

This safety data sheet complies with the requirements of:  
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Issuing Date 14-Feb-2017

Revision Date 28-Nov-2016

## Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1. Product identifier

**Product Code(s)** SDS-06182 BE E  
**Denmark PR No** N/A  
**Product Name** RGD515 Plus / RGD515 Plus B / RGD515 Plus-L  
**Chemical name** Acrylic formulation  
**Pure substance/mixture** Mixture

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

**Recommended Use** Printing inks  
**Uses advised against** 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**

- +49 722 97772280 - Europe - Multi lingual response
- +49 722 97772281 - Global – English Language response
- +1 978 495 5580 - USA – Multi-lingual response
- +85 2 975 70887 - Asia Pacific - Multi lingual response
- +61 2 8011 4763 - Australia - Multi lingual response
- +86 15626070595 - China - Chinese response

## Section 2: HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture

*Regulation (EC) No 1272/2008*

Acute toxicity - Oral	Category 4 - (H302)
Skin corrosion/irritation	Category 2 - (H315)
Serious eye damage/eye irritation	Category 1 - (H318)

Skin sensitisation	Category 1A - (H317)
Specific target organ toxicity (single exposure)	Category 3 - (H335)
Specific target organ toxicity (repeated exposure)	Category 2 - (H373)
Chronic aquatic toxicity	Category 2 - (H411)

**2.2. Label elements**

Contains 4-(1-Oxo-2-propenyl)-morpholine, Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate, (Octahydro-4,7-methano-1H-indenediyl)bis(methylene)diacrylate, (5-ethyl-1,3-dioxan-5-yl)methyl acrylate



**Signal word**

Danger

**Hazard statements**

- H302 - Harmful if swallowed
- H315 - Causes skin irritation
- H317 - May cause an allergic skin reaction
- H318 - Causes serious eye damage
- H335 - May cause respiratory irritation
- H373 - May cause damage to organs through prolonged or repeated exposure
- H411 - Toxic to aquatic life with long lasting effects Contains Trimethylolpropane triacrylate, Glycerol, propoxylated, esters with acrylic acid, Acrylic acid, 2-hydroxyethyl ester May produce an allergic reaction.

**Precautionary Statements - EU (§28, 1272/2008)**

- 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
- P280 - Wear eye protection/ face protection
- P405 - Store locked up
- P271 - Use only outdoors or in a well-ventilated area
- 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
- P314 - Get medical advice/attention if you feel unwell
- P501 - Dispose of contents/container to industrial incineration plant

**Additional information**

This product requires tactile warnings if supplied to the general public

**2.3. Other hazards**

May be harmful in contact with skin. Toxic to aquatic life.

**Section 3: COMPOSITION/INFORMATION ON INGREDIENTS**

**3.1 Substances**

Chemical name	EC No	CAS No	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH Registration Number
Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	227-561-6	5888-33-5	20 - 30	Skin Sens. 1 (H317) Aquatic Chronic 1 (H410) STOT SE 3 (H335)	17-2120129664-54-0000
Proprietary	Not Listed	-	20 - 30	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319)	No data available

4-(1-Oxo-2-propenyl)-morpholine	418-140-1	5117-12-4	10 - 20	Acute Tox. 4 (H302) Eye Dam. 1 (H318) Skin Sens. 1 (H317) STOT RE 2 (H373)	17-2120129668-46 -0000
Proprietary	Not Listed	-	5 - 10	Eye Irrit. 2 (H319)	No data available
Proprietary	Listed	-	3 - 5	Skin Sens. 1 (H317) Aquatic Chronic 2 (H411)	17-2120129659-45 -0000
Proprietary	Listed	-	3 - 5	Skin Irrit. 2 (H315) Skin Sens. 1B (H317) Aquatic Chronic 2 (H411)	No data available
Tripropylene glycol diacrylate	256-032-2	42978-66-5	1-3	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Skin Sens. 1 (H317) STOT SE 3 (H335) Aquatic Chronic 2 (H411)	No data available
Proprietary	Listed	-	1-3	Repr. 2 (H361) Skin Sens. 1B (H317) Aquatic Chronic 2 (H411)	01-2119972295-29 -0000
Trimethylolpropane triacrylate	239-701-3	15625-89-5	0.1 - 1	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Skin Sens. 1A (H317)	No data available
Glycerol, propoxylated, esters with acrylic acid	-	52408-84-1	0.1 - 1	Skin Sens. 1 (H317) Eye Irrit. 2 (H319)	No data available
Acrylic acid, 2-hydroxyethyl ester	212-454-9	818-61-1	< 0.05	Acute Tox. 3 (H311) Skin Corr. 1B (H314) Skin Sens. 1 (H317) Aquatic Acute 1 (H400)	17-2120129649-46 -0000
TOLUENE	203-625-9	108-88-3	< 0.05	Skin Irrit. 2 (H315) Repr. 2 (H361d) STOT SE 3 (H336) STOT RE 2 (H373) Asp. Tox. 1 (H304) Flam. Liq. 2 (H225)	No data available
HYDROQUINONE	204-617-8	123-31-9	< 0.05	Acute Tox. 4 (H302) Eye Dam. 1 (H318) Skin Sens. 1 (H317) Muta. 2 (H341) Carc. 2 (H351) Aquatic Acute 1 (H400)	No data available

**Full text of H- and EUH-phrases: see section 16**

**Additional information**

This product requires tactile warnings if supplied to the general public

**Section 4: FIRST AID MEASURES**

**4.1. Description of first aid measures**

**General advice**

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

**Inhalation**

Remove to fresh air. Get medical attention immediately if symptoms occur. IF exposed or concerned: Get medical advice/attention.

**Eye contact**

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.

**Skin contact**

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.

**Ingestion** Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Call a doctor.

**Self-protection of the first aider** 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**

**Symptoms** Burning sensation. Itching. Rashes. Hives.

**4.3. Indication of any immediate medical attention and special treatment needed**

**Note to doctors** May cause sensitisation in susceptible persons. Treat symptomatically.

**Section 5: FIRE-FIGHTING MEASURES**

**5.1. Extinguishing media**

**Suitable Extinguishing Media** 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

**Unsuitable extinguishing media** No information available.

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

**Specific hazards arising from the chemical** Product is or contains a sensitiser. May cause sensitisation by skin contact.

**5.3. Advice for firefighters**

**Special protective equipment for fire-fighters** 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.

**Section 6: ACCIDENTAL RELEASE MEASURES**

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

**Personal precautions** 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.

**Occupational Spill Release** 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

**Other Information** Refer to protective measures listed in Sections 7 and 8.

**For emergency responders** Use personal protection recommended in Section 8.

**6.2. Environmental precautions**

**Environmental precautions** Prevent further leakage or spillage if safe to do so.

**6.3. Methods and material for containment and cleaning up**

**Methods for containment** 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.

**Methods for cleaning up** Take up mechanically, placing in appropriate containers for disposal.

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

**6.4. Reference to other sections**

**Reference to other sections** See section 8 for more information. See section 13 for more information.

**Section 7: HANDLING AND STORAGE**

**7.1. Precautions for safe handling**

**Advice on safe handling** 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.

**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.

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

**Storage Conditions** 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.

**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
TOLUENE 108-88-3	TWA: 50 ppm TWA: 192 mg/m <sup>3</sup> *	TWA: 50 ppm TWA: 191 mg/m <sup>3</sup> STEL: 100 ppm STEL: 384 mg/m <sup>3</sup> Sk*	TWA: 20 ppm TWA: 76.8 mg/m <sup>3</sup> TWA: 1000 mg/m <sup>3</sup> STEL: 100 ppm STEL: 384 mg/m <sup>3</sup> STEL: 1500 mg/m <sup>3</sup> *	TWA: 50 ppm TWA: 192 mg/m <sup>3</sup> STEL: 100 ppm STEL: 384 mg/m <sup>3</sup> via dérmica*	TWA: 50 ppm TWA: 190 mg/m <sup>3</sup> H*
HYDROQUINONE	-	TWA: 0.5 mg/m <sup>3</sup>	TWA: 2 mg/m <sup>3</sup>	TWA: 2 mg/m <sup>3</sup>	-

123-31-9		STEL: 1.5 mg/m <sup>3</sup>			
Chemical name	Italy	Portugal	Netherlands	Finland	Denmark
Acrylic acid, 2-hydroxyethyl ester 818-61-1	-	-	-	-	TWA: 1 ppm TWA: 5 mg/m <sup>3</sup> H*
TOLUENE 108-88-3	TWA: 50 ppm TWA: 192 mg/m <sup>3</sup> pelle*	TWA: 50 ppm TWA: 192 mg/m <sup>3</sup> STEL: 100 ppm STEL: 384 mg/m <sup>3</sup> P*	TWA: 150 mg/m <sup>3</sup> STEL: 384 mg/m <sup>3</sup>	TWA: 25 ppm TWA: 81 mg/m <sup>3</sup> STEL: 100 ppm STEL: 380 mg/m <sup>3</sup> iho*	TWA: 25 ppm TWA: 94 mg/m <sup>3</sup> H*
HYDROQUINONE 123-31-9	-	TWA: 2 mg/m <sup>3</sup>	-	TWA: 0.5 mg/m <sup>3</sup> STEL: 2 mg/m <sup>3</sup>	Ceiling: 2 mg/m <sup>3</sup>
Chemical name	Austria	Switzerland	Poland	Norway	Ireland
TOLUENE 108-88-3	TWA: 50 ppm TWA: 190 mg/m <sup>3</sup> STEL 100 ppm STEL 380 mg/m <sup>3</sup> H*	TWA: 50 ppm TWA: 190 mg/m <sup>3</sup> STEL: 200 ppm STEL: 760 mg/m <sup>3</sup> H*	STEL: 200 mg/m <sup>3</sup> TWA: 100 mg/m <sup>3</sup>	TWA: 25 ppm TWA: 94 mg/m <sup>3</sup> STEL: 37.5 ppm STEL: 141 mg/m <sup>3</sup> H*	TWA: 50 ppm TWA: 192 mg/m <sup>3</sup> STEL: 384 mg/m <sup>3</sup> STEL: 100 ppm Sk*
HYDROQUINONE 123-31-9	TWA: 2 mg/m <sup>3</sup> STEL 4 mg/m <sup>3</sup>	TWA: 2 mg/m <sup>3</sup> STEL: 2 mg/m <sup>3</sup> H*	STEL: 2 mg/m <sup>3</sup> TWA: 1 mg/m <sup>3</sup>	TWA: 0.5 mg/m <sup>3</sup> STEL: 1.5 mg/m <sup>3</sup>	TWA: 0.5 mg/m <sup>3</sup> STEL: 1.5 mg/m <sup>3</sup>

**Biological occupational exposure limits**

Chemical name	European Union	United Kingdom	France	Spain	Germany
TOLUENE 108-88-3	-	-	-	0.5 1.6 0.05 0.08	600 µg/L 1.5 mg/L
Chemical name	Italy	Portugal	Netherlands	Finland	Denmark
TOLUENE 108-88-3	-	-	-	500	
Chemical name	Austria	Switzerland	Poland	Norway	Ireland
TOLUENE 108-88-3	-	600 2 0.5	-	-	-

**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

<b>Physical state</b>	liquid
<b>Appearance</b>	Ink cartridge
<b>Odour</b>	Characteristic.
<b>Colour</b>	purple
<b>Odour threshold</b>	No information available

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

### 9.2. Other information

<b>Softening point</b>	No information available
<b>Molecular weight</b>	No information available
<b>VOC Content (%)</b>	No information available
<b>Liquid Density</b>	No information available
<b>Bulk density</b>	No information available
<b>Particle Size</b>	No information available
<b>Particle Size Distribution</b>	No information available

## Section 10: STABILITY AND REACTIVITY

### 10.1. Reactivity

<b>Reactivity</b>	Heating may cause a fire.
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### 10.2. Chemical stability

<b>Stability</b>	Decomposes on exposure to light. Unstable if heated.
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### **Explosion data**

<b>Sensitivity to Mechanical Impact</b>	None.
<b>Sensitivity to Static Discharge</b>	None.

### 10.3. Possibility of hazardous reactions

<b>Possibility of hazardous reactions</b>	Uncured ink will polymerize on exposure to light.
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**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**

- Inhalation** Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract.
- Eye contact** Specific test data for the substance or mixture is not available. Severely irritating to eyes. Causes serious eye damage. May cause burns. May cause irreversible damage to eyes. (based on components).
- Skin contact** Specific test data for the substance or mixture is not available. May cause sensitisation by skin contact. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components). Causes skin irritation.
- Ingestion** Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea. Harmful if swallowed. (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)** 1,288.00 mg/kg
- ATEmix (dermal)** 3,199.00 mg/kg
- ATEmix (inhalation-dust/mist)** 5.33 mg/l

**Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	= 4890 mg/kg ( Rat )	> 3000 mg/kg ( Rabbit )	
Proprietary		> 13 g/kg ( Rabbit )	
4-(1-Oxo-2-propenyl)-morpholin e	588 mg/kg (rat)	> 2000 mg/kg (rat)	5.28 mg/l (rat)
Proprietary	2.000 mg/kg (Rat) (Method:	2.000 mg/kg (Rat)(Method:	



	OECD Test Guideline 423)	OECD Test Guideline 402)	
Tripropylene glycol diacrylate	= 6200 mg/kg ( Rat )	> 2 g/kg ( Rabbit )	
Proprietary	> 5,000 mg/kg (Rat) (OECD Guideline 401)	> 2,000 mg/kg (Rat) (OECD Guideline 402)	
Trimethylolpropane triacrylate	= 5190 µL/kg ( Rat )	= 5000 mg/kg ( Rabbit )	
Acrylic acid, 2-hydroxyethyl ester	= 548 mg/kg ( Rat )	= 154 mg/kg ( Rabbit )	
TOLUENE	= 2600 mg/kg ( Rat )	= 12000 mg/kg ( Rabbit )	= 12.5 mg/L ( Rat ) 4 h
HYDROQUINONE	= 298 mg/kg ( Rat )	= 74800 mg/kg ( Rabbit )	

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Skin corrosion/irritation** Classification based on data available for ingredients. Irritating to skin.

**Serious eye damage/eye irritation** Classification based on data available for ingredients. Causes burns. Risk of serious damage to eyes.

**Respiratory or skin sensitisation** May cause sensitisation by skin contact.

**Germ cell mutagenicity** No information available.

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

Chemical name	European Union
HYDROQUINONE	Muta. 2

**Carcinogenicity** No information available.

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

Chemical name	European Union
HYDROQUINONE	Carc. 2

**Reproductive toxicity** No information available.

Chemical name	European Union
Proprietary	Repr. 2
TOLUENE	Repr. 2

**STOT - single exposure** May cause respiratory irritation.

**STOT - repeated exposure** Causes damage to organs through prolonged or repeated exposure.

**Aspiration hazard** No information available.

**Section 12: ECOLOGICAL INFORMATION**

**12.1. Toxicity**

**Ecotoxicity** Toxic to aquatic life with long lasting effects.

**Unknown aquatic toxicity** Contains 46.581692425 % of components with unknown hazards to the aquatic environment.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Exo-1,7,7-trimethylbicycl of[2.2.1]hept-2-yl acrylate	1.98 mg/l Fresh water	0.704 mg/l Fresh water	-	0.524 mg/l Fresh water
4-(1-Oxo-2-propenyl)-morpholine	120 mg/l (algae)	-	-	120 mg/kg (daphnia)
Proprietary	(Pseudokirchneriella subcapitata) : 1,6 mg/l (Method: OECD Test	(Fish) : 4,95 mg/l	-	(Daphnia magna Straus) : 2,36 mg/l (Method: OECD Test Guideline

	Guideline 201)			202)
Tripropylene glycol diacrylate	28: 72 h <i>Desmodesmus subspicatus</i> mg/L EC50	4.5 - 10: 96 h <i>Leuciscus idus</i> mg/L LC50	-	88.7: 48 h <i>Daphnia magna</i> mg/L EC50
Proprietary	> 2.01 mg/l (growth rate), <i>Pseudokirchneriella subcapitata</i> (OECD Guideline 201, static)	6.53 mg/l, <i>Oryzias latipes</i> (JIS K 0102-71, semistatic)	-	3.53 mg/l, <i>Daphnia magna</i> (OECD Guideline 202, part 1, static)
Acrylic acid, 2-hydroxyethyl ester	-	4.8: 96 h <i>Pimephales promelas</i> mg/L LC50 flow-through	-	0.78: 48 h <i>Daphnia magna</i> mg/L EC50
TOLUENE	433: 96 h <i>Pseudokirchneriella subcapitata</i> mg/L EC50 12.5: 72 h <i>Pseudokirchneriella subcapitata</i> mg/L EC50 static	15.22 - 19.05: 96 h <i>Pimephales promelas</i> mg/L LC50 flow-through 11.0 - 15.0: 96 h <i>Lepomis macrochirus</i> mg/L LC50 static 50.87 - 70.34: 96 h <i>Poecilia reticulata</i> mg/L LC50 static 54: 96 h <i>Oryzias latipes</i> mg/L LC50 static 28.2: 96 h <i>Poecilia reticulata</i> mg/L LC50 semi-static 12.6: 96 h <i>Pimephales promelas</i> mg/L LC50 static 5.89 - 7.81: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 flow-through 5.8: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 semi-static 14.1 - 17.16: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 static	-	11.5: 48 h <i>Daphnia magna</i> mg/L EC50 5.46 - 9.83: 48 h <i>Daphnia magna</i> mg/L EC50 Static
HYDROQUINONE	13.5: 120 h <i>Desmodesmus subspicatus</i> mg/L EC50 0.335: 72 h <i>Pseudokirchneriella subcapitata</i> mg/L EC50	0.044: 96 h <i>Pimephales promelas</i> mg/L LC50 flow-through 0.1 - 0.18: 96 h <i>Pimephales promelas</i> mg/L LC50 static 0.044: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 flow-through 0.17: 96 h <i>Brachydanio rerio</i> mg/L LC50	-	0.29: 48 h <i>Daphnia magna</i> 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
Tripropylene glycol diacrylate	2.77
Acrylic acid, 2-hydroxyethyl ester	0.21
TOLUENE	2.7
HYDROQUINONE	0.5

**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**

**14.1 UN/ID no** UN3082  
**14.2 Proper Shipping Name** OTHER REGULATED SUBSTANCES, LIQUID, N.O.S. , (Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate)  
**14.3 Hazard Class** 9  
**14.4 Packing group Description** III  
 UN3082, OTHER REGULATED SUBSTANCES, LIQUID, N.O.S. (TRIPROPYLENE GLYCOL DIACRYLATE), 9, III, Marine pollutant  
**14.5 Marine pollutant Environmental Hazard** Not applicable  
 Yes  
**14.6 Special Provisions EmS-No** 274, 335, 969  
 F-A, S-F  
**14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** No information available

**RID**

**14.1 UN/ID no** UN3082  
**14.2 Proper Shipping Name** OTHER REGULATED SUBSTANCES, LIQUID, N.O.S. , (Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate)  
**14.3 Hazard Class** 9  
**14.4 Packing group Description** III  
 UN3082, OTHER REGULATED SUBSTANCES, LIQUID, N.O.S. (TRIPROPYLENE GLYCOL DIACRYLATE, ACRYLIC ACID, 2-HYDROXYETHYL ESTER), 9, III  
**14.5 Environmental Hazard** Yes  
**14.6 Special Provisions Classification code** None  
 M6

**ADR**

14.1 UN/ID no UN3082  
 14.2 Proper Shipping Name OTHER REGULATED SUBSTANCES, LIQUID, N.O.S. , (Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate)  
 14.3 Hazard Class 9  
 ADR/RID-Labels 9  
 14.4 Packing group III  
 Description UN3082, OTHER REGULATED SUBSTANCES, LIQUID, N.O.S. (TRIPROPYLENE GLYCOL DIACRYLATE, ACRYLIC ACID, 2-HYDROXYETHYL ESTER), 9, III  
 14.5 Environmental Hazard Yes  
 14.6 Special Provisions 274, 335, 601, 375  
 Classification code M6  
 Tunnel restriction code (E)

**IATA**

14.1 UN/ID no UN3082  
 14.2 Proper Shipping Name Other regulated substances, liquid, n.o.s. , (Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate)  
 14.3 Hazard Class 9  
 14.4 Packing group III  
 Description UN3082, Other regulated substances, liquid, n.o.s. (Tripropylene glycol diacrylate, Acrylic acid, 2-hydroxyethyl ester), 9, III  
 14.5 Environmental Hazard Yes  
 14.6 Special Provisions A197  
 ERG Code 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
Acrylic acid, 2-hydroxyethyl ester 818-61-1	RG 65	-
TOLUENE 108-88-3	RG 4bis, RG 84	-
HYDROQUINONE 123-31-9	RG 65	-

**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
TOLUENE - 108-88-3	48.	

**Persistent Organic Pollutants**

Not applicable

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

E2 - Hazardous to the Aquatic Environment in Category Chronic 2

**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**

- H315 - Causes skin irritation
- H361d - Suspected of damaging the unborn child
- H336 - May cause drowsiness or dizziness
- H373 - May cause damage to organs through prolonged or repeated exposure if inhaled
- H304 - May be fatal if swallowed and enters airways
- H225 - Highly flammable liquid and vapour
- H319 - Causes serious eye irritation
- H302 - Harmful if swallowed
- H318 - Causes serious eye damage
- H317 - May cause an allergic skin reaction
- H341 - Suspected of causing genetic defects if swallowed
- H351 - Suspected of causing cancer if swallowed
- H400 - Very toxic to aquatic life
- H411 - Toxic to aquatic life with long lasting effects
- H335 - May cause respiratory irritation
- H303 - May be harmful if swallowed
- H313 - May be harmful in contact with skin
- H410 - Very toxic to aquatic life with long lasting effects
- H361f - Suspected of damaging fertility
- H311 - Toxic in contact with skin
- H314 - Causes severe skin burns and eye damage

**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

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Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method
Acute aquatic toxicity	Calculation method
Chronic aquatic toxicity	Calculation method
Aspiration toxicity	Calculation method
	Calculation method

Revision Date 28-Nov-2016

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

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End of Safety Data Sheet