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Revision F

Section 1: PRODUCT AND COMPANY IDENTIFICATION**Product identifier****Product Name** Digital ABS, RGD515**Product Code(s)** SDS-06108 EN Z**Other means of identification****Proper Shipping Name** OTHER REGULATED SUBSTANCES, LIQUID, N.O.S.**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 the supplier of the safety data sheet****Importer**Stratasys AP Limited
7/F, C-BONS International Center
108 Wai Yip Street, Kwun Tong
Kowloon Hong Kong
+852 3944 8888**For further information, please contact****Contact Point** Product Safety Department**E-mail address** info@Stratasys.com**Emergency telephone number****Emergency Telephone**

- +44 1865 407333 - Global – English Language response
- +44 1235 239670 - Europe - Multi lingual response
- +1 215 207 0061 - USA – Multi-lingual response
- +65 3158 1074 - Asia Pacific - Multi lingual response
- +61 2 8014 4558 - Australia - English Language response
- +86 512 8090 3042 - China - Chinese response

Section 2: HAZARDS IDENTIFICATION**ERMA New Zealand HSNO approval code or group standard** HSR002670**Dangerous Goods Class** Hazard Class 9 Packing group III**GHS Classification**

Acute toxicity - Oral	Category 5 (HSNO - 6.1E)
Serious eye damage/eye irritation	Category 1 (HSNO - 8.3A)
Skin sensitisation	Category 1 (HSNO - 6.5B)
Specific target organ toxicity (repeated exposure)	Category 2 (HSNO - 6.9B)
Acute aquatic toxicity	Category 1 (HSNO - 9.1A)
Chronic aquatic toxicity	Category 1 (HSNO - 9.1A)

Label elements**Signal word**

Danger

Hazard statements

H303 - May be harmful if swallowed

H317 - May cause an allergic skin reaction

H318 - Causes serious eye damage

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

H410 - Very toxic to aquatic life with long lasting effects

Precautionary Statements - Prevention

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

Contaminated work clothing should not be allowed out of the workplace

Do not breathe dust/fume/gas/mist/vapours/spray

Avoid release to the environment

Call a POISON CENTER or doctor/physician 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

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

Wash contaminated clothing before reuse

Collect spillage

Dispose of contents/container to an approved waste disposal plant

Other hazards

May cause respiratory irritation

No information available

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

Not applicable

Mixture

Chemical name	CAS No	Weight-%
Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	5888-33-5	30-50
4-(1-Oxo-2-propenyl)-morpholine	5117-12-4	10-30
Proprietary	-	10-30
Proprietary	-	0.3-1
Glycerol, propoxylated, esters with acrylic acid	52408-84-1	0.1-0.3
camphene	79-92-5	0.1-0.3
Non-hazardous ingredients	Proprietary	Balance

Additional information

This product requires tactile warnings if supplied to the general public

Section 4: FIRST AID MEASURES

Description of first aid measures

General advice	Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.
Inhalation	Remove to fresh air. Get medical attention immediately if symptoms occur.
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	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.
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 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: FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Suitable Extinguishing Media Use extinguishing agent suitable for type of surrounding fire. Class B fires: Use carbon dioxide (CO₂), regular dry chemical (sodium bicarbonate), regular foam (Aqueous Film Forming Foam-AFFF), or water spray to cool containers.

Unsuitable extinguishing media No information available.

Specific hazards arising from the chemical

Specific hazards arising from the chemical No information available.

Special protective actions for fire-fighters

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.

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 See Section 12 for additional Ecological Information.

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 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

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice.

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 None known based on information supplied.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Biological occupational exposure limits Not applicable.

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.
Hand Protection	Wear suitable gloves.
Skin and body protection	Wear suitable protective 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.
Environmental exposure controls	No information available.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	liquid
Appearance	Ink cartridge
Odour	Characteristic.
Colour	yellow
Odour threshold	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.	

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 Heating may cause a fire.

Chemical stability

Stability Decomposes on exposure to light. Unstable if heated.

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** None known based on information supplied.**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**

Specific test data for the substance or mixture is not available.

Eye contact

Specific test data for the substance or mixture is not available.

Skin contact

Specific test data for the substance or mixture is not available.

Ingestion

Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

Symptoms

Redness. Burning. May cause blindness. Itching. Rashes. Hives.

Numerical measures of toxicity - Product Information**The following values are calculated based on chapter 3.1 of the GHS document**

ATEmix (oral)	2,074.00 mg/kg
ATEmix (dermal)	5,595.00 mg/kg 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
Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	= 4890 mg/kg (Rat)	> 3000 mg/kg (Rabbit)	-
4-(1-Oxo-2-propenyl)-morpholine	= 588 mg/kg (rat)	> 2000 mg/kg (rat)	= 5.28 mg/l (rat)
Proprietary	>2000 mg/kg (Rat)	>2000 mg/kg	-

camphene	> 5 g/kg (Rat)	> 2500 mg/kg (Rabbit)	= 17100 mg/m ³ (Rat) 1 h
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See section 16 for terms and abbreviations

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

Skin corrosion/irritation	No information available.
Serious eye damage/eye irritation	No information available.
Sensitisation	No information available.
Germ cell mutagenicity	No information available.
Carcinogenicity	No information available.
Reproductive toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Aspiration hazard	No information available

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity	Very toxic to aquatic life with long lasting effects
Unknown aquatic toxicity	0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.

Chemical name	Algae/aquatic plants	Fish	Crustacea
Exo-1,7,7-trimethylbicyclo[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)
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

Persistence and degradability

Persistence and degradability	No information available.
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Bioaccumulative potential

Bioaccumulation	No information available.
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Mobility

Mobility in soil	No information available.
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Mobility	No information available.
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Other adverse effects

Other adverse effects	No information available.
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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
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Road transport

ADG

UN Number	UN3082
Proper Shipping Name	OTHER REGULATED SUBSTANCES, LIQUID, N.O.S.
Hazard Class	9
Packing group	III
Environmental Hazard	Yes
Special Provisions	179, 274, 331, 335, AU01
Description	UN3082, OTHER REGULATED SUBSTANCES, LIQUID, N.O.S., 9, III

IATA

UN Number	UN3082
Transport hazard class(es)	9
Packing group	III
ERG Code	9L
Special Provisions	A197
Description	&UN3082, &, 9, III

IMDG

UN Number	UN3082
Transport hazard class(es)	9
Packing group	III
EmS-No	F-A, S-F
Special Provisions	274, 335, 969
Description	&UN3082, & (EXO-1,7,7-TRIMETHYLBICYCLO[2.2.1]HEPT-2-YL ACRYLATE), 9, III, <TWRP0001>

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

New Zealand

National Regulations See section 8 for national exposure control parameters

ERMA New Zealand HSNO approval code or group standard HSR002670

Chemical name	New Zealand HSNO Chemical Classification
4-(1-Oxo-2-propenyl)-morpholine - 5117-12-4	6.3A,6.4A
Glycerol, propoxylated, esters with acrylic acid - 52408-84-1	6.1E inhalation,6.3A,6.4A 6.3A,6.4A
camphene - 79-92-5	4.1.1B,8.3A,9.1A fish,9.1C crustacean

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

International Regulations

Ozone-depleting substances (ODS) Not applicable

Persistent Organic Pollutants Not applicable

Export Notification requirements Not applicable

Section 16: OTHER INFORMATION

Revision Date 08-Nov-2017

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