%	162881-26-7	423-340-5	No data available.	No data available.	

\* 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
Isobornyl acrylate	STOT SE: 3: H335 Aquatic Chronic: 2: H411 Skin Irrit.: 2: H315 Eye Irrit.: 2: H319	Note A
Phenoxyethylacrylate	Skin Sens.: 1A: H317 Aquatic Chronic: 2: H411	
Tetrahydrofurfuryl acrylate	Skin Irrit.: 2: H315 Eye Irrit.: 2: H319	
Oxybis(methyl-2,1-ethanediyl) diacrylate	Skin Sens.: 1: H317 Eye Dam.: 1: H318 Skin Irrit.: 2: H315	
N-vinyl caprolactam	Acute Tox.: 4: H302 Eye Irrit.: 2: H319 Skin Sens.: 1B: H317 STOT RE: 1: H372	
2-Propenoic acid ,1-6-hexanediyl ester, polymer with 2-aminoethanol	Skin Irrit.: 2: H315 Eye Irrit.: 2: H319	
Isodecyl acrylate	Eye Irrit.: 2: H319 Skin Irrit.: 2: H315 Aquatic Chronic: 2: H411 STOT SE: 3: H335	Note A
Hexamethylene diacrylate	Skin Sens.: 1: H317 Eye Irrit.: 2: H319 Skin Irrit.: 2: H315	
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	Repr.: 2: H361f Aquatic Chronic: 2: H411	No data available.
Penyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	Skin Sens.: 1: H317 Aquatic Chronic: 4: H413	No data available.

CLP: Regulation No. 1272/2008.

## SECTION 4: First aid measures

**General:** Get medical attention if symptoms occur.

### 4.1 Description of first aid measures

**Inhalation:** Move to fresh air.

**Eye contact:** Rinse immediately with plenty of water.

**Skin Contact:** Remove contaminated clothing and wash the skin thoroughly with soap and water after work.

**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:** No data available.

**Treatment:** Skin and/or eye contact. Flush thoroughly with water for at least 15 minutes. Get medical assistance.

**SECTION 5: Firefighting measures**

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

**5.1 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.

**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:** Use personal protective equipment. Put on protective equipment before entering danger area.

**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:** Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

**7.2 Conditions for safe storage, including any incompatibilities:** Store away from incompatible materials.

**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

None of the components have assigned exposure limits.

#### Biological Limit Values

None.

#### DNEL-Values

Critical component	type	Route of Exposure		Remarks
Isobornyl acrylate	General population	Oral	0.83 mg/kg	Repeated dose toxicity
	General population	Dermal	0.83 mg/kg	Repeated dose toxicity
	Workers	Dermal	1.39 mg/kg	Repeated dose toxicity
Phenoxyethylacrylate	Workers	Dermal	1.5 mg/kg	Repeated dose toxicity
	Workers	Inhalation	77 mg/m <sup>3</sup>	Repeated dose toxicity
	Workers	Inhalation	10 mg/m <sup>3</sup>	Repeated dose toxicity
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/m <sup>3</sup>	Repeated dose toxicity
	Workers	Dermal	2.77 mg/kg	Repeated dose toxicity
Isodecyl acrylate	General population	Inhalation	7.24 mg/m <sup>3</sup>	Repeated dose toxicity
	Workers	Dermal	370 µg/cm <sup>2</sup>	Skin sensitization
	Workers	Inhalation	37.5 mg/m <sup>3</sup>	Irritating to respiratory system.
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	Workers	Dermal	1 mg/kg	Repeated dose toxicity
	Workers	Inhalation	3.5 mg/m <sup>3</sup>	Repeated dose toxicity
29H,31H-Phthalocyaninato(2-)-N29,N30,N31,N32 copper	Workers	Inhalation	4 mg/m <sup>3</sup>	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
Penyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	Workers	Inhalation	7.84 mg/m <sup>3</sup>	Repeated dose toxicity
	General population	Inhalation	3.92 mg/m <sup>3</sup>	Repeated dose toxicity
	Workers	Inhalation	7.84 mg/m <sup>3</sup>	
	General population	Oral	1.7 mg/kg	Repeated dose toxicity

	Workers	Dermal	3.3 mg/kg	Repeated dose toxicity
	General population	Inhalation	1.93 mg/m3	
	General population	Oral	1.67 mg/kg	Repeated dose toxicity
	General population	Dermal	1.67 mg/kg	
	General population	Inhalation	1.9 mg/m3	Repeated dose toxicity
	Workers	Dermal	3.33 mg/kg	Repeated dose toxicity
	Workers	Dermal	3.33 mg/kg	Repeated dose toxicity
	General population	Dermal	1.67 mg/kg	Repeated dose toxicity
	General population	Dermal	1.67 mg/kg	Repeated dose toxicity
	Workers	Dermal	3.33 mg/kg	
	General population	Oral	1.67 mg/kg	Repeated dose toxicity
	General population	Inhalation	3.92 mg/m3	Repeated dose toxicity
	General population	Dermal	1.7 mg/kg	Repeated dose toxicity
	Workers	Inhalation	7.84 mg/m3	Repeated dose toxicity
	General population	Inhalation	1.93 mg/m3	Repeated dose toxicity
	General population	Oral	1.67 ng/kg	
	Workers	Inhalation	7.8 mg/m3	Repeated dose toxicity
#-caprolactam	General population	Inhalation	5 mg/m3	Irritating to respiratory system.
	General population	Oral	8.55 mg/kg	Repeated dose toxicity
	General population	Inhalation	2.5 mg/m3	Irritating to respiratory system.
	Workers	Inhalation	10 mg/m3	Irritating to respiratory system.
	Workers	Inhalation	5 mg/m3	Irritating to respiratory system.
2,6-bis(1,1-dimethylethyl)-4-methylphenol	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	
mequinol; 4-methoxyphenol; hydroquinone monomethyl ether	Workers	Inhalation	10 mg/m3	Acute toxicity
	Workers	Inhalation	3 mg/m3	Repeated dose toxicity

**PNEC-Values**

Critical component	Environmental compartment		Remarks
Isobornyl acrylate	Aquatic (freshwater)	0.00092 mg/l	
	soil	0.0285 mg/kg	

	freshwater sediment	0.145 mg/kg	
	Marine sediments	0.0145 mg/kg	
	Sewage treatment plant	2 mg/l	
	Aquatic (marine water)	0.000092 mg/l	
	Aquatic (intermit. releases)	0.00704 mg/l	
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	
Isodecyl acrylate	freshwater sediment	0.904 mg/kg	
	Marine sediments	0.0904 mg/kg	
	Aquatic (intermit. releases)	13 µg/l	
	Sewage treatment plant	2.3 mg/l	
	Aquatic (marine water)	0.13 µg/l	
	soil	0.18 mg/kg	
	Aquatic (freshwater)	1.3 µg/l	
Hexamethylene diacrylate	Aquatic (freshwater)	0.0015 mg/l	
	Marine sediments	0.00243 mg/kg	
	Aquatic (marine water)	0.00015 mg/l	
	soil	0.00397 mg/kg	
	Sewage treatment plant	2.7 mg/l	
	freshwater sediment	0.0243 mg/kg	
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	soil	0.0557 mg/kg	
	Fresh water	0.00353 mg/l	
	Marine sediments	0.029 mg/kg	
	Marine water	0.00353 mg/l	
	Aquatic (intermit. releases)	0.0353 mg/l	
	Intermittent release	0.0353 mg/l	
	Aquatic (marine water)	0.000353 mg/l	
	Sediment-fresh water	0.29 mg/kg	
	freshwater sediment	0.29 mg/kg	
	Soil	0.0557 mg/kg	
	Aquatic (freshwater)	0.00353 mg/l	



29H,31H-Phthalocyaninato(2-)-N29,N30,N31,N32 copper	soil	1 mg/kg	
	freshwater sediment	10 mg/kg	
	Marine sediments	1 mg/kg	
Penyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	Aquatic (intermit. releases)	0.8 µg/l	
	Aquatic (freshwater)	0.8 µg/l	
	Sewage treatment plant	1 mg/l	
	Aquatic (intermit. releases)	1 µg/l	
	Aquatic (marine water)	1 µg/l	
	Aquatic (marine water)	0.8 µg/l	
	Aquatic (freshwater)	0.8 µg/l	
	Aquatic (freshwater)	1 µg/l	
#-caprolactam	soil	2.55 mg/kg	
	Sewage treatment plant	1737 mg/l	
	Aquatic (marine water)	0.2 mg/l	
	Aquatic (freshwater)	2 mg/l	
	freshwater sediment	18.7 mg/kg	
	Aquatic (intermit. releases)	1 mg/l	
2,6-bis(1,1-dimethylethyl)-4-methylphenol	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	
mequinol; 4-methoxyphenol; hydroquinone monomethyl ether	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	

## 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. Follow training instructions when handling this material.

**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:** Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned.

**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:** Characteristic

<b>Odor Threshold:</b>	No data available.
<b>pH:</b>	No data available.
<b>Freezing point:</b>	> 0 °C
<b>Boiling Point:</b>	> 100 °C
<b>Flash Point:</b>	> 100 °C
<b>Evaporation Rate:</b>	No data available.
<b>Flammability (solid, gas):</b>	No data available.
<b>Flammability Limit - Upper (%):</b>	No data available.
<b>Flammability Limit - Lower (%):</b>	No data available.
<b>Vapor pressure:</b>	No data available.
<b>Vapor density (air=1):</b>	No data available.
<b>Relative density:</b>	1.055
<b>Solubility(ies)</b>	
<b>Solubility in Water:</b>	No data available.
<b>Solubility (other):</b>	No data available.
<b>Partition coefficient (n-octanol/water):</b>	No data available.
<b>Autoignition Temperature:</b>	No data available.
<b>Decomposition Temperature:</b>	No data available.
<b>Viscosity:</b>	No data available.
<b>Explosive properties:</b>	No data available.
<b>Oxidizing properties:</b>	No data available.

## 9.2 Other information

**VOC Content:** EC Directive 2004/42: 485.56 g/l ~48.56 % (calculated)

## SECTION 10: Stability and reactivity

<b>10.1 Reactivity:</b>	Material is stable under normal conditions.
<b>10.2 Chemical Stability:</b>	Material is stable under normal conditions.
<b>10.3 Possibility of hazardous reactions:</b>	No data available.
<b>10.4 Conditions to avoid:</b>	Avoid heat or contamination.
<b>10.5 Incompatible Materials:</b>	No data available.
<b>10.6 Hazardous Decomposition Products:</b>	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:** Moderately irritating to skin with prolonged exposure.

**Eye contact:** Eye contact is possible and should be avoided.

### 11.1 Information on toxicological effects

#### Acute toxicity

##### Oral

**Product:** ATEmix: 10,549.88 mg/kg

##### Specified substance(s)

Isobornyl acrylate LD 50 (Rat): 4,350 mg/kg

Phenoxyethylacrylate LD 50 (Rat): 5,000 mg/kg

Tetrahydrofurfuryl acrylate No data available.

Oxybis(methyl-2,1-ethanediyl) diacrylate LD 50 (Rat): 4,626 mg/kg

N-vinyl caprolactam LD 50 (Rat): 1,400 mg/kg

2-Propenoic acid ,1-6-hexanediyl ester, polymer with 2-aminoethanol No data available.

Isodecyl acrylate LD 50 (Rat): 4,435 mg/kg

Hexamethylene diacrylate LD 50 (Rat): > 5,000 mg/kg

Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)- LD 50 (Rat): > 5,000 mg/kg

Penyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide LD 50 (Rat): > 2,000 mg/kg

##### Dermal

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

##### Specified substance(s)

Isobornyl acrylate LD 50 (Rabbit): > 3,000 mg/kg

Phenoxyethylacrylate No data available.

Tetrahydrofurfuryl acrylate No data available.

Oxybis(methyl-2,1-ethanediyl) diacrylate LD 50 (Rabbit): > 2,000 mg/kg

N-vinyl caprolactam LD 50 (Rat): > 2,000 mg/kg

2-Propenoic acid ,1-6-hexanediyl ester, polymer with 2-aminoethanol Isodecyl acrylate	No data available.  LD 50 (Rabbit): 7,522 mg/kg
Hexamethylene diacrylate	LD 50 (Rabbit): 3,650 mg/kg
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-Penyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	LD 50 (Rat): > 2,000 mg/kg  LD 50 (Rat): > 2,000 mg/kg

**Inhalation**

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

**Specified substance(s)**

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	LC 50 (Rat, 8 h): > 1.6 mg/l
2-Propenoic acid ,1-6-hexanediyl ester, polymer with 2-aminoethanol Isodecyl acrylate	No data available.  LC 50 (Rat, 8 h): > 1.19 mg/l
Hexamethylene diacrylate	LC 0 (Rat, 7 h): 0.41 mg/l
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-Penyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	No data available.  No data available.

**Repeated dose toxicity**

**Product:** No data available.

**Specified substance(s)**

Isobornyl acrylate	NOAEL (Rat(Female, Male), Inhalation): 0.226 mg/l NOAEL (rat(male/female)): 100 mg/kg NOAEL (Rat(Female, Male), Oral, 28 - 53 d): 100 mg/kg NOAEL (Rat(Female, Male), Inhalation): 0.075 mg/l LOAEL (Rat(Female, Male), Inhalation): 0.753 mg/l
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Phenoxyethylacrylate	NOAEL (Rat(Female, Male), Oral, 2 Weeks): 500 mg/kg
Tetrahydrofurfuryl acrylate	No data available.
Oxybis(methyl-2,1-ethanediyl) diacrylate	NOAEL (Rat(Female, Male), Oral, 28 - 52 d): 250 mg/kg
N-vinyl caprolactam	NOAEL (Rat(Female, Male), Inhalation): 0.058 mg/l
2-Propenoic acid ,1-6-hexanediyl ester, polymer with 2-aminoethanol	No data available.
Isodecyl acrylate	NOAEL (Rat(Female, Male), Inhalation): 0.226 mg/l NOAEL (Rat(Female, Male), Inhalation): 0.075 mg/l LOAEL (Rat(Female, Male), Inhalation): 0.226 mg/l LOAEL (Rat(Female, Male), Inhalation): 0.753 mg/l NOAEL (Rat(Female, Male), Oral, 28 - 52 d): 250 mg/kg
Hexamethylene diacrylate	LOAEL (Rat(Female, Male), Oral, 28 d): 250 mg/kg
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	LOAEL (Rat(Female, Male), Oral, 64 - 91 d): 300 mg/kg NOAEL (Rat(Female, Male), Oral, 64 - 91 d): 100 mg/kg NOAEL (Rat(Female, Male), Oral, 28 d): 50 mg/kg NOAEL (Rat(Female, Male), Oral): 300 mg/kg
Penyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	

**Skin Corrosion/Irritation:**

**Product:** Causes skin irritation.

**Specified substance(s)**

Isobornyl acrylate	No data available.
Phenoxyethylacrylate	No data available.
Tetrahydrofurfuryl acrylate	No data available.
Oxybis(methyl-2,1-ethanediyl) diacrylate	in vivo (Rabbit): Category 2
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.
Hexamethylene diacrylate	in vivo (Rabbit): Category 2
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	No data available.
Penyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	No data available.

**Serious Eye Damage/Eye Irritation:**

**Product:** Causes serious eye damage.

**Specified substance(s)**

Isobornyl acrylate	No data available.
Phenoxyethylacrylate	No data available.
Tetrahydrofurfuryl acrylate	No data available.
Oxybis(methyl-2,1-ethanediyl) diacrylate	in vivo (Rabbit, 24 - 72 hrs): Category 1 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
Hexamethylene diacrylate	Irritating
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	No data available.
Penyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	in vivo (Rabbit, 24 - 72 hrs): Not Classified EU

**Respiratory or Skin**

**Sensitization:**

**Product:** May cause an allergic skin reaction.

**Specified substance(s)**

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.
Hexamethylene diacrylate	No data available.
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	No data available.
Penyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	No data available.

**Germ Cell Mutagenicity**

**In vitro****Product:** No data available.**Specified substance(s)**

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.
Hexamethylene diacrylate	No data available.
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	No data available.
Penyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	No data available.

**In vivo****Product:** No data available.**Specified substance(s)**

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.
Hexamethylene diacrylate	No data available.
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	No data available.
Penyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	No data available.

**Carcinogenicity****Product:** No data available.**Specified substance(s)**



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.
Hexamethylene diacrylate	No data available.
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	No data available.
Penyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	No data available.

**Reproductive toxicity**

**Product:** No data available.

**Specified substance(s)**

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.
Hexamethylene diacrylate	No data available.
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	No data available.
Penyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	No data available.

**Specific Target Organ Toxicity - Single Exposure**

**Product:** No data available.

**Specified substance(s)**

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.
Hexamethylene diacrylate	No data available.
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	No data available.
Penyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	No data available.

**Specific Target Organ Toxicity - Repeated Exposure**

**Product:** No data available.

**Specified substance(s)**

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.
Hexamethylene diacrylate	No data available.
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	No data available.
Penyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	No data available.

**Target Organs:**

Liver

**Aspiration Hazard**

**Product:** No data available.

**Specified substance(s)**

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.
Hexamethylene diacrylate	No data available.
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	No data available.
Penyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	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)**

Isobornyl acrylate	No data available.
Phenoxyethylacrylate	No data available.
Tetrahydrofurfuryl acrylate	No data available.
Oxybis(methyl-2,1-ethanediyl) diacrylate	LC 50 (Leuciscus idus, 96 h): 2.2 - 4.64 mg/l (Static) experimental result
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.
Hexamethylene diacrylate	LC 50 (Leuciscus idus, 96 h): 4.6 - 10 mg/l (Static) experimental result
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	No data available.
Penyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	LC 50 (96 h): > 0.09 mg/l experimental result

**Aquatic Invertebrates**

**Product:** No data available.

**Specified substance(s)**

Isobornyl acrylate	No data available.
Phenoxyethylacrylate	No data available.
Tetrahydrofurfuryl acrylate	No data available.
Oxybis(methyl-2,1-ethanediyl) diacrylate	EC 50 (48 h): 22.3 mg/l (Static) experimental result
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.
Hexamethylene diacrylate	EC 50 (48 h): 2.6 mg/l (Static) experimental result
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	No data available.
Penyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	EC 50 (48 h): > 1.175 mg/l experimental result

## Chronic Toxicity

### Fish

**Product:** No data available.

#### Specified substance(s)

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.
Hexamethylene diacrylate	No data available.
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	No data available.
Penyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	No data available.

### Aquatic Invertebrates

**Product:** No data available.

#### Specified substance(s)

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.
Hexamethylene diacrylate	No data available.
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	No data available.
Penyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	No data available.

**Toxicity to Aquatic Plants**

**Product:** No data available.

**Specified substance(s)**

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.
Hexamethylene diacrylate	No data available.
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	No data available.
Penyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	No data available.

**12.2 Persistence and Degradability**

**Biodegradation**

**Product:** No data available.

**Specified substance(s)**

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.
Hexamethylene diacrylate	No data available.
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	No data available.
Penyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	No data available.

**BOD/COD Ratio**

**Product** No data available.

**Specified substance(s)**

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.
Hexamethylene diacrylate	No data available.
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	No data available.
Penyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	No data available.

**12.3 Bioaccumulative Potential**

**Product:** No data available.

**Specified substance(s)**

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.
Hexamethylene diacrylate	No data available.
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	No data available.
Penyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	No data available.

**12.4 Mobility in Soil:** No data available.

**Known or predicted distribution to environmental compartments**

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.
Hexamethylene diacrylate	No data available.
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	No data available.
Penyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	No data available.

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

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.
Hexamethylene diacrylate	No data available.
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	No data available.
Penyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	No data available.

**12.6 Other Adverse Effects:** Toxic 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)\20 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: UN 3082  
14.2 UN Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(Acrylate)  
14.3 Transport Hazard Class(es)  
Class: 9  
Label(s): 9  
Hazard No. (ADR): 90  
Tunnel restriction code: (E)  
14.4 Packing Group: III  
Limited quantity 5.00L  
Excepted quantity E1  
14.5 Environmental Hazards: Yes  
14.6 Special precautions for user: SPECIAL PROVISION 375

### RID

14.1 UN Number: UN 3082  
14.2 UN Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(Acrylate)  
14.3 Transport Hazard Class(es)  
Class: 9  
Label(s): 9  
14.4 Packing Group: III  
14.5 Environmental Hazards: Yes  
14.6 Special precautions for user: –

### IMDG

14.1 UN Number: UN 3082  
14.2 UN Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(Acrylate)  
14.3 Transport Hazard Class(es)  
Class: 9  
Label(s): 9  
EmS No.: F-A, S-F  
14.4 Packing Group: III



Limited quantity 5.00L  
Excepted quantity E1  
14.5 Environmental Hazards: Environmentally Hazardous  
14.6 Special precautions for user: CODE 2.10.2.7

**IATA**

14.1 UN Number: UN 3082  
14.2 Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s.(Acrylate)  
14.3 Transport Hazard Class(es):  
Class: 9  
Label(s): 9MI  
14.4 Packing Group: III  
Limited quantity 30.00KG  
Excepted quantity E1  
14.5 Environmental Hazards: Yes  
14.6 Special precautions for user: SPECIAL PROVISION A197

Other information  
Passenger and cargo aircraft: Allowed.  
  
Cargo aircraft only: Allowed.

**14.7 Transport in bulk according to Annex II of MARPOL73/78 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 II): on the control of major accident hazards involving dangerous substances:**

Chemical name	CAS-No.	Concentration
Isobornyl acrylate	5888-33-5	10 - 20%
Isodecyl acrylate	1330-61-6	1.0 - 10%
Hexamethylene diacrylate	13048-33-4	1.0 - 10%

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

Chemical name	CAS-No.	Concentration
29H,31H-Phthalocyaninato(2-)-N29,N30,N31,N32 copper	147-14-8	1.0 - 10%

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

Chemical name	CAS-No.	Concentration
Isobornyl acrylate	5888-33-5	10 - 20%
Isodecyl acrylate	1330-61-6	1.0 - 10%
Hexamethylene diacrylate	13048-33-4	1.0 - 10%
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	75980-60-8	1.0 - 10%
Penyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	162881-26-7	1.0 - 10%
#-caprolactam	105-60-2	0.1 - 1.0%
mequinol; 4-methoxyphenol; hydroquinone monomethyl ether	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.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H335 May cause respiratory irritation.
- H361f Suspected of damaging fertility.
- H372 Causes damage to organs through prolonged or repeated exposure.
- H373 May cause damage to organs through prolonged or repeated exposure.
- H411 Toxic to aquatic life with long lasting effects.
- H413 May cause long lasting harmful effects to aquatic life.

**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. 1A, H317  
STOT SE 3, H335  
STOT RE 2, H373  
Aquatic Chronic 2, H411

**Issue Date:** 05.07.2016

**SDS No.:**

**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.