

**\*\*\*Section 1 - IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING\*\*\*****1.1 Product Identifier:****Material Name:** VEROCLEAR RGD810**Chemical Family**

acrylic compounds

**Substance Registration Number(s)**

The components are either registered, pre-registered or not subject to REACH.

(CAS#, 5117-12-4) Substance Registration Number(s) : 01-0000016491-73-XXXX

**1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against Identified Uses**

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.

**Uses Advised Against**

None known.

**1.3 Details of the supplier of the safety data sheet**Stratasys GmbH  
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Emergency # +49 722 97772280

**Email Address**[info@stratasys.com](mailto:info@stratasys.com); [www.stratasys.com](http://www.stratasys.com)**1.4 Emergency Telephone Number**+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 language response)**\*\*\*Section 2 - HAZARDS IDENTIFICATION\*\*\*****2.1 Classification of the Substance or Mixture****Classification according to Regulation (EC) No 1272/2008**Acute Toxicity (Oral), Category 4  
Eye Damage / Irritation, Category 1  
Skin Corrosion / Irritation, Category 2  
Skin sensitizer, Category 1  
Toxic to Reproduction, Category 2  
Specific Target Organ Toxicity - Single Exposure, Category 3 (respiratory system)  
Specific Target Organ Toxicity - Repeated Exposure, Category 2  
Hazardous to the Aquatic Environment - Chronic Hazard, Category 2

### 2.2 Label Elements

Labeling according to Regulation (EC) 1272/2008/EC:

Symbol(s)



#### Signal Word

DANGER

#### Hazard Statement(s)

**H302** Harmful if swallowed.

**H318** Causes serious eye damage

**H315** Causes skin irritation

**H317** May cause an allergic skin reaction

**H335** May cause respiratory irritation

**H361** Suspected of damaging fertility or the unborn child.

**H373** May cause damage to organs through prolonged or repeated exposure

**H411** Toxic to aquatic life with long lasting effects

#### Precautionary Statement(s)

##### Prevention

**P271** Use only outdoors or in a well-ventilated area. **P280** Wear protective gloves/protective clothing/eye protection/face protection.

##### Response

**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/physician.

##### Storage

**P405** Store locked up.

##### Disposal

**P501** Dispose of contents/container in accordance with local/regional/national/international regulations.

**2.3 Other Hazards**

None known.

**\*\*\*Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS\*\*\***

CAS EC No Registration No	Component Synonyms	1272/2008 (CLP)	Percent
-- XXXX	Acrylic monomer	Acute Tox. 4 (Oral) Eye Dam. 1 Skin Sens. 1 STOT RE 2	<30
5888-33-5 227-561-6 --	Exo-1,7,7-Trimethylbicyclo[2.2.1]hept-2-yl acrylate	Skin Irrit. 2 Eye Irrit. 2 STOT SE 3 Aquatic Chronic 2	<25
--	Acrylic oligomer	Skin Sens. 1	<15

--	Photo initiator	Repr. 2	<2
52408-84-1 500-114-5 --	Acrylic acid ester	Eye Irrit. 2 Skin Sens. 1	<0.3

**Additional Information**

Under normal conditions of use, the substance is released from a cartridge only inside an appropriate printing system, and therefore, exposure is limited. The liquid within the cartridges is considered hazardous, and the MSDS has been prepared in case of exposure to the liquid.

<b>***Section 4 - FIRST AID MEASURES***</b>
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**4.1 Description of First Aid Measures****Inhalation**

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

**Skin**

IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash before re-use.

**Eyes**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

**Ingestion**

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.

**4.2 Most Important Symptoms and Effects, both Acute and Delayed****Acute**

respiratory tract irritation, eye damage, skin irritation, allergic skin reaction

**Delayed**

allergic reactions, reproductive effects

**4.3 Indication of any Immediate Medical Attention and Special Treatment Needed****Note to Physicians**

IF exposed or concerned: Get medical advice/attention.

<b>***Section 5 - FIRE FIGHTING MEASURES***</b>
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**5.1 Extinguishing Media**

Use extinguishing agents appropriate for surrounding fire. Class B fires: Use carbon dioxide (CO<sub>2</sub>), regular dry chemical (sodium bicarbonate), regular form (Aqueous Film Forming Foam-AFFF), or water spray to cool containers.

**Unsuitable Extinguishing Media**

None known.

**5.2 Special Hazards Arising from the Substance or Mixture**

Slight fire hazard.

**Thermal Decomposition Products**

**Combustion:** oxides of carbon

### 5.3 Advice for Firefighters

#### Fire Fighting Measures

Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Keep unnecessary people away, isolate hazard area and deny entry. Keep out of water supplies and sewers. Avoid inhalation of material or combustion by-products.

#### Protective Equipment and Precautions for Firefighters

Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure. Avoid inhalation of material or combustion by-products.

### \*\*\*Section 6 - ACCIDENTAL RELEASE MEASURES\*\*\*

#### Occupational Spill / Release

Intact cartridges do not pose a leak or spill hazard. Damaged cartridges may leak uncured ink. Stop leak if possible without personal risk. Reduce vapors with water spray. Absorb with sand or other non-combustible material. Collect spilled material in appropriate container for disposal. Keep out of water supplies and sewers.

#### 6.1 Personal Precautions, Protective Equipment and Emergency Procedures

Wear personal protective clothing and equipment, see Section 8.

#### 6.2 Environmental Precautions

Avoid release to the environment.

#### 6.3 Methods and Material for Containment and Cleaning up

Collect spilled material. Collect spilled cartridge contents with an inert absorbent such as sand or vermiculite. Place in properly labeled closed container. Flush area with water to remove trace residue.

#### 6.4 Reference to Other Sections

See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations. See Section 13 for Disposal Considerations.

### \*\*\*Section 7 - HANDLING AND STORAGE\*\*\*

#### 7.1 Precautions for Safe Handling

Do not breathe vapor or mist. 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. Wash thoroughly after handling. Do not eat, drink, or smoke when using this product. Avoid release to the environment.

#### 7.2 Conditions for Safe Storage, Including any Incompatibilities

Store in accordance with all current regulations and standards. Store in a well-ventilated place. Keep container tightly closed. Store locked up. Store between 15 °C and 25 °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. Store in a cool, dry place. Avoid direct sunlight. Keep in the dark. Keep separated from incompatible substances.

### \*\*\*Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION\*\*\*

#### 8.1 Control Parameters

##### Component Exposure Limits

Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Gibraltar, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovak Republic, Slovenia, Spain, Sweden and United Kingdom have not developed exposure limits for any of this product's components.

##### EU - Interim Strategy for Management of PBT and vPvB Substances (PBT Assessments)

No components of this material are listed.

### Biological Limit Value

#### Component Analysis

There are no biological limit values for any of this product's components.

#### Derived No Effect Levels (DNELs)

No DNELs available.

#### Predicted No Effect Concentrations (PNECs)

No PNECs available.

#### Ventilation

Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

## 8.2 Exposure Controls

### Appropriate Engineering Controls

#### Eye / Face Protection

Eye protection not required under normal conditions. Chemical goggles or safety glasses with side shields should be worn when handling a damaged cartridge.

#### Skin Protection

Protective clothing is not required under normal conditions. Wear neoprene or nitrile impervious gloves when handling damaged cartridge. Wash contaminated clothing before reuse.

#### Glove Recommendations

Wear neoprene or nitrile impervious gloves when handling damaged cartridge.

#### Respiratory Protection

Respiratory protection is not generally needed when using this product.

## \* \* \*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 containing clear, blue liquid ink
<b>Color:</b>	clear / blue	<b>Physical Form:</b>	liquid
<b>Odor:</b>	characteristic odor	<b>Odor Threshold:</b>	Not available
<b>pH:</b>	Not applicable	<b>Melting Point:</b>	Not available
<b>Boiling Point:</b>	Not available	<b>Decomposition:</b>	Not available
<b>Flash Point:</b>	>100 °C	<b>Evaporation Rate:</b>	Not available
<b>LEL:</b>	Not available	<b>UEL:</b>	Not available
<b>Vapor Pressure:</b>	Not available	<b>Vapor Density (air = 1):</b>	Not available
<b>Density:</b>	Not available	<b>Specific Gravity (water = 1):</b>	Not available
<b>Water Solubility:</b>	Not available	<b>Coeff. Water/Oil Dist:</b>	Not available
<b>Auto Ignition:</b>	Not available	<b>Viscosity:</b>	Not available
<b>Volatility:</b>	Not available		

## \* \* \*Section 10 - STABILITY AND REACTIVITY\* \* \*

### 10.1 Reactivity

Heating may cause a fire

### 10.2 Chemical Stability

Unstable on exposure to light. Unstable on exposure to heat.

**10.3 Possibility of Hazardous Reactions**

Uncured ink will polymerize on exposure to light.

**10.4 Conditions to Avoid**

Avoid exposure to heat and light.

**10.5 Incompatible Materials**

Not applicable under normal conditions of use and storage.

**10.6 Hazardous Decomposition Products****Thermal Decomposition Products**

**Combustion:** oxides of carbon

**\*\*\*Section 11 - TOXICOLOGICAL INFORMATION\*\*\*****11.1 Information on Toxicological Effects****Acute and Chronic Toxicity**

No hazard is expected from the normal use of this product. While unlikely, uncured ink may leak from damaged ink cartridges and cause skin and eye irritation. After skin contact: tingling or irritation of the skin. After eye contact: irritation, inflammation or damage of the eye tissue.

**Component Analysis - LD50/LC50**

The components of this material have been reviewed in various sources and no selected endpoints have been identified.

**Irritation / Corrosivity**

Contact with uncured ink may cause eye damage and skin irritation. Inhalation may cause respiratory tract irritation.

**Respiratory Sensitization**

No data available for the mixture.

**Skin Sensitization**

Component data indicate the substance is sensitizing. Uncured ink may cause an allergic response in sensitized individuals.

**Germ Cell Mutagenicity**

No data available for the mixture.

**Carcinogenicity****Component Carcinogenicity**

None of this product's components are listed by IARC or DFG.

**Reproductive Toxicity**

Available data characterizes components of this product as reproductive hazards.

**Specific Target Organ Toxicity - Single Exposure**

respiratory system

**Specific Target Organ Toxicity - Repeated Exposure**

May cause damage to organs through prolonged or repeated exposure

**Aspiration Hazard**

No data available for the mixture.

**\*\*\*Section 12 - ECOLOGICAL INFORMATION\*\*\*****12.1 Toxicity**

Harmful to aquatic life with long lasting effects.

### 12.2 Persistence and Degradability

No data available for the mixture.

### 12.3 Bioaccumulative Potential

No data available for the mixture.

### 12.4 Mobility in Soil

No data available for the mixture.

### 12.5 Results of PBT and vPvB Assessment

No information available.

### EU - Interim Strategy for Management of PBT and vPvB Substances (PBT Assessments)

No components of this material are listed.

### 12.6 Other Adverse Effects

No information available.

## \*\*\*Section 13 - DISPOSAL CONSIDERATIONS\*\*\*

### 13.1 Waste Treatment Methods

Dispose in accordance with all applicable regulations. Hazardous Waste Number(s): 08 03 12\*

Refer to manufacturer/supplier for information on recovery/recycling. Do not landfill. Avoid discharge into drains or surface water. See Section 7 for handling procedures. See Section 8 for personal protection information.

## \*\*\*Section 14 - TRANSPORT INFORMATION\*\*\*

### Transportation

	ADR	RID	ICAO	ADN	IMDG
14.1 <b>UN Number</b>	3082	3082	3082	3082	3082
14.2 <b>UN Proper Shipping Name</b>	Environmentally hazardous substance, liquid, n.o.s. (Contains: Exo-1,7,7-Trimethylbicyclo[2.2.1]hept-2-yl acrylate)	Environmentally hazardous substance, liquid, n.o.s. (Contains: Exo-1,7,7-Trimethylbicyclo[2.2.1]hept-2-yl acrylate)	Environmentally hazardous substance, liquid, n.o.s. (Contains: Exo-1,7,7-Trimethylbicyclo[2.2.1]hept-2-yl acrylate)	Environmentally hazardous substance, liquid, n.o.s. (Contains: Exo-1,7,7-Trimethylbicyclo[2.2.1]hept-2-yl acrylate)	Environmentally hazardous substance, liquid, n.o.s. (Contains: Exo-1,7,7-Trimethylbicyclo[2.2.1]hept-2-yl acrylate)
14.3 <b>Transport Hazard Class(es)</b>	<b>Hazard Class: 9</b>	<b>Hazard Class: 9</b>	<b>Hazard Class: 9</b>	<b>Hazard Class: 9</b>	<b>Hazard Class: 9</b>





Material Name: VEROCLEAR RGD810

SDS ID: DOC-06119\_C  
 In Compliance with Regulation  
 (EC) 1907/2006 (REACH) as  
 Amended

14.4	<b>Packing Group</b>	<b>Packing Group: III</b>	<b>Packing Group: III</b>	<b>Packing Group: III</b>	<b>Packing Group: III</b>	<b>Packing Group: III</b>
14.5	<b>Environmental Hazards</b>	<b>Marine Pollutant</b>	<b>Marine Pollutant</b>	<b>Marine Pollutant</b>	<b>Marine Pollutant</b>	<b>Marine Pollutant</b>
14.6	<b>Special Precautions For User</b>	<b>Classification Code : M6</b>	<b>Classification Code : M6</b>	<b>Passenger and Cargo aircraft - Packaging Instructions : Y964/964</b>	<b>Classification Code : M6</b>	<b>EMS: F-A, S-F</b>
14.7	<b>Transport in Bulk According to Annex II</b>					
	<b>or MARPOL 73/78 and the IBC Code</b>					

**International Bulk Chemical Code**

This material does not contain any chemicals required by the IBC Code to be identified as dangerous chemicals in bulk.

**\*\*\*Section 15 - REGULATORY INFORMATION\*\*\*****15.1 Safety, Health and Environmental Regulations / Legislation Specific for the Substance or Mixture****EU - REACH (1907/2006) - Annex XIV List of Substances Subject to Authorisation**

No components of this material are listed.

**EU - REACH (1907/2006) - Article 59(1) Candidate List of Substances for Eventual Inclusion in Annex XIV**

No components of this material are listed.

**EU - REACH (1907/2006) - Annex XVII Restrictions of Certain Dangerous Substances, Mixtures and Articles**

No components of this material are listed.

**Germany Regulations****Germany Water Classification****Acrylic monomer (5117-12-4)**

ID Number 6697, hazard class 2 - hazard to waters

**Exo-1,7,7-Trimethylbicyclo[2.2.1]hept-2-yl acrylate (5888-33-5)**

ID Number 2247, hazard class 2 - hazard to waters

**Diphenyl-2,4,6-trimethylbenzoyl phosphine oxide (75980-60-8)**

ID Number 6366, hazard class 2 - hazard to waters

**Denmark Regulations****Environmental Protection Agency List of Undesirable Substances**

No components of this material are listed.

## EU Inventory

## Substance Analysis - Inventory

Component	CAS	EEC
Acrylic monomer	--	ELN
Exo-1,7,7-Trimethylbicyclo[2.2.1]hept-2-yl acrylate	5888-33-5	EIN
Acrylic oligomer	--	NLP
Photo initiator	--	EIN
Acrylic acid ester	52408-84-1	NLP

## 15.2 Chemical Safety Assessment

No chemical safety assessment has been carried out for the substance/mixture.

**\*\*\*Section 16 - OTHER INFORMATION\*\*\***

## 16.1 Indication of changes

New MSDS: 12/31/2012

## 16.2 Key / Legend

ADR - European Road Transport; EEC - European Economic Community; EIN (EINECS) - European Inventory of Existing Commercial Chemical Substances; ELN (ELINCS) - European List of Notified Chemical Substances; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IMDG - International Maritime Dangerous Goods; Kow - Octanol/water partition coefficient; LEL - Lower Explosive Limit; RID - European Rail Transport; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TWA - Time Weighted Average; UEL - Upper Explosive Limit

## 16.3 Key literature references and sources for data

Available upon request

## 16.4 Methods used for classification of mixture according to Regulation (EC) No 1272/2008

Available upon request

## 16.5 Training Advice

Read the Safety Data Sheet before handling product.

## 16.6 Other Information

The information in this safety data sheet is based on data and samples provided to a third party SDS author. The sheet was written to the best of our ability and according to the state of knowledge at that time. The safety data sheet only constitutes a guideline for the safe handling, use, consumption, storage, transport and disposal of the substances/preparations/mixtures mentioned in this safety data sheet. New safety data sheets are written from time to time. Only the most recent versions may be used. Unless indicated otherwise word for word on the safety data sheet, the information does not apply to substances/preparations/mixtures in purer form, mixed with other substances or in processes. The safety data sheet offers no quality specification for the substances/preparations/mixtures in question.

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