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Revision Number 2

**Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING****1.1. Product identifier**

<b>Product Code(s)</b>	SDS-06125 EN E
<b>Product Name</b>	VeroBlue, RGD840
<b>PN (Part Number)</b>	OBJ-02204, OBJ-03204, OBJ-04034, OBJ-06265
<b>Denmark PR No</b>	4123658
<b>Chemical name</b>	Acrylic formulation
<b>Pure substance/mixture</b>	Mixture

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

<b>Recommended Use</b>	Printing inks
<b>Uses advised against</b>	This product is a cartridge containing ink. Under normal conditions of use, the substance is released from a cartridge only inside an appropriate printing system, and therefore, exposure is limited

**1.3. Details of the supplier of the safety data sheet****Importer**

Stratasys EMEA Regional Office  
Airport Boulevard B 120  
77836 Rheinmünster, Germany  
Phone: +49-7229-7772-0

For further information, please contact

**E-mail address** info@Stratasys.com**1.4. Emergency telephone number****Emergency Telephone** +44 1235 239670 - Europe - Multi lingual response

<b>Austria</b>	Poison Information Centre (AT): +43-(0)1-406 43 43
<b>Belgium</b>	Poison Centre (BE): +32 70 245 245
<b>Croatia</b>	Poison Control (CR): +385 1 2348 342
<b>Czech Republic</b>	Poison Control (CS): +420 224 919 293, +420 224 915 402
<b>Denmark</b>	Poison Control Hotline (DK): +45 82 12 12 12
<b>Estonia</b>	Poison Control (ET): 16662, (+372) 626 93 90
<b>Finland</b>	Poison Information Centre (FI): +358 9 471 977
<b>France</b>	ORFILA (FR): + 01 45 42 59 59
<b>Germany</b>	Poison Centre Berlin (DE): +49 030 30686 790 (24 h service, Advice in German and English)
<b>Greece</b>	Poison Information Center (EL): (0030) 2107793777
<b>Hungary</b>	Poison Information Service (HU): (+ 36-80) 201-199

<b>Iceland</b>	Poison Information Center: 543 2222
<b>Italy</b>	Poison Centre, Milan (IT): +39 02 6610 1029
<b>Latvia</b>	Poison Information Center (LV): +371 67042473
<b>Lithuania</b>	Poison Information Office (LT): +370 5236 20 52 or +370 687 53 378
<b>Luxembourg</b>	Belgian Poison Center: (+352) 8002-5500
<b>Netherlands</b>	National Poisons Information Center (NVIC): 030-274 8888
<b>Norway</b>	Poison Center: 22 59 13 00
<b>Portugal</b>	Poison Information Centre (PT): +351 21 330 3284
<b>Spain</b>	Poison Information Service (ES): +34 91 562 04 20
<b>Sweden</b>	112 – ask for Poisons Information

## Section 2: HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture

**Regulation (EC) No 1272/2008**

<b>Skin corrosion/irritation</b>	Category 2 - (H315)
<b>Serious eye damage/eye irritation</b>	Category 1 - (H318)
<b>Skin sensitisation</b>	Category 1B - (H317)
<b>Specific target organ toxicity (single exposure)</b>	Category 3 - (H335)
<b>Specific target organ toxicity (repeated exposure)</b>	Category 2 - (H373)
<b>Acute aquatic toxicity</b>	Category 1 - (H400)
<b>Chronic aquatic toxicity</b>	Category 1 - (H410)

### 2.2. Label elements

Contains 4-(1-Oxo-2-propenyl)-morpholine, Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate, 2-Hydroxy-3-phenoxypropyl acrylate, 4,4'-isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid



#### Signal word

Danger

#### Hazard statements

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  
 H410 - Very toxic to aquatic life with long lasting effects

#### Precautionary Statements

P101 - If medical advice is needed, have product container or label at hand  
 P102 - Keep out of reach of children  
 P260 - Do not breathe dust/fume/gas/mist/vapours/spray  
 P271 - Use only outdoors or in a well-ventilated area  
 P273 - Avoid release to the environment  
 P280 - Wear protective gloves and eye/face protection  
 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 or doctor  
 P391 - Collect spillage  
 P405 - Store locked up  
 P501 - Dispose of contents/ container to an approved waste disposal plant

### 2.3. Other hazards

May be harmful if swallowed.

### Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.2 Mixtures

Chemical name	EC No	CAS No	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH Registration Number
Proprietary	Listed	-	10 - 30	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Skin Sens. 1B (H317) STOT SE 3 (H335) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	17-2120129664-54-0000
Proprietary	Listed	-	10 - 30	Acute Tox. 4 (H302) Eye Dam. 1 (H318) Skin Sens. 1 (H317) STOT RE 2 (H373)	17-2120129668-46-0000
Proprietary	Listed	-	10 - 30	Skin Sens. 1B (H317)	No data available
Proprietary	Not Listed	-	3-10	Skin Sens. 1 (H317)	No data available
Proprietary	Listed	-	1-3	Skin Sens. 1B (H317) Aquatic Chronic 2 (H411)	No data available
Proprietary	Listed	-	0.3-1	Skin Sens. 1 (H317) Aquatic Chronic 4 (H413)	No data available
Titanium dioxide	236-675-5	13463-67-7	0.1 - 0.3	Not classified	No data available
camphene	201-234-8	79-92-5	0.1 - 0.3	Flam. Sol. 2 (H228) Eye Irrit. 2 (H319) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	No data available
Ethoxylated Trimethylolpropane Triacrylate	-	28961-43-5	0.1 - 0.3	Skin Sens. 1B (H317) Eye Irrit. 2 (H319)	No data available
Acrylic acid	201-177-9	79-10-7	0.1 - 0.3	Flam. Liq. 3 (H226) Acute Tox. 4 (H302) Acute Tox. 4 (H312) Acute Tox. 4 (H332) Skin Corr. 1A (H314) Eye Dam. 1 (H318) STOT SE 3 (H335) Aquatic Acute 1 (H400) Aquatic Chronic 2 (H411)	No data available
Glycerol, propoxylated, esters with acrylic acid	500-114-5	52408-84-1	0.1 - 0.3	Skin Sens. 1 (H317) Eye Irrit. 2 (H319)	No data available
1,7,7-Trimethyltricyclo[2.2.1.0 <sup>2,6</sup> ]heptane	208-083-7	508-32-7	0.1 - 0.3	Eye Irrit. 2 (H319) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	No data available
Aluminium Hydroxide	-	21645-51-2	<0.1	Not classified	No data available
4-Methoxyphenol	205-769-8	150-76-5	<0.1	Acute Tox. 4 (H302) Eye Irrit. 2 (H319) Skin Sens. 1 (H317) Repr. 2 (H361d) Aquatic Chronic 3 (H412)	No data available
2-methoxy-1-methylethyl acetate	203-603-9	108-65-6	<0.1	Flam. Liq. 3 (H226) STOT SE 3 (H336)	No data available
2,3-Epoxypropyl phenyl ether	204-557-2	122-60-1	<0.1	Acute Tox. 4 (H332) Skin Irrit. 2 (H315) Skin Sens. 1 (H317) Muta. 2 (H341) Carc. 1B (H350) STOT SE 3 (H335) Aquatic Chronic 3 (H412)	No data available
Phosphoric acid	231-633-2	7664-38-2	<0.1	Skin Corr. 1B (H314)	No data available

				Eye Dam. 1 (H318)	
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Full text of H- and EUH-phrases: see section 16

## Section 4: FIRST AID MEASURES

### 4.1. Description of first aid measures

<b>General advice</b>	Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.
<b>Inhalation</b>	Remove to fresh air. Get medical attention immediately if symptoms occur. IF exposed or concerned: Get medical advice/attention.
<b>Eye contact</b>	Get immediate medical advice/attention. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water for at least 15 minutes. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a doctor.
<b>Ingestion</b>	Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a doctor.
<b>Self-protection of the first aider</b>	Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).

### 4.2. Most important symptoms and effects, both acute and delayed

<b>Symptoms</b>	Burning sensation. Itching. Rashes. Hives.
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### 4.3. Indication of any immediate medical attention and special treatment needed

<b>Note to doctors</b>	May cause sensitisation in susceptible persons. Treat symptomatically.
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## Section 5: FIRE-FIGHTING MEASURES

### 5.1. Extinguishing media

<b>Suitable Extinguishing Media</b>	Use extinguishing agent suitable for type of surrounding fire Class B fires: Use carbon dioxide (CO <sub>2</sub> ), regular dry chemical (sodium bicarbonate), regular foam (Aqueous Film Forming Foam-AFFF), or water spray to cool containers
<b>Unsuitable extinguishing media</b>	No information available.

### 5.2. Special hazards arising from the substance or mixture

<b>Specific hazards arising from the chemical</b>	Product is or contains a sensitiser. May cause sensitisation by skin contact.
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### 5.3. Advice for firefighters

<b>Special protective equipment for fire-fighters</b>	Move containers from fire area if you can do it without risk. Cool containers with flooding quantities of water until well after fire is out. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Keep out of drains, sewers, ditches and waterways. Inhalation is a health risk. Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.
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## Section 6: ACCIDENTAL RELEASE MEASURES

### 6.1. Personal precautions, protective equipment and emergency procedures

<b>Personal precautions</b>	Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Ensure adequate ventilation. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
<b>Occupational Spill Release</b>	Intact cartridges do not pose a leak or spill hazard. Damaged cartridges may leak uncured ink. Stop leak if you can do it without risk Use water spray to reduce vapours or divert vapour cloud drift Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container Keep out of drains, sewers, ditches and waterways
<b>Other Information</b>	Refer to protective measures listed in Sections 7 and 8.
<b>For emergency responders</b>	Use personal protection recommended in Section 8.

### 6.2. Environmental precautions

<b>Environmental precautions</b>	Prevent further leakage or spillage if safe to do so.
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### 6.3. Methods and material for containment and cleaning up

<b>Methods for containment</b>	Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.
<b>Methods for cleaning up</b>	Take up mechanically, placing in appropriate containers for disposal.
<b>Prevention of secondary hazards</b>	Clean contaminated objects and areas thoroughly observing environmental regulations.

### 6.4. Reference to other sections

<b>Reference to other sections</b>	See section 8 for more information. See section 13 for more information.
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## Section 7: HANDLING AND STORAGE

### 7.1. Precautions for safe handling

<b>Advice on safe handling</b>	Do not eat, drink or smoke when using this product. Avoid breathing vapours or mists. Wash thoroughly after handling. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Use only outdoors or in a well-ventilated area. Wear protective gloves and eye/face protection. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment.
<b>General hygiene considerations</b>	Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product.

### 7.2. Conditions for safe storage, including any incompatibilities

<b>Storage Conditions</b>	Store in a cool, dry area away from potential sources of heat, open flames, sunlight or other chemicals. Store in a cool, well ventilated area. Store in accordance with local regulations. Keep container tightly closed. Store between 15 °C and 27 °C. Shipment temperature (up to 5 weeks) is -20 °C to 50 °C. Store in a combustible storage area away from heat and open flame.
<b>Hints on joint storage</b>	
<b>Storage class</b>	LGK10 - Combustible liquids unless storage class 3

### 7.3. Specific end use(s)

**Risk Management Methods (RMM)** The information required is contained in this Material Safety Data Sheet.

## Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**Exposure disclaimer** Personal protection measures are only needed if cartridge is damaged punctured causing spillage of material.

### 8.1. Control parameters

#### Exposure Limits

Chemical name	European Union	United Kingdom	France	Spain	Germany
Titanium dioxide 13463-67-7	-	TWA: 10 mg/m <sup>3</sup> TWA: 4 mg/m <sup>3</sup> STEL: 30 mg/m <sup>3</sup> STEL: 12 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup>	-
camphene 79-92-5	-	-	TWA: 1000 mg/m <sup>3</sup> STEL: 1500 mg/m <sup>3</sup>	-	-
Acrylic acid 79-10-7	-	-	TWA: 2 ppm TWA: 6 mg/m <sup>3</sup> STEL: 10 ppm STEL: 30 mg/m <sup>3</sup>	TWA: 2 ppm TWA: 6 mg/m <sup>3</sup> vía dérmica*	TWA: 10 ppm TWA: 30 mg/m <sup>3</sup>
1,7,7-Trimethyltricyclo[2.2.1.0 <sup>2,6</sup> ]heptane 508-32-7	-	-	TWA: 1000 mg/m <sup>3</sup> STEL: 1500 mg/m <sup>3</sup>	-	-
Aluminium Hydroxide 21645-51-2	-	TWA: 10 mg/m <sup>3</sup> TWA: 4 mg/m <sup>3</sup>	-	-	-
4-Methoxyphenol 150-76-5	-	-	TWA: 5 mg/m <sup>3</sup>	TWA: 5 mg/m <sup>3</sup>	-
2-methoxy-1-methylethyl acetate 108-65-6	TWA 50 ppm TWA 275 mg/m <sup>3</sup> STEL 100 ppm STEL 550 mg/m <sup>3</sup> *	TWA: 50 ppm TWA: 274 mg/m <sup>3</sup> STEL: 100 ppm STEL: 548 mg/m <sup>3</sup> Sk*	TWA: 50 ppm TWA: 275 mg/m <sup>3</sup> STEL: 100 ppm STEL: 550 mg/m <sup>3</sup> *	TWA: 50 ppm TWA: 275 mg/m <sup>3</sup> STEL: 100 ppm STEL: 550 mg/m <sup>3</sup> vía dérmica*	TWA: 50 ppm TWA: 270 mg/m <sup>3</sup>
2,3-Epoxypropyl phenyl ether 122-60-1	-	-	TWA: 1 ppm TWA: 6 mg/m <sup>3</sup>	TWA: 0.1 ppm TWA: 0.62 mg/m <sup>3</sup> vía dérmica*	-
Phosphoric acid 7664-38-2	TWA 1 mg/m <sup>3</sup> STEL 2 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup> STEL: 2 mg/m <sup>3</sup>	TWA: 0.2 ppm TWA: 1 mg/m <sup>3</sup> STEL: 0.5 ppm STEL: 2 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup> STEL: 2 mg/m <sup>3</sup>	TWA: 2 mg/m <sup>3</sup>
Chemical name	Italy	Portugal	Netherlands	Finland	Denmark
Titanium dioxide 13463-67-7	-	TWA: 10 mg/m <sup>3</sup>	-	-	TWA: 6 mg/m <sup>3</sup>
Acrylic acid 79-10-7	-	TWA: 2 ppm P*	-	TWA: 2 ppm TWA: 6 mg/m <sup>3</sup> STEL: 15 ppm STEL: 45 mg/m <sup>3</sup>	TWA: 2 ppm TWA: 5.9 mg/m <sup>3</sup> H*
4-Methoxyphenol 150-76-5	-	TWA: 5 mg/m <sup>3</sup>	-	-	TWA: 5 mg/m <sup>3</sup>
2-methoxy-1-methylethyl acetate 108-65-6	TWA: 50 ppm TWA: 275 mg/m <sup>3</sup> STEL: 100 ppm STEL: 550 mg/m <sup>3</sup> pelle*	TWA: 50 ppm TWA: 275 mg/m <sup>3</sup> STEL: 100 ppm STEL: 550 mg/m <sup>3</sup> P*	TWA: 550 mg/m <sup>3</sup>	TWA: 50 ppm TWA: 270 mg/m <sup>3</sup> STEL: 100 ppm STEL: 550 mg/m <sup>3</sup> iho*	TWA: 50 ppm TWA: 275 mg/m <sup>3</sup> H*
2,3-Epoxypropyl phenyl ether 122-60-1	-	TWA: 0.1 ppm P*	-	TWA: 0.5 ppm TWA: 3.1 mg/m <sup>3</sup> iho*	TWA: 0.1 ppm TWA: 0.6 mg/m <sup>3</sup> H*

Phosphoric acid 7664-38-2	TWA: 1 mg/m <sup>3</sup> STEL: 2 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup> STEL: 3 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup> STEL: 2 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup> STEL: 2 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup>
<b>Chemical name</b>	<b>Austria</b>	<b>Switzerland</b>	<b>Poland</b>	<b>Norway</b>	<b>Ireland</b>
Titanium dioxide 13463-67-7	TWA: 5 mg/m <sup>3</sup> STEL 10 mg/m <sup>3</sup>	TWA: 3 mg/m <sup>3</sup>	STEL: 30 mg/m <sup>3</sup> TWA: 10.0 mg/m <sup>3</sup> TWA: 10 mg/m <sup>3</sup>	TWA: 5 mg/m <sup>3</sup> STEL: 10 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup> TWA: 4 mg/m <sup>3</sup> STEL: 30 mg/m <sup>3</sup> STEL: 12 mg/m <sup>3</sup>
Acrylic acid 79-10-7	-	TWA: 10 ppm TWA: 30 mg/m <sup>3</sup> STEL: 10 ppm STEL: 30 mg/m <sup>3</sup>	STEL: 29.5 mg/m <sup>3</sup> TWA: 10 mg/m <sup>3</sup>	TWA: 10 ppm TWA: 30 mg/m <sup>3</sup> STEL: 15 ppm STEL: 45 mg/m <sup>3</sup>	TWA: 2 ppm TWA: 6 mg/m <sup>3</sup> STEL: 6 ppm STEL: 18 mg/m <sup>3</sup>
Aluminium Hydroxide 21645-51-2	TWA: 5 mg/m <sup>3</sup> STEL 10 mg/m <sup>3</sup>	TWA: 3 mg/m <sup>3</sup>	TWA: 2.5 mg/m <sup>3</sup> TWA: 1.2 mg/m <sup>3</sup>	-	TWA: 10 mg/m <sup>3</sup> TWA: 4 mg/m <sup>3</sup> STEL: 30 mg/m <sup>3</sup> STEL: 12 mg/m <sup>3</sup>
4-Methoxyphenol 150-76-5	TWA: 5 mg/m <sup>3</sup> STEL 10 mg/m <sup>3</sup>	-	TWA: 5 mg/m <sup>3</sup>	TWA: 5 mg/m <sup>3</sup> STEL: 10 mg/m <sup>3</sup>	TWA: 5 mg/m <sup>3</sup> STEL: 15 mg/m <sup>3</sup>
2-methoxy-1-methylethyl acetate 108-65-6	TWA: 50 ppm TWA: 275 mg/m <sup>3</sup> STEL 100 ppm STEL 550 mg/m <sup>3</sup> H*	TWA: 50 ppm TWA: 275 mg/m <sup>3</sup> STEL: 50 ppm STEL: 275 mg/m <sup>3</sup>	STEL: 520 mg/m <sup>3</sup> TWA: 260 mg/m <sup>3</sup>	TWA: 50 ppm TWA: 270 mg/m <sup>3</sup> STEL: 75 ppm STEL: 337.5 mg/m <sup>3</sup> H*	TWA: 50 ppm TWA: 275 mg/m <sup>3</sup> STEL: 100 ppm STEL: 550 mg/m <sup>3</sup> Sk*
2,3-Epoxypropyl phenyl ether 122-60-1	H*	TWA: 1 ppm TWA: 6 mg/m <sup>3</sup> H*	STEL: 3 mg/m <sup>3</sup> TWA: 0.6 mg/m <sup>3</sup>	TWA: 1 ppm TWA: 5 mg/m <sup>3</sup> STEL: 2 ppm STEL: 10 mg/m <sup>3</sup>	TWA: 0.1 ppm TWA: 0.6 mg/m <sup>3</sup> STEL: 0.3 ppm STEL: 1.8 mg/m <sup>3</sup>
Phosphoric acid 7664-38-2	TWA: 1 mg/m <sup>3</sup> STEL 2 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup> STEL: 2 mg/m <sup>3</sup>	STEL: 2 mg/m <sup>3</sup> TWA: 1 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup> STEL: 2 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup> STEL: 2 mg/m <sup>3</sup>

**Derived No Effect Level (DNEL)** No information available.

**Predicted No Effect Concentration (PNEC)** No information available.

## 8.2. Exposure controls

### Personal protective equipment

**Eye/face protection** Tight sealing safety goggles.

**Hand Protection** Wear suitable gloves. Impervious gloves.

**Skin and body protection** Wear suitable protective clothing. Long sleeved clothing.

**Respiratory protection** No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

**General hygiene considerations** Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product.

**Environmental exposure controls** No information available.

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on basic physical and chemical properties

**Physical state** liquid  
**Appearance** Ink cartridge  
**Odour** Characteristic

**Colour** blue  
**Odour threshold** No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>pH</b>	N/A	
<b>Melting point / freezing point</b>	No data available	None known
<b>Boiling point / boiling range</b>	No data available	None known
<b>Flash point</b>	>= 100 - < 250 °C	
<b>Evaporation rate</b>	No data available	None known
<b>Flammability (solid, gas)</b>	No data available	None known
<b>Flammability Limit in Air</b>		None known
<b>Upper flammability limit:</b>	No data available	
<b>Lower flammability limit</b>	No data available	
<b>Vapour pressure</b>	No data available	None known
<b>Vapour density</b>	No data available	None known
<b>Relative density</b>	1.10	g/cm <sup>3</sup>
<b>Water solubility</b>	Insoluble in water	
<b>Solubility(ies)</b>	No data available	None known
<b>Partition coefficient</b>	No data available	None known
<b>Autoignition temperature</b>	No data available	None known
<b>Decomposition temperature</b>	No data available	None known
<b>Kinematic viscosity</b>	No data available	None known
<b>Dynamic viscosity</b>	No data available	None known
<b>Explosive properties</b>	No information available	
<b>Oxidising properties</b>	No information available	

## 9.2. Other information

**Softening point** No information available  
**Molecular weight** No information available  
**VOC Content (%)** No information available  
**Liquid Density** No information available  
**Bulk density** No information available  
**Particle Size** No information available  
**Particle Size Distribution** No information available

## Section 10: STABILITY AND REACTIVITY

### 10.1. Reactivity

**Reactivity** Heating may cause a fire.

### 10.2. Chemical stability

**Stability** Decomposes on exposure to light. Unstable if heated.

#### **Explosion data**

**Sensitivity to Mechanical Impact** None.

**Sensitivity to Static Discharge** None.

### 10.3. Possibility of hazardous reactions

**Possibility of hazardous reactions** Uncured ink will polymerize on exposure to light.

### 10.4. Conditions to avoid

**Conditions to avoid** Avoid exposure to heat and light.

### 10.5. Incompatible materials

**Incompatible materials** Not applicable under normal conditions of use and storage.



**10.6. Hazardous decomposition products**

**Hazardous decomposition products** Thermal Decomposition Products. Combustion: oxides of carbon.

**Section 11: TOXICOLOGICAL INFORMATION****11.1. Information on toxicological effects****Information on likely routes of exposure****Product Information**

<b>Inhalation</b>	May cause irritation of respiratory tract. (based on components).
<b>Eye contact</b>	Severely irritating to eyes. Causes serious eye damage. May cause burns. May cause irreversible damage to eyes. (based on components).
<b>Skin contact</b>	May cause sensitisation by skin contact. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components). Causes skin irritation.
<b>Ingestion</b>	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. (based on components).

**Information on toxicological effects**

**Symptoms** Redness. Burning. May cause blindness. Itching. Rashes. Hives. May cause redness and tearing of the eyes.

**Numerical measures of toxicity****Acute toxicity**

The following values are calculated based on chapter 3.1 of the GHS document

**ATEmix (oral)** 2,043.30 mg/kg mg/l

**Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Proprietary	= 4890 mg/kg ( Rat )	> 3000 mg/kg ( Rabbit )	-
Proprietary	= 588 mg/kg (rat)	> 2000 mg/kg (rat)	= 5.28 mg/l (rat)
Proprietary	(Rat) LD50 = 1,590 - 3,910 mg/kg	(Rabbit) LD50 = > 2,000 mg/kg	(Rat) 1 h LC0 = 6.7 mg/l
Proprietary	>2000 mg/kg (Rat)	>2000 mg/kg	-
Proprietary	= 2.000 mg/kg (Rat) (Method: OECD Test Guideline 423)	= 2.000 mg/kg (Rat)(Method: OECD Test Guideline 402)	-
Titanium dioxide	> 10000 mg/kg > 10000 mg/kg ( Rat )	-	-
camphene	> 5 g/kg ( Rat )	> 2500 mg/kg ( Rabbit )	= 17100 mg/m <sup>3</sup> ( Rat ) 1 h
Ethoxylated Trimethylolpropane Triacrylate	-	> 13 g/kg ( Rabbit )	-
Acrylic acid	= 193 mg/kg ( Rat ) = 33500 µg/kg ( Rat )	= 295 mg/kg ( Rabbit ) = 280 µL/kg ( Rabbit )	= 3.6 mg/L ( Rat ) 4 h = 11.1 mg/L ( Rat ) 1 h
Aluminium Hydroxide	> 5000 mg/kg ( Rat )	-	-
4-Methoxyphenol	= 1600 mg/kg ( Rat )	> 2000 mg/kg ( Rabbit )	-
2-methoxy-1-methylethyl acetate	= 8532 mg/kg ( Rat )	> 5 g/kg ( Rabbit )	-
2,3-Epoxypropyl phenyl ether	= 2600 mg/kg = 3850 mg/kg = 2600 mg/kg ( Rat ) = 3850 mg/kg ( Rat )	= 1500 mg/kg ( Rabbit ) = 1500 µL/kg ( Rabbit )	> 100 ppm ( Rat ) 8 h

Phosphoric acid	= 1530 mg/kg ( Rat )	= 2740 mg/kg ( Rabbit )	> 850 mg/m <sup>3</sup> ( Rat ) 1 h
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**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

<b>Skin corrosion/irritation</b>	Classification based on data available for ingredients. Irritating to skin.
<b>Serious eye damage/eye irritation</b>	Classification based on data available for ingredients. Causes burns. Risk of serious damage to eyes.
<b>Respiratory or skin sensitisation</b>	May cause sensitisation by skin contact. Classification based on data available for ingredients.

**Germ cell mutagenicity**

The table below indicates ingredients above the cut-off threshold considered as relevant which are listed as mutagenic.

Chemical name	European Union
2,3-Epoxypropyl phenyl ether	Muta. 2

**Carcinogenicity**

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	European Union
2,3-Epoxypropyl phenyl ether	Carc. 1B

<b>Reproductive toxicity</b>	No information available.
<b>STOT - single exposure</b>	Classification based on data available for ingredients.
<b>STOT - repeated exposure</b>	Classification based on data available for ingredients.
<b>Aspiration hazard</b>	No information available.

## Section 12: ECOLOGICAL INFORMATION

**12.1. Toxicity**

<b>Ecotoxicity</b>	Very toxic to aquatic life with long lasting effects
<b>Unknown aquatic toxicity</b>	Contains 0 % of components with unknown hazards to the aquatic environment.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Proprietary	1.98 mg/l Fresh water	0.704 mg/l Fresh water	-	0.524 mg/l Fresh water
Proprietary	120 mg/l (algae)	-	-	120 mg/kg (daphnia)
Proprietary	Pseudokirchneriella subcapitata (green algae) 96 h EC50 = 0.17 mg/l	Oncorhynchus mykiss (rainbow trout) 96 h LC50 = 27 mg/l	-	Daphnia magna (Water flea) 48 h EC50 = 95 mg/l
Proprietary	(Pseudokirchneriella subcapitata) : 1,6 mg/l (Method: OECD Test Guideline 201)	(Fish) : 4,95 mg/l	-	(Daphnia magna Straus) : 2,36 mg/l (Method: OECD Test Guideline 202)
camphene	1000: 72 h Desmodesmus subspicatus mg/L EC50	0.72: 96 h Brachydanio rerio mg/L LC50 flow-through 150: 96 h Brachydanio rerio mg/L LC50 static	-	22: 48 h Daphnia magna mg/L EC50
Acrylic acid	0.04: 72 h Desmodesmus subspicatus mg/L EC50 0.17: 96 h Pseudokirchneriella subcapitata mg/L EC50	222: 96 h Brachydanio rerio mg/L LC50 semi-static	-	95: 48 h Daphnia magna mg/L EC50 270: 24 h Daphnia magna mg/L LC50 Static
4-Methoxyphenol	-	28.5: 96 h Oncorhynchus	-	-

		mykiss mg/L LC50 flow-through 84.3: 96 h Pimephales promelas mg/L LC50 flow-through		
2-methoxy-1-methylethyl acetate	-	161: 96 h Pimephales promelas mg/L LC50 static	-	500: 48 h Daphnia magna mg/L EC50
2,3-Epoxypropyl phenyl ether	-	43: 96 h Carassius auratus mg/L LC50 static	-	-
Phosphoric acid	-	3 - 3.5: 96 h Gambusia affinis mg/L LC50	-	4.6: 12 h Daphnia magna mg/L EC50

**12.2. Persistence and degradability**

**Persistence and degradability** No information available.

**12.3. Bioaccumulative potential**

**Bioaccumulation** There is no data for this product.

**Component Information**

Chemical name	Partition coefficient
Acrylic acid	0.46
4-Methoxyphenol	1.3
2-methoxy-1-methylethyl acetate	0.43

**12.4. Mobility in soil**

**Mobility in soil** No information available.

**12.5. Results of PBT and vPvB assessment**

**PBT and vPvB assessment** No information available.

**12.6. Other adverse effects**

**Other adverse effects** No information available.

## Section 13: DISPOSAL CONSIDERATIONS

**13.1. Waste treatment methods**

**Waste from residues/unused products** Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging** Do not reuse empty containers.

**Waste codes / waste designations according to EWC / AVV** 08 03 12\* Waste ink containing dangerous substances.

## Section 14: TRANSPORT INFORMATION

**Additional information** The environmentally hazardous substance mark is not required when transported in sizes of ≤5L or ≤5kg  
The marine pollutant mark is not required when transported in sizes of ≤5L or ≤5kg

**IMDG**

<b>14.1 UN Number</b>	UN3082
<b>14.2 UN proper shipping name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
<b>14.3 Transport hazard class(es)</b>	9
<b>14.4 Packing group</b>	III
<b>Description</b>	UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate, camphene), 9, III, Marine pollutant
<b>14.5 Marine pollutant</b>	This product contains a chemical which is listed as a severe marine pollutant according to IMDG/IMO
<b>Environmental Hazard</b>	Yes
<b>14.6 Special Provisions</b>	274, 335, 969
<b>EmS-No</b>	F-A, S-F
<b>14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	No information available

**RID**

<b>14.1 UN Number</b>	UN3082
<b>14.2 UN proper shipping name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
<b>14.3 Transport hazard class(es)</b>	9
<b>Labels</b>	9
<b>14.4 Packing group</b>	III
<b>Description</b>	UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate, camphene), 9, III
<b>14.5 Environmental Hazard</b>	Yes
<b>14.6 Special Provisions</b>	274, 335, 375, 601
<b>Classification code</b>	M6

**ADR**

<b>14.1 UN Number</b>	UN3082
<b>14.2 UN proper shipping name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
<b>14.3 Transport hazard class(es)</b>	9
<b>Labels</b>	9
<b>14.4 Packing group</b>	III
<b>Description</b>	UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate, camphene), 9, III
<b>14.5 Environmental Hazard</b>	Yes
<b>14.6 Special Provisions</b>	274, 335, 601, 375
<b>Classification code</b>	M6
<b>Tunnel restriction code</b>	(E)

**IATA**

<b>14.1 UN Number</b>	UN3082
<b>14.2 UN proper shipping name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
<b>14.3 Transport hazard class(es)</b>	9
<b>14.4 Packing group</b>	III
<b>Description</b>	UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate, camphene), 9, III
<b>14.5 Environmental Hazard</b>	Yes
<b>14.6 Special Provisions</b>	A97, A158, A197
<b>ERG Code</b>	9L



## Section 15: REGULATORY INFORMATION

**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations****France****Occupational Illnesses (R-463-3, France)**

Chemical name	French RG number	Title
4-Methoxyphenol 150-76-5	RG 65	-
2-methoxy-1-methylethyl acetate 108-65-6	RG 84	-

**Germany**

**Water hazard class (WGK)**      hazardous to water (WGK 2)

**European Union**

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

**Authorisations and/or restrictions on use:**

This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Chemical name	Restricted substance per REACH Annex XVII	Substance subject to authorisation per REACH Annex XIV
2,3-Epoxypropyl phenyl ether - 122-60-1	28.	

**Persistent Organic Pollutants**

Not applicable

**Dangerous substance category per Seveso Directive (2012/18/EU)**

E1 - Hazardous to the Aquatic Environment in Category Acute 1 or Chronic 1

**Ozone-depleting substances (ODS) regulation (EC) 1005/2009** Not applicable

**15.2. Chemical safety assessment****Chemical Safety Report**

No information available

**Section 16: OTHER INFORMATION****Key or legend to abbreviations and acronyms used in the safety data sheet****Full text of H-Statements referred to under section 3**

H226 - Flammable liquid and vapour  
H228 - Flammable solid  
H302 - Harmful if swallowed  
H312 - Harmful in contact with skin  
H314 - Causes severe skin burns and eye damage  
H315 - Causes skin irritation  
H317 - May cause an allergic skin reaction  
H318 - Causes serious eye damage  
H319 - Causes serious eye irritation  
H332 - Harmful if inhaled  
H335 - May cause respiratory irritation  
H336 - May cause drowsiness or dizziness  
H341 - Suspected of causing genetic defects  
H350 - May cause cancer  
H361d - Suspected of damaging the unborn child

H373 - May cause damage to organs through prolonged or repeated exposure  
 H400 - Very toxic to aquatic life  
 H410 - Very toxic to aquatic life with long lasting effects  
 H411 - Toxic to aquatic life with long lasting effects  
 H412 - Harmful to aquatic life with long lasting effects  
 H413 - May cause long lasting harmful effects to aquatic life

**Legend**

SVHC: Substances of Very High Concern for Authorisation:

**Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA TWA (time-weighted average) STEL STEL (Short Term Exposure Limit)  
 Ceiling Maximum limit value \* Skin designation

Classification procedure	
Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - Vapor	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitisation	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method
Acute aquatic toxicity	Calculation method
Chronic aquatic toxicity	Calculation method
Aspiration toxicity	Calculation method
Ozone	Calculation method

Revision Date 07-Feb-2019

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

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End of Safety Data Sheet