

SAFETY DATA SHEET

Issuing Date 27-Oct-2019 Revision Date 12-Dec-2018 Revision Number 2

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name VeroUltraClear Component, RGD820

Other means of identification

Product Code(s) SDS-06258 EN A

PN (Part Number) OBJ-03361, OBJ-18018

UN/ID no. UN3082

Synonyms None

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 the supplier of the safety data sheet

Manufacturer Address

Stratasys Corporate headquarters United States 9600 West 76th Street Suite #108 Eden Prairie, MN 55344

Eden Plaine, Win 55344

United States

Local: +1 952-294-3900 Phone: +1 952-937-3000

Emergency telephone number

Emergency Telephone +1 215 207 0061 - Americas - Multi lingual response

E-mail address info@Stratasys.com

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Skin sensitization	Category 1B
Reproductive toxicity	Category 2
Specific target organ toxicity (single exposure)	Category 3

Label elements

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Warning

Hazard statements

Causes skin irritation Causes serious eye irritation

May cause an allergic skin reaction

Suspected of damaging fertility or the unborn child

May cause respiratory irritation



Appearance Ink cartridge

Physical state liquid

Odor Characteristic

Precautionary Statements - Prevention

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Wear protective gloves/protective clothing/eye protection/face protection

Wash face, hands and any exposed skin thoroughly after handling

Avoid breathing dust/fume/gas/mist/vapors/spray

Contaminated work clothing must not be allowed out of the workplace

Use only outdoors or in a well-ventilated area

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

If eye irritation persists: Get medical advice/attention

IF ON SKIN: Wash with plenty of water and soap

Take off contaminated clothing and wash it before reuse

If skin irritation or rash occurs: Get medical advice/attention

IF INHALED: Remove person to fresh air and keep comfortable for breathing

Precautionary Statements - Storage

Store locked up

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

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Not applicable

Other Information

Very toxic to aquatic life with long lasting effects. Very toxic to aquatic life.

Unknown acute toxicity

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

3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Chemical name	CAS No.	Weight-%	Proprietary
Proprietary	Proprietary	50 - 60	*
Proprietary	Proprietary	10 - 30	*
Proprietary	Proprietary	10 - 30	*

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Tripropylene glycol diacrylate	42978-66-5	3 - 10	*
Proprietary	Proprietary	0.3-1	*
camphene	79-92-5	0.1-0.3	*
1,7,7-Trimethyltricyclo[2.2.1.02,6]heptane	508-32-7	0.1-0.3	*
Glycerol, propoxylated, esters with acrylic acid	52408-84-1	0.1-0.3	*
Acrylic acid, 2-hydroxyethyl ester	818-61-1	0.1-0.3	*

^{*}The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of first aid measures

General advice Show this safety data sheet to the doctor in attendance.

Inhalation Remove to fresh air. IF exposed or concerned: Get medical advice/attention. Get medical

attention immediately if symptoms occur.

Eye contactRinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep

eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists. Do not rub affected area.

Skin contact May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a

physician. Wash off immediately with soap and plenty of water for at least 15 minutes.

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 physician.

Self-protection of the first aider Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).

Most important symptoms and effects, both acute and delayed

Symptoms Itching. Rashes. Hives. Burning sensation.

Indication of any immediate medical attention and special treatment needed

Note to physicians May cause sensitization in susceptible persons. Treat symptomatically.

5. FIRE-FIGHTING MEASURES

dioxide (CO2), regular dry chemical (sodium bicarbonate), regular foam (Aqueous Film

Forming Foam-AFFF), or water spray to cool containers.

Unsuitable extinguishing media CAUTION: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the Product is or contains a sensitizer. May cause sensitization by skin contact.

chemical

Explosion data

Sensitivity to Mechanical Impact None. **Sensitivity to Static Discharge** None.

Special protective equipment for fire-fighters

Cool containers with flooding quantities of water until well after fire is out. Firefighters 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.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal

protective equipment as required. 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.

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

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 Pick up and transfer to properly labeled containers.

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

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Avoid breathing vapors 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. Do not eat, drink or smoke

when using this product. Heating may cause a fire.

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.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits The following ingredients are the only ingredients of the product above the cut-off level (or

level that contributes to the hazard classification of the mixture) which have an exposure

limit applicable in the region for which this safety data sheet is intended or other

recommended limit. At this time, the other relevant constituents have no known exposure

limits from the sources listed here.

Appropriate engineering controls

Engineering controls Showers

Eyewash stations

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Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles). If splashes are likely to occur, wear

safety glasses with side-shields.

Hand Protection Wear suitable gloves. Impervious gloves.

Skin and body protectionWear 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 Do not eat, drink or smoke when using this product. Wash hands before breaks and

immediately after handling the product. Wear suitable gloves and eye/face protection. Avoid

contact with skin, eyes or clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state liquid
Appearance lnk cartridge
Odor Characteristic

Color clear

Odor threshold No information available

Property Values Remarks • Method

pH N/A

Melting point / freezing point No data available / 131 °F

Boiling point / boiling range No data available None known

Flash point >= 110 - < 250 °C / >= 230 - <

482 °F

Evaporation rateNo data availableNone knownFlammability (solid, gas)No data availableNone knownFlammability Limit in AirNone known

Upper flammability limit: No data available

Lower flammability limit: No data available

Vapor pressureNo data availableNone knownVapor densityNo data availableNone knownRelative densityNo data availableNone known

Water solubility Insoluble in water

Solubility in other solvents No data available None known Partition coefficient No data available None known No data available None known **Autoignition temperature Decomposition temperature** No data available None known Kinematic viscosity No data available None known No data available **Dvnamic viscosity** None known

Explosive properties

No information available

No information available

Other Information

Softening point
Molecular weight
VOC Content (%)
Liquid Density
No information available

10. STABILITY AND REACTIVITY

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Reactivity Heating may cause a fire.

Chemical stability Decomposes on exposure to light. Unstable if heated.

Conditions to avoid Avoid exposure to heat and light.

Incompatible materialsNot applicable under normal conditions of use and storage.

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

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

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

Eye contact Irritating to eyes. (based on components). Causes serious eye irritation.

Skin contact May cause sensitization 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).

Information on toxicological effects

Symptoms Itching. Rashes. Hives. Redness. 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 .

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

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Proprietary	Proprietary = 4890 mg/kg (Rat)		-
Tripropylene glycol diacrylate 42978-66-5	= 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)	-
camphene 79-92-5	> 5 g/kg (Rat)	> 2500 mg/kg (Rabbit)	= 17100 mg/m ³ (Rat) 1 h
Acrylic acid, 2-hydroxyethyl ester 818-61-1	= 548 mg/kg(Rat)	= 154 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. Irritating to eyes.

Respiratory or skin sensitization May cause sensitization by skin contact. Classification based on data available for

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ingredients.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

IARC (International Agency for Research on Cancer)

Group 3 - Not Classifiable as to Carcinogenicity in Humans

Reproductive toxicity Classification based on data available for ingredients. Contains a known or suspected

reproductive toxin. The table below indicates ingredients above the cut-off threshold

considered as relevant which are listed as reproductive toxins.

STOT - single exposure Classification based on data available for ingredients.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

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
Tripropylene glycol diacrylate 42978-66-5	28: 72 h Desmodesmus subspicatus mg/L EC50	4.5 - 10: 96 h Leuciscus idus mg/L LC50	-	88.7: 48 h Daphnia magna mg/L EC50
Proprietary	> 2.01 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201, static)	6.53 mg/l, Oryzias latipes (JIS K 0102-71, semistatic)	-	3.53 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)
camphene 79-92-5	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, 2-hydroxyethyl ester 818-61-1	-	4.8: 96 h Pimephales promelas mg/L LC50 flow-through	-	0.78: 48 h Daphnia magna mg/L EC50

Persistence and degradability No information available.

Bioaccumulation There is no data for this product.

Component Information

Chemical name	Partition coefficient
Tripropylene glycol diacrylate 42978-66-5	2.77
Acrylic acid, 2-hydroxyethyl ester 818-61-1	0.21

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

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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.

US EPA Waste Number U008 U220

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

DOT

UN/ID no. UN3082

Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Hazard Class 9
Packing group III

Special Provisions 8, 146, 173, 335, IB3, T4, TP1, TP29

Description UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

(Tripropylene glycol diacrylate, Acrylic acid, 2-hydroxyethyl ester), 9, III, Marine pollutant

Emergency Response Guide

Number

e 17

TDG

UN/ID no. UN3082

Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Hazard Class 9
Packing group III

Description UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

(Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate, Bisphenol A ethoxylate diacrylate), 9, III

MEX

UN/ID no. UN3082

Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Hazard Class

Special Provisions 274, 331, 335

Packing group

Description UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

(Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate, 1,7,7-Trimethyltricyclo[2.2.1.02,6]heptane), 9, III

ICAO (air)

UN/ID no. UN3082

Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Hazard Class 9
Packing group III

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, 1,7,7-Trimethyltricyclo[2.2.1.02,6]heptane), 9, III

IATA

UN Number UN3082

UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Transport hazard class(es) 9
Packing group ||||

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, 1,7,7-Trimethyltricyclo[2.2.1.02,6]heptane), 9, III

IMDG

UN Number UN3082

UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Transport hazard class(es)

Packing group

EmS-No.

Special Provisions

9

III

F-A, S-F

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,

1,7,7-Trimethyltricyclo[2.2.1.02,6]heptane), 9, III, Marine pollutant

RID

UN Number UN3082

UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Transport hazard class(es) 9
Packing group III
Classification code M6

Special Provisions 274, 335, 375, 601

Description UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

(Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate, 1,7,7-Trimethyltricyclo[2.2.1.02,6]heptane), 9, III

Labels 9

ADR

UN Number UN3082

UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Transport hazard class(es) 9
Packing group III
Classification code M6
Tunnel restriction code (E)

Special Provisions 274, 335, 601, 375

Description UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

(Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate, 1,7,7-Trimethyltricyclo[2.2.1.02,6]heptane), 9, III

Labels

ADN

UN/ID no UN3082

UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Transport hazard class(es) 9
Packing group III
Classification code M6

Special Provisions 274, 335, 375, 601

Description UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

(Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate, 1,7,7-Trimethyltricyclo[2.2.1.02,6]heptane), 9, III

Hazard label(s) 9 Limited quantity (LQ) 5 L



15. REGULATORY INFORMATION

International Inventories

TSCA Complies DSL/NDSL Complies

EINECS/ELINCS No information available

ENCS Complies IECSC Complies

KECL No information available PICCS No information available

AICS Complies

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

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute health hazard Yes
Chronic Health Hazard Yes
Fire hazard No
Sudden release of pressure hazard No
Reactive Hazard No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

<u>CERCLA</u>

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals:.

ı	Chemical name	California Proposition 65

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TOLUENE -	108-88-3	Developmental	

U.S. State Right-to-Know Regulations

US State Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Acrylic acid, 2-hydroxyethyl	X	X	X
ester			
818-61-1			

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA Health hazards 3 Flammability 1 Instability 0 Physical and chemical

properties -

Health hazards 3 * Flammability 1 Physical hazards 0 Personal protection X

Chronic Hazard Star Legend *= Chronic Health Hazard

Revision Date 12-Dec-2018

Revision Note No information available.

Disclaimer

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End of Safety Data Sheet