Safety Data Sheet

1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier
imageCure, PRR35-OP

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

1.3. Details of the supplier of the safety data sheet

Manufacture's name:	Roland DG Corporation
Address:	1-6-4 Shinmiyakoda, Kita-ku, Hamamatsu-shi, Shizuoka-ken, 431-2103 JAPAN
Phone:	+ 81-53-484-1224
Fax:	+ 81-53-484-1226

1.4. Emergency telephone:
Prepared date: 29 September, 2017

2. Hazard identification

2.1. Classification of the substance or mixture
This product is classified as dangerous according to GHS.

Acute toxicity - oral	Category 4
Skin corrosion/irritation	Category 2
Eye damage/irritation	Category 2A

2.2. GHS label elements, incliding precautionary statements
Pictogram

Signal word(s) Warning

Hazard statement(s)

Harmful if swallowed.
Causes skin irritation.
Causes serious eye irritation.

Contains 2-Hydroxyethyl acrylate. May produce an allergic reaction.

Precautionary statement(s)

Prevention	Wear protective gloves/protective clothing/eye protection/face protection.
Response	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. IF ON SKIN: Wash with plenty of soap and water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention.

2.3. Other hazards

Potential Health Effects:

Eyes:	Causes severe eye injury which may persist for several days.
Skin:	Contact with skin may cause irritation, swelling or redness, allergic sensitization.
Inhalation:	Exposure to vapors (mist) will cause respiratory irritation and anesthesia.
Ingestion:	May cause injury of mouth ,throat, and stomach.
Chronic Health Hazards:	Repeated skin contact may cause a persistent irritation or dermatitis.
Carcinogenicity:	None of the ingredients in this resin is listed by IARC as a carcinogen. (1,2A and 2B)

3. Composition/information on ingredients

Chemical nature: mixture

Composition	CAS No.	EC No.	EU registration No.	% By Weight	Classification EC No. 1272/2008
Urethane acrylate oligomer	C.B.I.	C.B.I.	N/A for the moment	15-25	Not classified as hazardous
2-Hydroxy-3-phenoxypropyl acrylate	16969-10-1	241-045-8	N/A for the moment	40-50	Acute Tox.(Oral) 4: H302
Poly(oxy-1,2-ethanediyl), .alpha.-(1-oxo-2-propen-1-yl)-.omega.-phenoxy-	56641-05-5	500-133-9	N/A for the moment	30-40	Skin Irrit. 2: H315 Eye Irrit. 2: H319
Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	75980-60-8	278-355-8	N/A for the moment	1-5	Repr. 2: H361f
2-Hydroxyethyl acrylate	818-61-1	212-454-9	N/A for the moment	<0.2	Acute Tox.(Dermal) 3: H311 Skin Corr. 1B: H314 Skin Sens. 1: H317 Aquatic Acute 1: H400

*For the full text of the H-Statements mentioned in this Section, see Section 16.

4. First aid measures

4.1. Description of first aid measures

Eyes: In case of contact, immediately flush eyes with plenty of water for several minutes. Hold eyelids open during flushing. Call a physician.

Skin: In case of contact, immediately flush with plenty of water while removing contaminated clothing and shoes. Wash contaminated clothing before reuse. If swelling or redness occurs, call a physician.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Ingestion: If swallowed, DO NOT induce vomiting. Seek immediate medical advice.

4.2. Most important symptoms and effects, both acute and delayed

Eyes: Causes severe eye injury which may persist for several days.

Skin: Contact with skin may cause irritation, swelling or redness, allergic sensitization.

Inhalation: Exposure to vapors (mist) will cause respiratory irritation and anesthesia.

Ingestion: May cause injury of mouth ,throat, and stomach.

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

No information

5. Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Dry chemical, Foam, Carbon dioxide, Dry sand, Loaded stream in spray.

Unsuitable extinguishing media:

Water, High-pressure water jet

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products: Carbon monoxide, carbon dioxide, oxides of nitrogen, toxic gases/vapors.

Flash Point: >93deg.C

5.3. Advice for firefighters

Wear special chemical protective clothing and positive pressure self-contained breathing apparatus(SCBA). Approach fire from upwind to avoid hazardous vapors and toxic decomposition products. Decontaminate or discard any clothing that may contain chemical residues.Applying direct water may be dangerous because fire may expand to surroundings.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate personnel, thoroughly ventilate area, use self-contained breathing apparatus and wear appropriate personal protective equipment.

6.2. Environmental precautions

Wipe off spillage. Prevent liquid from entering sewers, waterways or low areas.

6.3. Methods and material for containment and cleaning up

Sweep up material and dispose as waste following local regulations.

6.4. Reference to other sections

Refer to “Section 8 Exposure controls/ personal protection” and “Section 13 Disposal consideration” as appropriate.

7. Handling and storage

7.1. Precautions for safe handling

Avoid contact with eyes, skin and clothing. Use proper ventilation and no fire in work place. Keep out of reach of children and do not drink. Do not dismantle container.

7.2. Conditions for safe storage, including any incompatibilities

Keep containers tightly closed. Do not store the product in high or freezing temperatures. Keep the product out of direct sunlight. Do not store the product with metals, amines, free radical initiators, oxidising agents.

7.3. Specific end use(s): Stereolithography Resin

8. Exposure controls/ personal protection

8.1. Control parameters

Occupational Exposure Limits:

DNEL(Derived No Effect Level)

components	Long term exposure	Short term exposure
Diphenyl(2,4,6-trimethylbenzoyl) phosphine oxide	3.5mg/m^3	-
2-Hydroxyethyl acrylate	2.4mg/m^3	-

*Refere to Toxicological Information of REACH registered substance.
(Assessment information of exposure via inhalation route for workers)

8.2 Exposure controls:

Appropriate engineering controls:	Provide general and/or local exhaust ventilation.
Respiratory protection:	In case ventilation is insufficient, employee must use NIOSH approved air purifying respiratory protection equipment. Use a half facepiece respirator (with goggles) or full face-piece respirator (without goggles) filtered with organic vapor cartridge.For emergency and other conditions where the exposure guideline may be exceeded,use an approved positive-pressure self-contained breathing apparatus or positive-pressure airline with auxiliary self contained air supply. WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.
Hand protection:	When handling the resin or washing the multiple job, use protective gloves. Recommended Chemical Protective Gloves are ethylene vinyl alcohol (EVA) Gloves and Laminate gloves. Laminate gloves are made by cutting and then heat-sealing patterns of various hand sizes from laminated sheets of EVA sealed between layers of polyethylene.
Eye protection:	When handling the resin, wear safety glasses or chemical splash goggles.
Skin protection:	When handling the resin, wear protective clothing.
Hygiene measures:	Wash hands after handling. In case contact with clothing, wash before reuse.Do not eat, drink or smoke in handling or storage area.
Environmental exposure control:	Avoid release to the environment.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance:	Clear Liquid
Odour:	Characteristic odor
Odour threshold:	No data available
pH:	Not applicable
Melting point/freezing point:	No data available
Initial boiling point and boiling range:	No data available
Flash point:	> 93deg.C
Evaporation rate:	No data available
Flammability(solid,gas):	Not applicable
Upper/lower flammability or explosive limits:	No data available
Vapor pressure:	No data available
Vapor density:	No data available
Relative density:	No data available
Solubility:	No data available
Solubility(ies):	Water solubility: Slightly soluble
Partition coefficient: n-octanol/water:	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity:	No data available
Explosive properties:	No data available
Oxidizing properties:	No data available
Volatile organic compounds (VOC) content:	No data available

9.2. Other information: No information

10. Stability and reactivity

10.1. Reactivity:	High temperatures and UV light may cause rapid polymerization.
10.2. Chemical stability:	Polymerize under heat and/or light.
10.3. Possibility of hazardous reactions:	Not expected
10.4. Conditions to avoid:	Elevated temperatures/heat, UV light, when not in use.
10.5. Incompatible materials:	Avoid contact with acids, amines, free radical initiators, oxidizing agents.
10.6. Hazardous decomposition products:	Carbon monoxide, carbon dioxide, oxides of nitrogen, toxic gases/vapors.

11. Toxicological information

11.1. Information on toxicological effects

Acute toxicity:

2-Hydroxy-3-phenoxypropyl acrylate

LD50 (Oral-mouse)	1730 mg/kg

Serious eye damage/eye irritation:	No data available Causes serious eye irritation. (Poly(oxy-1,2-ethanediyl), .alpha.-(1-oxo-2-propen-1-yl)-.omega.-phenoxy-)
Skin corrosion/irritation:	No data available Causes skin irritation. (Poly(oxy-1,2-ethanediyl), .alpha.-(1-oxo-2-propen-1-yl)-.omega.-phenoxy-)
Respiratory or skin sensitisation:	No data available May cause an allergic skin reaction.(2-Hydroxyethyl acrylate)
Germ cell mutagenicity:	No data available
Reproductive toxicity:	No data available Suspected of damaging fertility or the unborn child.(Diphenyl(2,4,6-trimethylbenzoyl) phosphine oxide)
Carcinogenicity:	None of the ingredients in this product is listed by IARC as a carcinogen. (1,2A and 2B)
STOT-single exposure:	No data available
STOT-repeated exposure:	No data available
Aspiration hazard:	No data available

12. Ecological information

12.1. Toxicity:	No data available
12.2. Persistence and degradability:	No data available
12.3. Bioaccumulative potential:	No data available
12.4. Mobility in soil:	No data available
12.5. Results of PBT and vPvB assessment:	No data available
12.6. Other adverse effects:	No data available

13. Disposal considerations

13.1. Waste treatment methods:

This product is considered as a hazardous waste according to Directive 2008/98/EC.

Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial and Local regulations. Do not flush to surface water or sanitary sewer system.

14. Transport information

14.1. UN Class/UN Number:
ADR/ADG/DOT, IMDG, or IATA : Not regulated

14.2. UN proper shipping name:
ADR/ADG/DOT, IMDG, or IATA : Not regulated

14.3. Transport hazard class(es):
ADR/ADG/DOT, IMDG, or IATA : Not regulated

14.4. Packing group:
ADR/ADG/DOT, IMDG, or IATA : Not regulated

14.5. Environmental hazards:
ADR/ADG/DOT, IMDG, or IATA : Not regulated

14.6. Special precautions for user: Transport and storage of the product in accordance with general precautions and instructions mentioned in this SDS.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and IBC code:
Not regulated

15. Regulatory information

EU information:
Chemical Safety Assessment according to (EC)1907/2006:
This product has not carried out any Chemical Safety Assessment yet.

Australia Information:
Hazardous statement: Classified as hazardous according to NOHSC criteria.

International Information:
None of the ingredients in this resin is listed by IARC as a carcinogen. (1,2A and 2B)

16. Other information

List of relevant H-Statements:

H302 Harmful if swallowed.
H311 Toxic in contact with skin.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H361f Suspected of damaging fertility or the unborn child.
H400 Very toxic to aquatic life.

The information in this Safety Data Sheet (SDS) is believed to be correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. It is subject to revision as additional knowledge and experience is gained. Roland DG does not warrant the completeness or accuracy of the information contained herein.