

SAFETY DATA SHEET

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

VERJET F2 MAGENTA

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

1.1 Product Identifier

Product Name : VERJET F2 MAGENTA

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 Supplier

Supplier Details : ColorJet India Limited
 B-195, Phase II, Noida, U.P.
 Phone : + 0120-4548195
 Email : info@colorjetgroup.com

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	H360Df: May damage the unborn child. Suspected of damaging fertility.
Specific Target Organ Toxicity - Single Exposure	Category 3	H335: May cause respiratory irritation.
Specific Target Organ Toxicity - Repeated Exposure	Category 2 (Liver, Respiratory system)	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
 Oxybis(methyl-2,1-ethanediyl) diacrylate
 N-vinyl caprolactam
 Isodecyl acrylate
 Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-
 Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide



Signal Word

Danger

Hazard Statement(s)

H315: Causes skin irritation.
 H318: Causes serious eye damage.
 H317: May cause an allergic skin reaction.
 H360Df: May damage the unborn child. Suspected of damaging fertility.
 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.

Precautionary Statements Prevention

P201: Obtain special instructions before use.
 P260: Do not breathe dust/fume/gas/mist/vapors/spray.
 P273: Avoid release to the environment.
 P280: Wear protective gloves/protective clothing/eye protection/face protection.

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						
3.1 Mixtures						
Chemical Name	Concentration	CAS-No.	EC No.	REACH Registration No.	M-Factor	
Isobornyl acrylate	10 - <20%	5888-33-5	227-561-6	01-2119957862-25-XXXX;	No data available	
Tetrahydrofurfuryl acrylate	10 - <16.591%	2399-48-6	219-268-7	01-2120738396-46-XXXX;	No data available.	
Phenoxyethylacrylate	10 - <20%	48145-04-6	256-360-6	01-2119980532-35-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.	
N-vinyl caprolactam	5 - <10%	2235-00-9	218-787-6	01-2119977109-27-XXXX;	No data available.	
Isodecyl acrylate	5 - <10%	1330-61-6	215-542-5	01-2119964031-47-XXXX;	No data available.	
Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	1 - <5%	162881-26-7	-	01-2119489401-38-0001;	No data available	
2-Isopropyl-9H-thioxanthen-9-one	1 - <5%	5495-84-1	226-827-9	No data available.	No data available.	
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	1 - <3%	75980-60-8	278-355-8	01-2119972295-29-XXXX;	No data available	
Ethoxylated phenyl acrylate	1 - <2.5%	56641-05-5	No data available.	No data available	Ethoxylated phenyl acrylate	
Tetrahydrofurfuryl alcohol	0.1 - <0.3%	97-99-4	202-625-6	01-2119968921-26-XXXX;	No data available	
caprolactam	0.01 - <1%	105-60-2	203-313-2	01-2119457029-36-XXXX;	No data available.	
Hexamethylene diacrylate	0.1 - <1%	13048-33-4	235-921-9	01-2119484737-22-XXXX;	No data available.	
Cetrimonium chloride	0.01 - <0.1%	112-02-7	203-928-6	No data available.	Aquatic (Acute):	Toxicity 10;

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Hydroquinone	0.01 - <0.1%	123-31-9	204-617-8	01-2119524016-51-0002;	Aquatic Toxicity (Chronic): 1 Aquatic Toxicity (Acute): 10; Aquatic Toxicity (Chronic): 1
<p>* 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). ## This substance is listed as SVHC</p>					
Classification		Classification		Notes	
Chemical name		Classification		Notes	
Isobornyl acrylate		Eye Irrit.: 2: H319; Skin Irrit.: 2: H315; STOT SE: 3: H335; Skin Sens.: 1B: H317; Aquatic Acute: 1: H400; Aquatic Chronic: 2: H411;		Note A	
Tetrahydrofurfuryl acrylate		Acute Tox.: 4: H302; Skin Corr.: 1C: H314; Skin Sens.: 1B: H317; Eye Dam.: 1: H318; Repr.: 1B: H360Df; Aquatic Chronic: 2: H411;		No data available	
Phenoxyethylacrylate		Skin Sens.: 1A: H317; Repr.: 2: H361d; Aquatic Chronic: 2: H411;		No data available.	
Oxybis(methyl-2,1-ethanediyl) diacrylate		Skin Sens.: 1: H317; Eye Dam.: 1: H318; Skin Irrit.: 2: H315;		No data available	
Tetrahydrofurfuryl acrylate		Acute Tox.: 4: H302; Skin Corr.: 1C: H314; Skin Sens.: 1B: H317; Eye Dam.: 1: H318; Repr.: 1B: H360Df; Aquatic Chronic: 2: H411;		No data available	
N-vinyl caprolactam		Acute Tox.: 4: H302; Eye Irrit.:		No data available.	

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	2A: H319; Skin Sens.: 1B: H317; STOT RE: 1: H372; Acute Tox.: 4: H312;		
2-Propenoic acid ,1-6-hexanediyl ester, polymer with 2-aminoethanol Isodecyl acrylate	Skin Irrit.: 2: H315; Eye Irrit.: 2: H319; STOT SE: 3: H335; Skin Irrit.: 2: H315; Eye Irrit.: 2: H319; Skin Sens.: 1B: H317; Aquatic Chronic: 2: H411;	No data available.	Note A
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	Repr.: 2: H361f; Skin Sens.: 1: H317; Aquatic Chronic: 2: H411;	No data available.	
Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	Skin Sens.: 1A: H317; Aquatic Chronic: 4: H413;	No data available.	
2-Isopropyl-9H-thioxanthen-9-one	STOT RE: 2: H373;	No data available.	
Ethoxylated phenyl acrylate	Skin Sens.: 1: H317; Aquatic Chronic: 2: H411;	No data available.	
Hexamethylene diacrylate	Skin Irrit.: 2: H315; Eye Irrit.: 2: H319; Skin Sens.: 1: H317;	No data available.	
Tetrahydrofurfuryl alcohol	Eye Irrit.: 2: H319; Repr.: 1B: H360Df;	No data available.	
caprolactam	Acute Tox.: 4: H302; Skin Irrit.: 2: H315; Acute Tox.: 4: H332; Eye Irrit.: 2: H319; STOT SE: 3: H335;	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;	No data available.	

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<p>Hydroquinone</p> <p>CLP: Regulation No. 1272/2008. The full text for all H-statements is displayed in section 16.</p>	<p>Carc.: 2: H351; Muta.: 2: H341; Acute Tox.: 4: H302; Eye Dam.: 1: H318; Skin Sens.: 1: H317; Aquatic Acute: 1: H400; Aquatic Chronic: 1: H410;</p>	<p>No data available.</p>
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Section 4: First Aid Measures

General: Get medical attention if symptoms occur.

4.1 Description of first aid measures

<p>Inhalation</p>	<p>Move to fresh air.</p>
<p>Skin Contact</p>	<p>Get medical attention. 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.</p>
<p>Eye contact</p>	<p>Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Call a physician or poison control center immediately.</p>
<p>Ingestion</p>	<p>Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.</p>
<p>Personal Protection for</p>	<p>CAUTION! First aid personnel must be aware of own risk during rescue!</p>

First-aid Responders See Section 8 of the SDS for Personal Protective Equipment.

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

<p>Hazards</p>	<p>See section 11 of the SDS for additional information on health hazards.</p>
<p>Treatment</p>	<p>Treat symptomatically</p>

Section 5: Fire Fighting 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 Measure

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.

6.1.1 For non-emergency personnel: Use personal protective equipment.

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

6.2 Environmental Precautions:

Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water sources or sewer.

6.3 Methods and material for containment and cleaning up:

Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Dike far ahead of larger spill for later recovery and disposal.

6.4 Reference to other sections:

See Section 8 of the SDS for Personal Protective Equipment. For waste disposal, see section 13 of the SDS.

Section 7: Handling and Storage

7.1 Precautions for safe handling:

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.

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 Control/Personal Protection

8.1 Control Parameters

Occupational Exposure Limits

Chemical name	Type	Exposure Limit Values	Source
caprolactam - Inhalable dust.	STEL	3 mg/m3	UK. EH40 Workplace Exposure Limits (WELs), as amended (12 2011)
caprolactam - Vapor and dust.	STEL	20 mg/m3	UK. EH40 Workplace Exposure Limits (WELs), as amended (12 2011)
	TWA	10 mg/m3	UK. EH40 Workplace Exposure Limits (WELs), as amended (12 2011)
caprolactam - Inhalable dust.	TWA	1 mg/m3	UK. EH40 Workplace Exposure Limits (WELs), as amended (12 2011)
caprolactam - Vapor and dust.	TWA	10 mg/m3	EU. Indicative Occupational Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU, as amended (12 2009)
	STEL	40 mg/m3	EU. Indicative Occupational Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU, as amended (12 2009)
caprolactam	TWA	10 mg/m3	EU. Scientific Committee on Occupational Exposure Limit Values (SCOELs), European Commission - SCOEL, as amended (2014)
	STEL	40 mg/m3	EU. Scientific Committee on Occupational Exposure Limit Values (SCOELs), European Commission - SCOEL, as amended (2014)
Hydroquinone	TWA	0.5 mg/m3	UK. EH40 Workplace Exposure Limits (WELs), as amended (12 2011)

Biological Limit Values

None of the components have assigned exposure limits.

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DNEL-Values

Critical component	Type	Route of Exposure	Health Warnings	Remarks
Isobornyl acrylate	General population	Eyes	Local effect;	No hazard identified
	Workers	Eyes	Local effect;	No hazard identified
	Workers	Dermal	Systemic, long-term; 1.39 mg/kg bw/day	Repeated dose toxicity
	General population	Dermal	Systemic, long-term; 0.83 mg/kg bw/day	Repeated dose toxicity
	General population	Oral	Systemic, long-term; 0.83 mg/kg bw/day	Repeated dose toxicity
Phenoxyethylacrylate	Workers	Inhalation	Local, long-term; 77 mg/m ³	Repeated dose toxicity
	Workers	Inhalation	Systemic, long-term; 10 mg/m ³	Repeated dose toxicity
	Workers	Eyes	Local effect;	No hazard identified
	General population	Eyes	Local effect;	No hazard identified

	Workers	Dermal	Systemic, long-term; 1.5 mg/kg bw/day	Repeated dose toxicity
Oxybis(methyl-2,1-ethanediy) diacrylate	Workers	Inhalation	Systemic, long-term; 24.48 mg/m ³	Repeated dose toxicity
	General population	Inhalation	Systemic, long-term; 7.24 mg/m ³	Repeated dose toxicity
	Workers	Eyes	Local effect;	No data available
	General population	Eyes	Local effect;	No data available
	General population	Dermal	Systemic, long-term; 1.66 mg/kg bw/day	Repeated dose toxicity
N-vinyl caprolactam	General population	Oral	Systemic, long-term; 2.08 mg/kg bw/day	Repeated dose toxicity
	Workers	Dermal	Systemic, long-term; 2.77 mg/kg bw/day	Repeated dose toxicity
	General population	Eyes	Local effect;	Medium hazard (no threshold derived)
Isodecyl acrylate	Workers	Eyes	Local effect;	Low hazard (no threshold derived)
	General population	Eyes	Local effect;	No hazard identified
	Workers	Inhalation	Local, long-term; 37.5 mg/m ³	Irritating to respiratory system.
	Workers	Eyes	Local effect;	No hazard identified
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	Workers	Dermal	Local, long-term; 370 µg/cm ²	Skin sensitization
	Workers	Inhalation	Systemic, long-term; 3.5 mg/m ³	Repeated dose toxicity
	Workers	Eyes	Local effect;	No hazard identified
Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	General population	Eyes	Local effect;	No data available
	Workers	Dermal	Systemic, long-term; 1 mg/kg bw/day	Repeated dose toxicity
	Workers	Inhalation	Systemic, long-term; 7.84 mg/m ³	Repeated dose toxicity
	General population	Inhalation	Systemic, short-term; 1.93 mg/m ³	
	General population	Inhalation	Systemic, short-term; 3.92 mg/m ³	Repeated dose toxicity
	General population	Inhalation	Systemic, long-term; 1.93 mg/m ³	Repeated dose toxicity
	General population	Dermal	Systemic, short-term; 1.67 mg/kg bw/day	
	General population	Inhalation	Systemic, long-term; 2.9 mg/m ³	Repeated dose toxicity
	Workers	Eyes	Local effect;	Low hazard (no threshold derived)

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	General population	Dermal	Systemic, short-term; 1.67 mg/kg bw/day	Repeated dose toxicity
	General population	Inhalation	Systemic, short-term; 3.92 mg/m ³	Repeated dose toxicity
	Workers	Inhalation	Systemic, long-term; 16.46 mg/m ³	Repeated dose toxicity
	Workers	Inhalation	Systemic, long-term; 11.75 mg/m ³	Repeated dose toxicity
	General population	Eyes	Local effect;	Low hazard (no threshold derived)
	Workers	Dermal	Systemic, long-term; 4.67 mg/kg bw/day	Repeated dose toxicity
	General population	Inhalation	Systemic, short-term; 2.92 mg/m ³	
	Workers	Eyes	Local effect;	No hazard identified
	General population	Eyes	Local effect;	No hazard identified
	Workers	Inhalation	Systemic, long-term; 7.84 mg/m ³	Repeated dose toxicity
	General population	Oral	Systemic, long-term; 1.67 mg/kg bw/day	Repeated dose toxicity
	Workers	Inhalation	Systemic, short-term; 7.84 mg/m ³	Repeated dose toxicity
	General population	Inhalation	Systemic, long-term; 2.92 mg/m ³	Repeated dose toxicity
	General population	Oral	Systemic, short-term; 1.67 mg/kg bw/day	Repeated dose toxicity
	Workers	Dermal	Systemic, long-term; 3.33 mg/kg bw/day	Repeated dose toxicity
	Workers	Dermal	Systemic, long-term; 3 mg/kg bw/day	Repeated dose toxicity
	General population	Dermal	Systemic, short-term; 1.67 mg/kg bw/day	Repeated dose toxicity
	Workers	Inhalation	Systemic, short-term; 16.46 mg/m ³	Repeated dose toxicity
	General population	Oral	Systemic, long-term; 1.5 mg/kg bw/day	Repeated dose toxicity
	General population	Dermal	Systemic, long-term; 1.67 mg/kg bw/day	Repeated dose toxicity
	General population	Dermal	Systemic, long-term; 1.5 mg/kg bw/day	Repeated dose toxicity
	Workers	Inhalation	Systemic, short-term; 7.84 mg/m ³	
	Workers	Inhalation	Systemic, long-term; 21 mg/m ³	Repeated dose toxicity
Hexamethylene diacrylate	Workers	Eyes	Local effect;	Low hazard (no threshold derived)
	General population	Eyes	Local effect;	Low hazard (no threshold derived)
Tetrahydrofurfuryl alcohol	General population	Oral	Systemic, short-term; 0.175 mg/kg bw/day	Repeated dose toxicity
	Workers	Inhalation	Systemic, long-term; 1.4 mg/m ³	Repeated dose toxicity
	General population	Dermal	Systemic, short-term; 0.175 mg/kg bw/day	Repeated dose toxicity
	Workers	Inhalation	Systemic, short-term; 1.4 mg/m ³	Repeated dose toxicity
	General population	Inhalation	Systemic, long-term; 0.25 mg/m ³	Repeated dose toxicity
	Workers	Dermal	Systemic, long-term; 0.35 mg/kg bw/day	Repeated dose toxicity

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	General population	Oral	Systemic, long-term; 0.175 mg/kg bw/day	Repeated dose toxicity
	General population	Inhalation	Systemic, short-term; 0.25 mg/m ³	Repeated dose toxicity
	General population	Dermal	Systemic, long-term; 0.175 mg/kg bw/day	Repeated dose toxicity
	Workers	Eyes	Local effect;	Low hazard (no threshold derived)
	General population	Eyes	Local effect;	Low hazard (no threshold derived)
caprolactam	Workers	Eyes	Local effect;	No data available
	General population	Eyes	Local effect;	No data available
	Workers	Inhalation	Systemic, short-term; 10 mg/m ³	Irritating to respiratory system.
	General population	Inhalation	Systemic, short-term; 5 mg/m ³	Irritating to respiratory system.
	Workers	Inhalation	Systemic, short-term; 5 mg/m ³	Irritating to respiratory system.
	General population	Oral	Systemic, long-term; 8.55 mg/kg bw/day	Repeated dose toxicity
	General population	Inhalation	Systemic, short-term; 2.5 mg/m ³	Irritating to respiratory system.
Cetrimonium chloride	General population	Inhalation	Systemic, long-term; 0.98 mg/m ³	Repeated dose toxicity
	Workers	Inhalation	Systemic, long-term; 3.32 mg/m ³	Repeated dose toxicity
	Workers	Eyes	Local effect;	Medium hazard (no threshold derived)

	General population	Oral	Systemic, long-term; 2.83 mg/kg bw/day	Repeated dose toxicity
	General population	Eyes	Local effect;	Medium hazard (no threshold derived)
	General population	Dermal	Systemic, long-term; 2.83 mg/kg bw/day	Repeated dose toxicity
	Workers	Dermal	Systemic, long-term; 4.7 mg/kg bw/day	Repeated dose toxicity
Hydroquinone	General population	Eyes	Local effect;	Medium hazard (no threshold derived)
	General population	Oral	Systemic, long-term; 0.6 mg/kg bw/day	Carcinogenicity
	Workers	Eyes	Local effect;	Medium hazard (no threshold derived)

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PNEC-Values			
Critical component	Environmental compartment	PNEC-Values	Remarks
Isobornyl acrylate	freshwater sediment	0.145 mg/kg	
	Marine sediments	0.015 mg/kg	
	soil	0.029 mg/kg	
	Aquatic (marine water)	0 mg/l	
	Sewage treatment plant	2 mg/l	
	Aquatic (freshwater)	0.001 mg/l	
Oxybis(methyl-2,1-ethanediyl) diacrylate	freshwater sediment	0.009 mg/kg	
	Aquatic (marine water)	0 mg/l	
	soil	0.001 mg/kg	
	Aquatic (freshwater)	0.003 mg/l	
	Sewage treatment plant	100 mg/l	
Isodecyl acrylate	freshwater sediment	0.904 mg/kg	
	Aquatic (freshwater)	1.3 µg/l	
	Marine sediments	0.09 mg/kg	
	Aquatic (marine water)	0.13 µg/l	
	Sewage treatment plant	2.3 mg/l	
	Aquatic (intermit. releases)	13 µg/l	
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	soil	0.18 mg/kg	
	freshwater sediment	0.29 mg/kg	
	Fresh water	0.00353 mg/l	
	Aquatic (marine water)	0 mg/l	
	Marine water	0.00353 mg/l	
	soil	0.056 mg/kg	
	Intermittent release	0.0353 mg/l	
	Aquatic (freshwater)	0.004 mg/l	
	Sediment-fresh water	0.29 mg/kg	
	Marine sediments	0.029 mg/kg	
	Soil	0.0557 mg/kg	
Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	Aquatic (freshwater)	0.8 µg/l	
	Fresh water	0.00353 mg/l	
	Aquatic (marine water)	0 mg/l	
	Marine water	0.00353 mg/l	
	soil	0.056 mg/kg	
	Intermittent release	0.0353 mg/l	
	Aquatic (freshwater)	0.004 mg/l	
	Sediment-fresh water	0.29 mg/kg	
	Marine sediments	0.029 mg/kg	
	Soil	0.0557 mg/kg	
	Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	Aquatic (freshwater)	0.8 µg/l

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2-Isopropyl-9H-thioxanthen-9-one	Predator	0.333 mg/kg	Oral
Hexamethylene diacrylate	Aquatic (marine water)	0 mg/l	
	freshwater sediment	0.024 mg/kg	
	Aquatic (freshwater)	0.002 mg/l	
	soil	0.004 mg/kg	
	Marine sediments	0.002 mg/kg	
	Sewage treatment plant	2.7 mg/l	
Tetrahydrofurfuryl alcohol	Marine sediments	0.86 mg/kg	
	Aquatic (marine water)	0.19 mg/l	
	Aquatic (freshwater)	1.9 mg/l	
	Sewage treatment plant	10 mg/l	
	freshwater sediment	8.6 mg/kg	
	soil	0.6 mg/kg	
caprolactam		2.55 mg/kg	
	Aquatic (freshwater)	2 mg/l	
	Aquatic (marine water)	0.2 mg/l	
	freshwater sediment	18.7 mg/kg	
Cetrimonium chloride	soil	7 mg/kg	
	Aquatic (freshwater)	0.001 mg/l	
	Marine sediments	0.927 mg/kg	
	Aquatic (marine water)	0 mg/l	
	Sewage treatment plant	0.4 mg/l	
	freshwater sediment	9.27 mg/kg	

8.2 Exposure controls

Appropriate Engineering Controls:

Provide adequate ventilation.

Individual protection measures, such as personal protective equipment

General information:

Provide easy access to water supply and eye wash facilities. 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. Follow training instructions when handling this material.

Eye/face protection:

Safety goggles. EN 166.

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 (EN374), Glove thickness: > 0.35 mm, Break-through time: > 240 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:

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 get in eyes. Observe good industrial hygiene practices. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Wash contaminated clothing before reuse. Avoid contact with skin. Wash hands before breaks and immediately after handling the product. Contaminated work clothing should not be allowed out of the workplace.

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	: Purple
Odor	: Sweetish
Odor Threshold	: No data available.
pH	: No data available.
Freezing point	: No data available.
Boiling Point	: No data available.
Flash Point	: >100 °C estimated
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.
Density	: No data available.
Relative density	: 1.0576
Solubility(ies)	
Solubility in Water	: No data available.
Solubility (other)	: No data available.

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Partition coefficient (n-octanol/water) : No data available.
Self Ignition Temperature : No data available.
Decomposition Temperature : No data available.
Kinematic viscosity : No data available.
Dynamic viscosity : No data available.
Explosive properties : No data available.
Oxidizing properties : No data available.

9.2 Other information

VOC Content: EC Directive 1999/13: 2.63 g/l ~0.26 % (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: Not known.
10.4 Conditions to avoid: Avoid heat or contamination.
10.5 Incompatible Materials: None known.
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.

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.

11.1 Information on toxicological effects**Acute toxicity****Oral****Product:**

ATEmix: 2,737.14 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

VERJET F2 MAGENTA**Oxybis(methyl-2,1-ethanediyl) diacrylate**

LD 50 (Rat): 4,626 mg/kg Experimental result, Supporting study

Tetrahydrofurfuryl acrylate

No data available.

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

Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide

No data available.

2-Isopropyl-9H-thioxanthen-9-one

No data available.

Ethoxylated phenyl acrylate

No data available.

Hexamethylene 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.

Cetrimonium chloride

LD 50 (Rat): 861 mg/kg Experimental result, Key study

Hydroquinone

LD 50 (Rat): 367.3 mg/kg Experimental result, Key study

Dermal**Product:**

ATEmix 18,718.96 mg/kg

VERJET F2 MAGENTA**Components:****Isobornyl acrylate**

LD 50 (Rabbit): > 3,000 mg/kg Experimental result, Key study

Phenoxyethylacrylate

No data available.

Oxybis(methyl-2,1-ethanediyl) diacrylate

LD 50 (Rabbit): > 2,000 mg/kg Experimental result, Key study

Tetrahydrofurfuryl acrylate

No data available.

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.

Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide

No data available.

2-Isopropyl-9H-thioxanthen-9-one

No data available.

Ethoxylated phenyl acrylate

No data available.

Hexamethylene diacrylate

LD 50 (Rabbit): 3,650 mg/kg Experimental result, Key study

Tetrahydrofurfuryl alcohol

No data available.

caprolactam

No data available.

Cetrimonium chloride

LD 50 (Rabbit): 1,900 mg/kg

VERJET F2 MAGENTA**Revision Date: 01/08/2019****Hydroquinone**

LD 50 (Rabbit): > 2,000 mg/kg Experimental result, Key study

Inhalation**Product:**

Not classified for acute toxicity based on available data.

Components:**Isobornyl acrylate**

No data available.

Phenoxyethylacrylate

No data available.

Oxybis(methyl-2,1-ethanediyl) diacrylate

No data available.

Tetrahydrofurfuryl acrylate

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

LC 50 (Rat, 8 h)> 1.19 mg/l Vapor, Read-across from supporting substance (structural analogue or surrogate), Key study

Phosphine oxide, diphenyl(2,4,6- trimethylbenzoyl)

No data available

Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide

No data available.

2-Isopropyl-9H-thioxanthen-9-one

No data available.

Ethoxylated phenyl acrylate

No data available.

Hexamethylene diacrylate

LC 0 (Rat, 7 h)0.41 mg/l Vapor, Experimental result, Key study

VERJET F2 MAGENTA**Tetrahydrofurfuryl alcohol**

No data available.

caprolactam

LC 50 (Rat, 2 h)0.3 mg/l

Cetrimonium chloride

No data available.

Hydroquinone

No data available.

Repeated dose toxicity**Product:**

No data available.

Components:**Isobornyl acrylate**

NOAEL (rat(male/female)): 100 mg/kg

NOAEL (Rat(Female, Male), Oral, 28 - 53 d): 100 mg/kg

Phenoxyethylacrylate

NOAEL (Rat(Female, Male), Oral, 2 Weeks): 500 mg/kg

Oxybis(methyl-2,1-ethanediyl) diacrylate

NOAEL (Rat(Female, Male), Oral, 28 - 52 d): 250 mg/kg

Tetrahydrofurfuryl acrylate

No data available.

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): 0.075 mg/l

NOAEL (Rat(Female, Male), Inhalation): 0.226 mg/l

Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-

LOAEL (Rat(Female, Male), Oral, 28 d): 250 mg/kg

NOAEL (Rat(Female, Male), Oral, 28 d): 50 mg/kg

LOAEL (Rat(Female, Male), Oral, 64 - 91 d): 300 mg/kg

NOAEL (Rat(Female, Male), Oral, 64 - 91 d): 100 mg/kg

VERJET F2 MAGENTA**Revision Date: 01/08/2019****Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide**

No data available.

2-Isopropyl-9H-thioxanthen-9-one

No data available.

Ethoxylated phenyl acrylate

No data available.

Hexamethylene diacrylate

NOAEL (Rat(Female, Male), Oral, 28 - 52 d): 250 mg/kg

Tetrahydrofurfuryl alcohol

No data available.

caprolactam

NOAEL (Rat(Female, Male), Inhalation, 13 - 17 Weeks): 0.066 mg/l

NOAEL (Rat(Female, Male), Inhalation, 13 - 17 Weeks): 0.245 mg/l

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

Hydroquinone

No data available.

Skin Corrosion/Irritation:**Product:**

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

Components:**Isobornyl acrylate**

No data available.

Phenoxyethylacrylate

No data available.

Oxybis(methyl-2,1-ethanediyl) diacrylate

No data available.

Tetrahydrofurfuryl acrylate

No data available.

VERJET F2 MAGENTA**N-vinyl caprolactam**

in vivo (Rabbit): Not irritant 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)-

in vivo (Rabbit): Not irritant Experimental result, Key study

Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide

No data available.

2-Isopropyl-9H-thioxanthen-9-one

No data available.

Ethoxylated phenyl acrylate

No data available.

Hexamethylene diacrylate

in vivo (Rabbit): Category 2 Experimental result, Key study

Tetrahydrofurfuryl alcohol

in vivo (Rabbit): Not irritant Experimental result, Key study

caprolactam

Irritating

Cetrimonium chloride

Irritating

Hydroquinone

in vivo (Rabbit): Not irritant Experimental result, Weight of Evidence study

Serious Eye Damage/Eye Irritation:**Product:**

Causes serious eye damage.

Components:**Isobornyl acrylate**

No data available.

Phenoxyethylacrylate

No data available.

VERJET F2 MAGENTA**Revision Date: 01/08/2019****Oxybis(methyl-2,1-ethanediyl) diacrylate**

in vivo (Rabbit, 24 - 72 hrs): Category 1 OECD GHS

Tetrahydrofurfuryl acrylate

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

Mildly Irritating

Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-

No data available.

Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide

No data available.

2-Isopropyl-9H-thioxanthen-9-one

No data available.

Ethoxylated phenyl acrylate

No data available.

Hexamethylene diacrylate

Irritating

Tetrahydrofurfuryl alcohol

Severely Irritating

caprolactam

Irritating

Cetrimonium chloride

Irritating

Hydroquinone

No data available.

Respiratory or Skin Sensitization:**Product:**

May cause an allergic skin reaction.

VERJET F2 MAGENTA**Components:****Isobornyl acrylate**

No data available.

Phenoxyethylacrylate

No data available.

Oxybis(methyl-2,1-ethanediyl) diacrylate

No data available.

Tetrahydrofurfuryl acrylate

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.

Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide

No data available.

2-Isopropyl-9H-thioxanthen-9-one

No data available.

Ethoxylated phenyl acrylate

No data available.

Hexamethylene diacrylate

Skin sensitization:, in vivo (Guinea pig): Sensitising

Tetrahydrofurfuryl alcohol

No data available.

caprolactam

Skin sensitization:, in vivo (Guinea pig): Non sensitising

Cetrimonium chloride

No data available.

VERJET F2 MAGENTA**Revision Date: 01/08/2019****Hydroquinone**

Skin sensitization:, in vivo (Guinea pig): Sensitising

Germ Cell Mutagenicity**Product:**

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

In vitro

Components:**Isobornyl acrylate**

No data available.

Phenoxyethylacrylate

No data available.

Oxybis(methyl-2,1-ethanediyl) diacrylate

No data available.

Tetrahydrofurfuryl acrylate

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.

Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide

No data available.

2-Isopropyl-9H-thioxanthen-9-one

No data available.

Ethoxylated phenyl acrylate

No data available.

Hexamethylene diacrylate

No data available.

Tetrahydrofurfuryl alcohol

No data available.

VERJET F2 MAGENTA**caprolactam**

No data available.

Cetrimonium chloride

No data available.

Hydroquinone

No data available.

In vivo

Components:**Isobornyl acrylate**

No data available.

Phenoxyethylacrylate

No data available.

Oxybis(methyl-2,1-ethanediyl) diacrylate

No data available.

Tetrahydrofurfuryl acrylate

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.

Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide

No data available.

2-Isopropyl-9H-thioxanthen-9-one

No data available.

Ethoxylated phenyl acrylate

No data available.

Hexamethylene diacrylate

No data available.

VERJET F2 MAGENTA**Tetrahydrofurfuryl alcohol**

No data available.

caprolactam

No data available.

Cetrimonium chloride

No data available.

Hydroquinone

No data available.

Carcinogenicity**Product:**

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

Components:**Isobornyl acrylate**

No data available.

Phenoxyethylacrylate

No data available.

Oxybis(methyl-2,1-ethanediyl) diacrylate

No data available.

Tetrahydrofurfuryl acrylate

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.

Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide

No data available.

2-Isopropyl-9H-thioxanthen-9-one

No data available.

VERJET F2 MAGENTA**Ethoxylated phenyl acrylate**

No data available.

Hexamethylene diacrylate

No data available.

Tetrahydrofurfuryl alcohol

No data available.

caprolactam

No data available.

Cetrimonium chloride

No data available.

Hydroquinone

No data available.

Reproductive toxicity**Product:**

May damage fertility or the unborn child.

Components:**Isobornyl acrylate**

No data available.

Phenoxyethylacrylate

No data available.

Oxybis(methyl-2,1-ethanediyl) diacrylate

No data available.

Tetrahydrofurfuryl acrylate

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.

VERJET F2 MAGENTA**Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide**

No data available.

2-Isopropyl-9H-thioxanthen-9-one

No data available.

Ethoxylated phenyl acrylate

No data available.

Hexamethylene diacrylate

No data available.

Tetrahydrofurfuryl alcohol

No data available.

caprolactam

No data available.

Cetrimonium chloride

No data available.

Hydroquinone

No data available.

Specific Target Organ Toxicity - Single Exposure**Product:**

May cause respiratory irritation.

Components:**Isobornyl acrylate**

No data available.

Phenoxyethylacrylate

No data available.

Oxybis(methyl-2,1-ethanediyl) diacrylate

No data available.

Tetrahydrofurfuryl acrylate

No data available.

N-vinyl caprolactam

No data available.

2-Propenoic acid ,1-6-hexanediyl ester, polymer with 2-aminoethanol

No data available.

VERJET F2 MAGENTA**Isodecyl acrylate**

No data available.

Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-

No data available.

Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide

No data available.

2-Isopropyl-9H-thioxanthen-9-one

No data available.

Ethoxylated phenyl acrylate

No data available.

Hexamethylene diacrylate

No data available.

Tetrahydrofurfuryl alcohol

No data available.

caprolactam

No data available.

Cetrimonium chloride

No data available.

Hydroquinone

No data available.

Specific Target Organ Toxicity - Repeated Exposure

Product:

May cause damage to organs through prolonged or repeated exposure.**Components:****Isobornyl acrylate**

No data available.

Phenoxyethylacrylate

No data available.

Oxybis(methyl-2,1-ethanediyl) diacrylate

No data available.

Tetrahydrofurfuryl acrylate

No data available.

VERJET F2 MAGENTA**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.

Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide

No data available.

2-Isopropyl-9H-thioxanthen-9-one

No data available.

Ethoxylated phenyl acrylate

No data available.

Hexamethylene diacrylate

No data available.

Tetrahydrofurfuryl alcohol

No data available.

caprolactam

No data available.

Cetrimonium chloride

No data available.

Hydroquinone

No data available.

Target Organs:

Liver, Respiratory system

Aspiration Hazard**Product:**

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

Components:**Isobornyl acrylate**

No data available.

VERJET F2 MAGENTA**Phenoxyethylacrylate**

No data available.

Oxybis(methyl-2,1-ethanediyl) diacrylate

No data available.

Tetrahydrofurfuryl acrylate

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.

Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide

No data available.

2-Isopropyl-9H-thioxanthen-9-one

No data available.

Ethoxylated phenyl acrylate

No data available.

Hexamethylene diacrylate

No data available.

Tetrahydrofurfuryl alcohol

No data available.

caprolactam

No data available.

Cetrimonium chloride

No data available.

Hydroquinone

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****Remarks:**

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

Fish**Product:**

No data available.

Components**Isobornyl acrylate**

LC50 (Pisces (fish), 96 h): 0.704 mg/l (OECD Test Guideline 203)

Phenoxyethylacrylate

No data available.

Oxybis(methyl-2,1-ethanediyl) diacrylate

NOAEL (Leuciscus idus, 96 h): 1 mg/l (Static) Experimental result, Key study

LC 50 (Leuciscus idus, 96 h): 2.2 mg/l (Static)

Tetrahydrofurfuryl acrylate

No data available.

N-vinyl caprolactam

LC 50 (Danio rerio, 96 h): 318 mg/l (Static) Experimental result, Key study

NOAEL (Danio rerio, 96 h): 208 mg/l (Static) Experimental result, Key study

LC 0 (Danio rerio, 96 h): 208 mg/l (Static) Experimental result, Key study

NOAEL (Danio rerio, 96 h): 215 mg/l (Static) Experimental result, Key study

LC 50 (Danio rerio, 96 h): 307 mg/l (Static) Experimental result, Key study

2-Propenoic acid ,1-6-hexanediyl ester, polymer with 2-aminoethanol

No data available

Isodecyl acrylate

No data available

Oxybis(methyl-2,1-ethanediyl) diacrylate Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-

NOAEL (Leuciscus idus, 96 h): 1 mg/l (Static) Experimental result, Key study

LC 50 (Leuciscus idus, 96 h): 2.2 mg/l (Static)

LC 50 (Oryzias latipes, 48 h): +/- 6.53 mg/l (semi-static) Experimental result, Key study

Ethoxylated phenyl acrylate

No data available.

2-phenoxyethanol

LC 50 (Pimephales promelas, 96 h): 344 mg/l (flow-through) Experimental result, Key study

2-[[[(Butylamino)carbonyl]oxy]ethyl acrylate

No data available

2-Hydroxy-2-methylpropiophenone

No data available.

Oligo[2-hydroxy-2-methyl-1-[4-(1-methylvinyl)phenyl]propanoneNOAEL (Oncorhynchus mykiss, 96 h): > 3.7 mg/l (Static) Experimental result, Key study
caprolactam

LC 50 (Oryzias latipes, 96 h): > 100 mg/l (semi-static) Experimental result, Key study

2,4,6-trimethylbenzophenone

No data available.

2,6-bis(1,1-dimethylethyl)-4-methyl-phenol

LC 50 (96 h): 0.199 mg/l QSAR QSAR, Key study

Aquatic Invertebrates**Product:**

No data available.

Components**Phenoxyethylacrylate**

EC 50 (Daphnia magna, 48 h): 1.21 mg/l (Static) Experimental result, Key study

N-vinyl caprolactam

EC 50 (Daphnia magna, 48 h): > 100 mg/l (Static) Experimental result, Key study

Titanium dioxide

EC 50 (48 h): > 1,000 mg/l (Static) experimental result

Oxybis(methyl-2,1-ethanediyl) diacrylate

No data available.

Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-

EC 50 (Daphnia magna, 48 h): 3.53 mg/l (Static) Experimental result, Key study

Ethoxylated phenyl acrylate

No data available.

2-phenoxyethanol

EC 50 (Daphnia magna, 48 h): 460 mg/l (Static) Experimental result, Not specified

2-[[[(Butylamino)carbonyl]oxy]ethyl acrylate

No data available.

2-Hydroxy-2-methylpropiophenone

EC 50 (Daphnia magna, 48 h): > 119 mg/l (Static) Experimental result, Key study

Oligo[2-hydroxy-2-methyl-1-[4-(1-methylvinyl)phenyl]propanone

EC 50 (Daphnia magna, 48 h): > 3.7 mg/l Experimental result, Key study
caprolactam

EC 50 (Daphnia magna, 48 h): 0.08 mg/l (Static) Experimental result, Key study

2,4,6-trimethylbenzophenone

No data available.

2,6-bis(1,1-dimethylethyl)-4-methyl-phenol

EC 50 (Daphnia magna, 48 h): 0.61 mg/l (Static) Experimental result, Key study
NOAEL (Daphnia magna, 48 h): 0.23 mg/l (Static) Experimental result, Key study
EC 50 (Daphnia magna, 24 h): > 0.7 mg/l (Static) Experimental result, Key study
NOAEL (Daphnia magna, 48 h): 0.15 mg/l (Static) Experimental result, Key study
EC 50 (Daphnia magna, 48 h): 0.48 mg/l (Static) Experimental result, Key study

Toxicity to Aquatic Plants**Product:**

No data available.

Components**Phenoxyethylacrylate**

No data available.

N-vinyl caprolactam

No data available.

Titanium dioxide

No data available.

Oxybis(methyl-2,1-ethanediyl) diacrylate

No data available.

Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-

No data available.

Ethoxylated phenyl acrylate

No data available.

2-phenoxyethanol

No data available.

2-[[[(Butylamino)carbonyl]oxy]ethyl acrylate

No data available.

2-Hydroxy-2-methylpropiophenone

EC 50 (Desmodesmus subspicatus (algae), 72 h): 1.95 mg/l

Oligo[2-hydroxy-2-methyl-1-[4-(1-methylvinyl)phenyl]propanone

No data available.

caprolactam

EC 50 (Alga, 72 h): 130 mg/l

VERJET F2 MAGENTA**2,4,6-trimethylbenzophenone**

No data available.

2,6-bis(1,1-dimethylethyl)-4-methyl-phenol

No data available.

Toxicity to microorganisms**Product:**

No data available.

Components**Phenoxyethylacrylate**

No data available.

N-vinyl caprolactam

No data available.

Titanium dioxide

No data available.

Oxybis(methyl-2,1-ethanediyl) diacrylate

No data available.

Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-

No data available.

Ethoxylated phenyl acrylate

No data available.

2-phenoxyethanol

EC50 (waste sludge, 17 h): > 880 mg/l (OECD-Guideline No.209; 88/302/EEC C.11)

2-[[[(Butylamino)carbonyl]oxy]ethyl acrylate

No data available.

2-Hydroxy-2-methylpropiophenone

EC50 (3 h): > 1,000 mg/l (OECD-Guideline No.209; 88/302/EEC C.11)

Oligo[2-hydroxy-2-methyl-1-[4-(1-methylvinyl)phenyl]propanone

No data available.

caprolactam

EC50 (Pseudomonas putida (bacteria), 17 h): 4,200 mg/l

2,4,6-trimethylbenzophenone

No data available.

2,6-bis(1,1-dimethylethyl)-4-methyl-phenol

No data available.

Chronic Toxicity**Remarks:**

Toxic to aquatic life with long lasting effects.

Fish**Product:**

No data available.

Components**Phenoxyethylacrylate**

No data available.

N-vinyl caprolactam

No data available.

Titanium dioxide

LC 50 (Oncorhynchus mykiss, 28 d): 7.31 mg/l (Static renewal) interpreted

Oxybis(methyl-2,1-ethanediyl) diacrylate

No data available.

Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-

No data available.

Ethoxylated phenyl acrylate

No data available.

2-phenoxyethanol

VERJET F2 MAGENTA**Revision Date: 01/08/2019**

LC 50 (Danio rerio, 6 d): 461.5 - 521.6 mg/l (semi-static) Experimental result, Supporting study

2-[[[(Butylamino)carbonyl]oxy]ethyl acrylate

No data available.

2-Hydroxy-2-methylpropiophenone

No data available.

Oligo[2-hydroxy-2-methyl-1-[4-(1-methylvinyl)phenyl]propanone

No data available.

caprolactam

No data available.

2,4,6-trimethylbenzophenone

No data available.

2,6-bis(1,1-dimethylethyl)-4-methyl-phenol

No data available.

Aquatic Invertebrates**Product:**

No data available.

Components**Phenoxyethylacrylate**

No data available.

N-vinyl caprolactam

No data available.

Titanium dioxide

No data available.

Oxybis(methyl-2,1-ethanediyl) diacrylate

No data available.

Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-

No data available.

Ethoxylated phenyl acrylate

No data available.

2-phenoxyethanol

No data available.

2-[[[(Butylamino)carbonyl]oxy]ethyl acrylate

No data available.

2-Hydroxy-2-methylpropiophenone

No data available.

Oligo[2-hydroxy-2-methyl-1-[4-(1-methylvinyl)phenyl]propanone

No data available.

caprolactam

No data available.

2,4,6-trimethylbenzophenone

No data available.

2,6-bis(1,1-dimethylethyl)-4-methyl-phenol

No data available

Toxicity to Aquatic Plants**Product:**

No data available.

Components**Phenoxyethylacrylate**

No data available.

N-vinyl caprolactam

No data available.

VERJET F2 MAGENTA**Titanium dioxide**

No data available.

Oxybis(methyl-2,1-ethanediyl) diacrylate

No data available.

Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-

No data available.

Ethoxylated phenyl acrylate

No data available.

2-phenoxyethanol

No data available.

2-[[[(Butylamino)carbonyl]oxy]ethyl acrylate

No data available.

2-Hydroxy-2-methylpropiophenone

No data available.

Oligo[2-hydroxy-2-methyl-1-[4-(1-methylvinyl)phenyl]propanone

No data available.

caprolactam

No data available.

2,4,6-trimethylbenzophenone

No data available.

2,6-bis(1,1-dimethylethyl)-4-methyl-phenol

No data available.

12.2 Persistence and Degradability**Biodegradation****Product:**

No data available.

Components**Phenoxyethylacrylate**

(28 d): 22.3 % Detected in water. Experimental result, Key study

N-vinyl caprolactam

(28 d): 30 - 40 % Detected in water. Experimental result, Key study

Titanium dioxide

No data available.

Oxybis(methyl-2,1-ethanediyl) diacrylate

(28 d): 90 - 100 % Detected in water. Experimental result, Key study

Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-

(28 d): > 0 - 10 % Detected in water. Experimental result, Key study

Ethoxylated phenyl acrylate

No data available.

2-phenoxyethanol

> 70 % Detected in water. Experimental result, Supporting study

75 % Detected in water. Experimental result, Key study

(20 d): 21.33 % Detected in water. Experimental result, Supporting study

60 % Detected in water. Experimental result, Key study

61 % Detected in water. Experimental result, Supporting study

2-[[[(Butylamino)carbonyl]oxy]ethyl acrylate

No data available.

2-Hydroxy-2-methylpropiophenone

59 % Detected in water. Experimental result, Not specified

> 0 % Detected in water. Experimental result, Not specified

(28 d): 90 - 100 % Detected in water. Experimental result, Key study

Oligo[2-hydroxy-2-methyl-1-[4-(1-methylvinyl)phenyl]propanone

(28 d): 1.8 % Detected in water. Experimental result, Key study

caprolactam

(28 d): 5 % Detected in water. Experimental result, Key study

VERJET F2 MAGENTA**2,4,6-trimethylbenzophenone**

No data available.

2,6-bis(1,1-dimethylethyl)-4-methyl-phenol

(28 d): 4.5 % Detected in water. Experimental result, Key study

> 75 % soil Experimental result, Key study

> 85 % soil Experimental result, Key study

> 80 % soil Experimental result, Key study

(20 d): < 10 % Detected in water. Not specified, Not specified

BOD/COD Ratio

Product

No data available.

Components**Phenoxyethylacrylate**

No data available.

N-vinyl caprolactam

No data available.

Titanium dioxide

No data available.

Oxybis(methyl-2,1-ethanediyl) diacrylate

No data available.

Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-

No data available.

Ethoxylated phenyl acrylate

No data available.

2-phenoxyethanol

No data available.

2-[[[(Butylamino)carbonyl]oxy]ethyl acrylate

No data available.

VERJET F2 MAGENTA**2-Hydroxy-2-methylpropiophenone**

No data available.

Oligo[2-hydroxy-2-methyl-1-[4-(1-methylvinyl)phenyl]propanone

No data available.

caprolactam

No data available.

2,4,6-trimethylbenzophenone

No data available

2,6-bis(1,1-dimethylethyl)-4-methyl-phenol

No data available.

12.3 Bioaccumulative potential**Product:**

No data available.

Components**Phenoxyethylacrylate**

No data available.

N-vinyl caprolactam

No data available.

Titanium dioxide

No data available.

Oxybis(methyl-2,1-ethanediyl) diacrylate

No data available.

Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-

Cyprinus carpio, Bioconcentration Factor (BCF): 22 - 32 Aquatic sediment Experimental result, Key study

Cyprinus carpio, Bioconcentration Factor (BCF): 18 - 22 Aquatic sediment Experimental result, Key study

Cyprinus carpio, Bioconcentration Factor (BCF): 53 - 72 Aquatic sediment Experimental result, Key study

Cyprinus carpio, Bioconcentration Factor (BCF): 23 - 40 Aquatic sediment Experimental result, Key study

Cyprinus carpio, Bioconcentration Factor (BCF): 47 - 55 Aquatic sediment Experimental result, Key study

Ethoxylated phenyl acrylate

No data available.

2-phenoxyethanol

Bioconcentration Factor (BCF): 4.5 Aquatic sediment Estimated by calculation, Not specified

Bioconcentration Factor (BCF): 0.35 Aquatic sediment Estimated by calculation, Key study

2-[[[(Butylamino)carbonyl]oxy]ethyl acrylate

No data available.

2-Hydroxy-2-methylpropiophenone

No data available.

Oligo[2-hydroxy-2-methyl-1-[4-(1-methylvinyl)phenyl]propanone

No data available.

caprolactam

No data available.

2,4,6-trimethylbenzophenone

No data available.

2,6-bis(1,1-dimethylethyl)-4-methyl-phenol

Cyprinus carpio, Bioconcentration Factor (BCF): 230 - 2,500 Aquatic sediment Experimental result, Weight of Evidence study

Cyprinus carpio, Bioconcentration Factor (BCF): 230 - 2,500 Aquatic sediment Experimental result, Key study

Cyprinus carpio, Bioconcentration Factor (BCF): 330 - 1,800 Aquatic sediment Experimental result, Key study

Bioconcentration Factor (BCF): 598.4 Aquatic sediment Estimated by calculation, Weight of Evidence study

Cyprinus carpio, Bioconcentration Factor (BCF): 13 - 17 Aquatic sediment Experimental result, Supporting study

VERJET F2 MAGENTA**12.4 Mobility in soil:**

No data available.

Components**Phenoxyethylacrylate**

No data available.

N-vinyl caprolactam

No data available.

Titanium dioxide

No data available.

Oxybis(methyl-2,1-ethanediyl) diacrylate

No data available.

Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-

No data available.

Ethoxylated phenyl acrylate

No data available.

2-phenoxyethanol

No data available.

2-[[[(Butylamino)carbonyl]oxy]ethyl acrylate

No data available.

2-Hydroxy-2-methylpropiophenone

No data available.

Oligo[2-hydroxy-2-methyl-1-[4-(1-methylvinyl)phenyl]propanone

No data available.

caprolactam

No data available.

2,4,6-trimethylbenzophenone

No data available.

VERJET F2 MAGENTA**2,6-bis(1,1-dimethylethyl)-4-methyl-phenol**

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

Components**Phenoxyethylacrylate**

No data available.

N-vinyl caprolactam

No data available.

Titanium dioxide

No data available.

Oxybis(methyl-2,1-ethanediyl) diacrylate

No data available.

Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-

No data available.

Ethoxylated phenyl acrylate

No data available.

2-phenoxyethanol

No data available.

2-[[[(Butylamino)carbonyl]oxy]ethyl acrylate

No data available.

2-Hydroxy-2-methylpropiophenone

No data available.

Oligo[2-hydroxy-2-methyl-1-[4-(1-methylvinyl)phenyl]propanone

No data available.

caprolactam

No data available.

2,4,6-trimethylbenzophenone

No data available.

2,6-bis(1,1-dimethylethyl)-4-methyl-phenol

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

Contaminated Packaging:

Dispose in accordance with all applicable regulations.

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: (-)

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 No data available.

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 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

EU. REACH Candidate List of Substances of Very High Concern for Authorization (SVHC): none

EU. REACH Annex XIV, Substances Subject to Authorization: none

Regulation (EC) No. 1907/2006 Annex XVII Substances subject to restriction on marketing and use:

Chemical name	CAS-No.	Concentration
Tetrahydrofurfuryl alcohol	97-99-4	0.1 - 1.0%
Heptane	142-82-5	- <0.1%

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. 649/2012 Import and export of dangerous chemicals: 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.

Chemical name	CAS-No.	Concentration
Tetrahydrofurfuryl alcohol	97-99-4	0.1 - 1.0%
Hydroquinone	123-31-9	0 - <0.1%

EU. Directive 2012/18/EU (SEVESO III) on major accident hazards involving dangerous substances, Annex I:

Classification	Lower-tier Requirements	Upper-tier Requirements
E2. Hazardous to the aquatic environment	200 t	500 t

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

Chemical name	CAS-No.	Concentration
Titanium dioxide	13463-67-7	10 - 20%

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%
Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	75980-60-8	1.0 - 10%
Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	162881-26-7	1.0 - 10%
2-phenoxyethanol	122-99-6	0.1 - 1.0%
Hexamethylene diacrylate	13048-33-4	0.1 - 1.0%
Tetrahydrofurfuryl alcohol	97-99-4	0.1 - 1.0%
caprolactam	105-60-2	0.1 - 1.0%
Heptane	142-82-5	0 - <0.1%
Hydroquinone	123-31-9	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	
Abbreviations and acronyms	
Note A	Without prejudice to Article 17(2), the name of the substance must appear on the label in the form of one of the designations given in Part 3. In Part 3, use is sometimes made of a general description such as '...compounds' or '...salts'. In this case, the supplier is required to state on the label the correct name, due account being taken to Paragraph 1.1.1.4
ADR	Accord européen relatif au transport international des marchandises Dangereuses par Route
ADNR	Accord européen relatif au transport international des marchandises Dangereuses par la Rhin
AGW	Arbeitsplatzgrenswerte (DE)
ATEmix	Acute toxicity estimate of the mixture
CLP	Classification, Labelling and Packaging of substances and mixtures
CMR	carcinogenicity, mutagenicity and toxicity for reproduction
DNEL	Derived No Effect Level
ECO	Effective Concentration 0%
EC5	Effective Concentration 5%
EC10	Effective Concentration 10%
EC50	Median Effective Concentration
EC100	Effective Concentration 100%
EH40 WEL	Workplace Exposure Limit (GB)
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
IC50	inhibitory concentration 50%
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
IUCLID	International Uniform Chemical Information Database
LC50	Lethal Concentration 50%
LC100	Lethal Concentration 100%
LOAEL	Lowest Observed Adverse Effect Level
LDL0	Lethal Dose (minimum found to be lethal)
LD50	Lethal Dose 50%
MAC	Maximaal Aanvaardbare Concentratie (NL)
MAK	Maximale Arbeitsplatz-Konzentration
NOAEL	No Observed Adverse Effect Level

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NOEL	No Observed Effect Level
NOEC	No Observed Effect Concentration
OEL	Occupational Exposure Limit
PBT	Persistent, Bioaccumulative and Toxic substance
PNEC	Predicted No Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Regulations concerning the International Transport of Dangerous Goods by Rail
STEL	Short Term Exposure Limit
TLV	Treshold Limit Value
TRGS900	Arbeitsplatzgrenswerte (DE)
TWA	Time Weighted Average
VOC	Volatile Organic Compound
vPvB	very Persistent and very Bioaccumulative substance

Key literature references and sources for data:

Safety Data Sheet from the supplier.

ECHA

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]

Classification according to Regulation (EC) No 1272/2008 as amended.	Classification procedure
Skin irritation, Category 2	Calculation method
Serious eye damage, Category 1	Calculation method
Skin sensitizer, Category 1	Calculation method
Toxic to reproduction, Category 2	Calculation method
Chronic hazards to the aquatic environment, Category 2	Calculation method

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.
H361d	Suspected of damaging the unborn child.
H361f	Suspected of damaging fertility.
H361fd	Suspected of damaging fertility. Suspected of damaging 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.

Training information:

Follow training instructions when handling this material.

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.