

Safety Data Sheet

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

1.1. Product identifier

imageCure, PRH35-ST2

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

3D Printing

1.3. Details of the supplier of the safety data sheet

Manufacturer's name: Roland DG Corporation

Address: 1-1-2 Shinmiyakoda, Hamana-ku, Hamamatsu-shi, Shizuoka-ken, 431-2103

Phone: + 81-53-484-1224

FAX: + 81-53-484-1226

E-mail:

Revised date: 9-Jan-2024

1.4. Emergency telephone:

2. Hazard identification

2.1. Classification of the substance or mixture

This product is classified as hazardous according to GHS.

Hazardous to the aquatic environment (AcuteHazard) Category 3

Hazardous to the aquatic environment (Chronic Hazard) Category 3

2.2. GHS label elements, including precautionary statements

Pictogram(s): No pictograms

Hazard Statement: Harmful to aquatic life.

Harmful to aquatic life with long lasting effects.

Contains Bis(1,2,2,6,6-pentamethyl-4-piperidinyl)sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidinyl sebacate. May produce an allergic reaction.

Precautionary statements — Prevention:

Avoid release to the environment.

2.3. Other hazards

Potential Health Effects:

Eyes: Contact with eye will be irritating.

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)
Others:	No information.

3. Composition/information on ingredients

Chemical nature: mixture

Composition	CAS No.	% By Weight	GHS Classification
Bisphenol A, ethoxylated, dimethacrylate	41637-38-1	80-90	Aquatic Chronic 4: H413
Methacrylic ester	CBI	<10	Not classified as hazardous
Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	75980-60-8	<3	Repr. 1B: H360 Skin Sens.1: H317
Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	41556-26-7	<1	Skin Sens. 1: H317 Aquatic Acute 1: H400 Aquatic Chronic 1: H410
Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	82919-37-7	<1	Skin Sens. 1: H317 Aquatic Acute 1: H400 Aquatic Chronic 1: H410

† CBI: Confidential Business Information

‡ 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:** Contact with eye will be irritating.
- 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: > 94deg.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. Put protection wear that has electrical conductivity in case of work. Keep out of reach of children and do not drink.

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): 3D Printing

8. Exposure controls/ personal protection

8.1. Control parameters

Occupational Exposure Limits:

Derived No-Effect Level (DNEL)

— Bisphenol A, ethoxylated, dimethacrylate:

[Long term exposure] 3.52 mg/m³

[Short term exposure] -

— Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide:

[Long term exposure] 0.822 mg/m³

[Short term exposure] no hazard identified

8.2. Exposure controls

Appropriate engineering controls

Provide general and/or local exhaust ventilation.

Respiratory protection:

Not required when sufficient ventilation is provided. In case of inadequate ventilation and exposure limits are exceeded or if irritation or other symptoms are experienced, use a NIOSH/MSHA or European Standard EN149 approved respirator (with activated carbon layer for organic vapour).

Hand protection:

When handling the resin or washing the multiple job, use protective gloves. Recommended Chemical Protective Gloves are EN420/374 approved ethylene vinyl alcohol (EVOH) Gloves and Laminate gloves. Laminate gloves are made by cutting and then heat-sealing patterns of various hand sizes from laminated sheets of EVOH sealed between layers of polyethylene.

Eye protection:

When handling the resin, wear EN166 approved safety glasses.

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 odour

Odour threshold:	Not defined
pH:	Not applicable
Melting point/freezing point:	No data available
Initial boiling point and boiling range:	No data available
Flash point:	> 94deg.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(ies):	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:

Stable under normal temperature.

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: None of the ingredients in this ink is classified as acute toxicant.

Serious eye damage/eye irritation:

no data available.

Skin corrosion/irritation:

no data available.

Respiratory or skin sensitisation:

May cause an allergic skin reaction.

- Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide
- Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate
- Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate

Germ cell mutagenicity:

no data available.

Reproductive toxicity:

May damage fertility or the unborn child.

- Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide

Carcinogenicity:

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

Specific target organ toxicity - single exposure, (STOT-SE):

no data available.

Specific target organ toxicity - repeat exposure, (STOT-RE):

no data available.

Aspiration hazard:

no data available.

12. Ecological information

12.1. Toxicity:

Very toxic to aquatic life.

- Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate
- Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate

Very toxic to aquatic life with long lasting effects.

- Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate

- Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate
May cause long lasting harmful effects to aquatic life.
- Bisphenol A, ethoxylated, dimethacrylate

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:

Has not carried out PBT and vPvB assessment.

12.6. Endocrine disrupting properties:

No data available

12.7. Other adverse effects:

No data available

13. Disposal considerations**13.1. Waste treatment methods**

- Product: Dispose as hazardous waste. Packaging with product residues must be disposed of under the same conditions as the product itself.
- Recommended waste code: 20 01 27* (paint, inks, adhesives and resins containing hazardous substances)
- Uncleaned packaging: 15 01 10* (packaging, the residues of dangerous substances or hazardous waste contain or are contaminated by dangerous substances or special wastes)
- Recommendation: Uncontaminated packaging can be recycled. Non-cleanable packaging must be disposed of in the same way as the substance.

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

ADR/ADG/DOT, IMDG, or IATA : 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.

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:

(Reference for Section 3. "Composition/information on ingredients")

- H317: May cause an allergic skin reaction.
- H360: May damage fertility or the unborn child.
- H400: Very toxic to aquatic life.
- H410: Very toxic to aquatic life with long lasting effects.
- H413: May cause long lasting harmful effects 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.