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Revision Number 2.02

## Section 1: Identification: Product identifier and chemical identity

### Product identifier

**Product Name** VeroFlex® Cyan, RGD891  
**Product Code(s)** SDS-06186 EN U  
**PN (Part Number)** OBJ-03341

### Other means of identification

**Proper Shipping Name** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate,  
(Octahydro-4,7-methano-1H-indenediyl)bis(methylene)diacrylate)

**UN Number** UN3082

**Pure substance/mixture** Mixture

### Recommended use of the chemical and restrictions on use

**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

### Details of manufacturer or importer

<b>Importer</b> Objective3D Pty Ltd 33-35 Yazaki Way Carrum Downs, 3201 Victoria, Australia Phone: +613 9785 2333 Local: +1300 559 454 Fax: +613 9785 2322	<b>Importer</b> TCL Hofmann VIC - Braeside 150 Woodlands Drive Braeside VIC 3195 Australia Phone: +613 8586 2900 Fax: +613 9580 8322
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For further information, please contact

**E-mail address** info@Stratasys.com

### Emergency telephone number

Emergency telephone number +61 2 8014 4558 - Australia - English Language response

## Section 2: Hazard(s) identification

### GHS Classification

<b>Skin corrosion/irritation</b>	Category 2 - (H315)
<b>Serious eye damage/eye irritation</b>	Category 1 - (H318)
<b>Skin sensitisation</b>	Category 1A - (H317)
<b>Specific target organ toxicity (single exposure)</b>	Category 3 - (H335)

**Specific target organ toxicity (repeated exposure)**

Category 2 - (H373)

**Label elements**

Exclamation mark  
Health hazard  
Corrosion  
Environment

**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

**Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling  
Wear protective gloves/protective clothing/eye protection/face protection  
Contaminated work clothing should not be allowed out of the workplace  
Use only outdoors or in a well-ventilated area  
Do not breathe dust/fume/gas/mist/vapours/spray

**Precautionary Statements - Response**

Get medical advice/attention if you feel unwell  
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  
IF ON SKIN: Wash with plenty of soap and water  
Take off contaminated clothing and wash it before reuse  
If skin irritation or rash occurs: Get medical advice/attention  
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

**Precautionary Statements - Storage**

Store in a well-ventilated place. Keep container tightly closed  
Store locked up

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**Other hazards**

May be harmful if swallowed. Toxic to aquatic life with long lasting effects. Toxic to aquatic life.

**Section 3: Composition and information on ingredients, in accordance with Schedule 8****Substance**

Not applicable

**Mixture**

Chemical name	CAS No	Weight-%
Proprietary	-	10-30
Proprietary	-	10-30

Proprietary	-	10-30
Proprietary	-	10-30
Proprietary	-	3-10
Proprietary	-	3-10
Proprietary	-	1-3
camphene	79-92-5	0.1-0.3
Glycerol, propoxylated, esters with acrylic acid	52408-84-1	0.1-0.3
Ethoxylated Trimethylolpropane Triacrylate	28961-43-5	0.1-0.3
Acrylic acid	79-10-7	0.1-0.3
Non-hazardous ingredients	Proprietary	Balance

## Section 4: First aid measures

### 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).

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

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

### Indication of any immediate medical attention and special treatment needed

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

## Section 5: Firefighting measures

### Suitable 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.

### Specific hazards arising from the chemical

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

### Special protective actions for fire-fighters

**Special protective equipment for** Cool containers with flooding quantities of water until well after fire is out. Firefighters

**fire-fighters** should wear self-contained breathing apparatus and full firefighting turnout gear. Move containers from fire area if you can do it without risk. Use personal protection equipment. 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.

## Section 6: Accidental release measures

### 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.

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

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

### Environmental precautions

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

### Methods and material for containment and cleaning up

**Methods for containment** Methods for containment.

**Methods for cleaning up** Pick up and transfer to properly labelled containers.

### Precautions to prevent secondary hazards

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

## Section 7: Handling and storage, including how the chemical may be safely used

### Precautions for safe handling

**Advice on safe 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. Do not eat, drink or smoke when using this product. Heating may cause a fire.

**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.

### Conditions for safe storage, including any incompatibilities

**Storage Conditions** 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.

**Incompatible materials** Strong acids. Strong bases. Strong oxidising agents.

## Section 8: Exposure controls and personal protection

### Control parameters

#### Exposure Limits

Chemical name	Australia
Acrylic acid	2 ppm

79-10-7	5.9 mg/m <sup>3</sup>
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**Appropriate engineering controls**

**Engineering controls**                      Showers  
 Eyewash stations  
 Ventilation systems.

**Individual protection measures, such as personal protective equipment**

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

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

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

**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.

**Environmental exposure controls**        No information available.

<b>Section 9: Physical and chemical properties</b>
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**Information on basic physical and chemical properties**

**Physical state**                                liquid  
**Appearance**                                Ink cartridge  
**Odour**    Characteristic.  
**Colour**                                         blue  
**Odour threshold**                            No information available

<b><u>Property</u></b>	<b><u>Values</u></b>	<b><u>Remarks • Method</u></b>
<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>	1.09	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

**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

### Reactivity

**Reactivity** No information available.

### Chemical stability

**Stability** Stable under normal conditions.

### Explosion data

**Sensitivity to Mechanical Impact** None.

**Sensitivity to Static Discharge** None.

### Possibility of hazardous reactions

**Possibility of hazardous reactions** None under normal processing.

### Conditions to avoid

**Conditions to avoid** None known based on information supplied.

### Incompatible materials

**Incompatible materials** Strong acids. Strong bases. Strong oxidising agents.

### Hazardous decomposition products

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

## Section 11: Toxicological information

### Acute toxicity

#### Information on likely routes of exposure

#### **Product Information**

**Inhalation** May cause irritation of respiratory tract. (based on components).

**Eye contact** Severely irritating to eyes. Causes serious eye damage. May cause burns. May cause irreversible damage to eyes. (based on components).

**Skin contact** 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** Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea (based on components)

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

#### Numerical measures of toxicity - Product Information

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

**ATEmix (oral)** 2,901.07 mg/kg

**ATEmix (inhalation-dust/mist)** 8.42 mg/l

**Unknown acute toxicity** 0 % of the mixture consists of ingredient(s) of unknown toxicity

0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity  
 0 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity  
 0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)  
 0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapour)  
 0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

### Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Proprietary	= 4890 mg/kg = 4890 mg/kg ( Rat )	> 3000 mg/kg ( Rabbit )	-
Proprietary	= 588 mg/kg (rat)	> 2000 mg/kg (rat)	= 5.28 mg/l (rat)
Proprietary	= 2.000 mg/kg (Rat) (Method: OECD Test Guideline 423)	= 2.000 mg/kg (Rat)(Method: OECD Test Guideline 402)	-
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	> 2000 mg/kg > 2000 mg/kg ( Rat )	> 2000 mg/kg ( Rat )	-
camphene	> 5 g/kg > 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	= 33500 µg/kg = 193 mg/kg = 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

See section 16 for terms and abbreviations

### 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.
<b>Germ cell mutagenicity</b>	No information available.
<b>Carcinogenicity</b>	No information available.
The table below indicates whether each agency has listed any ingredient as a carcinogen.	
<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

### Ecotoxicity

Ecotoxicity

**Unknown aquatic toxicity** 0 % of the mixture consists of component(s) of 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) : 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)
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	-	90: 96 h Danio rerio µg/L LC50 semi-static	-	-
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
Glycerol, propoxylated, esters with acrylic acid	-	5.74: 96 h Danio rerio mg/L LC50 static	-	-
Ethoxylated Trimethylolpropane Triacrylate	-	1.95: 96 h Danio rerio mg/L LC50 static	-	-
Acrylic acid	0.17: 96 h Pseudokirchneriella subcapitata mg/L EC50 0.04: 72 h Desmodesmus subspicatus mg/L EC50	222: 96 h Brachydanio rerio mg/L LC50 semi-static	-	270: 24 h Daphnia magna mg/L LC50 Static 95: 48 h Daphnia magna mg/L EC50

#### Persistence and degradability

**Persistence and degradability** No information available.

#### Bioaccumulative potential

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

#### Mobility

**Mobility in soil** No information available.

**Mobility** No information available.

Chemical name	Partition coefficient
Acrylic acid	0.46

#### Other adverse effects

**Other adverse effects** No information available.

### Section 13: Disposal considerations

#### 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.

## 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

### ADG

**UN Number** UN3082  
**Proper Shipping Name** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
**Hazard Class** 9  
**Packing group** III  
**Environmental Hazard** Yes  
**Special Provisions** 274, 331, 335, 375, AU01  
**Description** UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
 (Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate,  
 (Octahydro-4,7-methano-1H-indenediyl)bis(methylene)diacrylate), 9, III

### IATA

**UN Number** UN3082  
**UN proper shipping name** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
**Transport hazard class(es)** 9  
**Packing group** III  
**ERG Code** 9L  
**Special Provisions** A97, A158, A197  
**Description** UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
 (Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate,  
 (Octahydro-4,7-methano-1H-indenediyl)bis(methylene)diacrylate), 9, III

### IMDG

**UN number** UN3082  
**UN proper shipping name** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
**Transport hazard class(es)** 9  
**Packing group** III  
**EmS-No** F-A, S-F  
**Special Provisions** 274, 335, 969  
**Marine pollutant** This product contains a chemical which is listed as a severe marine pollutant according to IMDG/IMO  
**Description** UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
 (Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate,  
 (Octahydro-4,7-methano-1H-indenediyl)bis(methylene)diacrylate), 9, III, Marine pollutant

### **Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

No information available



## Section 15: Regulatory information

### Safety, health and environmental regulations/legislation specific for the substance or mixture

**National regulations****Australia**

See section 8 for national exposure control parameters

**National pollutant inventory**

Subject to reporting requirement

Chemical name	National pollutant inventory
Acrylic acid - 79-10-7	10 tonne/yr Threshold category 1 20 MW Threshold category 2b total 60000 MWH Threshold category 2b total 1 tonne/h Threshold category 2a total 25 tonne/yr Threshold category 1a total 400 tonne/yr Threshold category 2a total 2000 tonne/yr Threshold category 2b total

**International Inventories**

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	No information available
KECL	No information available
PICCS	No information available
AICS	No information available

**Legend:**

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

**International Regulations**

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

**Section 16: Any other relevant information****Prepared By**

TSCA;  
[http://iaspub.epa.gov/sor\\_internet/registry/substreg/searchandretrieve/searchbylist/search.d](http://iaspub.epa.gov/sor_internet/registry/substreg/searchandretrieve/searchbylist/search.d)  
 IECSC; <http://cciss.cirs-group.com/>  
 EU Regulation 1272/2008  
 TOMES-LOLI®; <http://www.rightanswerknowledge.com/loginRA.asp>  
 UN Recommendations on the transport of dangerous goods 19th Edition  
 IARC Monographs on the Evaluation of Carcinogenic Risks to Humans;  
<http://monographs.iarc.fr>  
 ECHA CHEM;  
<http://echa.europa.eu/web/guest/information-on-chemicals/registered-substances>  
 OECD SIDS; <http://webnet.oecd.org/Hpv/UI/Search.aspx>  
 EPA; <http://www.epa.gov/iris>  
 EPISUITE Program ver.4.1

NIOSH (The National Institute for Occupational Safety and Health)  
ACGIH (American Conference of Governmental Industrial Hygienists)  
Waste Control Act enforcement regulation attached [1]  
National chemicals information systems; <http://ncis.nier.go.kr>  
Korea National Fire Agency-Korea dangerous material inventory management system;  
<http://hazmat.mpss.kfi.or.kr/material.do>  
Korea Ministry of Employment and Labor Public Notice No. 2016-19  
Korea Ministry of Employment and Labor Public Notice No. 2018-24

**Revision Date** 21-May-2020

**Revision Note**

The symbol (\*) in the margin of this SDS indicates that this line has been revised.

**Key or legend to abbreviations and acronyms used in the safety data sheet**

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

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

**Disclaimer**

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**End of Safety Data Sheet**