

Safety Data Sheet

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

1.1. Product identifier

Photo-Cured Resin, SR100-BS
Photo-Cured Resin, SR100-TR

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

Manufacturer's name: Vertex-DentalB.V.
Address: P.O. Box 103700 AA Zeist The Netherlands
Emergency telephone number: +31 88 6160 487 (only available during office hours)

Suppliere's name: Roland DG Corporation
Address: 1-6-4 Shinmiyakoda, Kita-ku, Hamamatsu-shi,
Shizuoka-ken, 431-2103
JAPAN
Phone: + 81-53-484-1224
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2. HAZARDS IDENTIFICATION

Classification of the product

Skin Sens. 1	Skin sensitization
Aquatic Chronic 4	Hazardous to the aquatic environment – chronic

2.2. GHS label elements, including precautionary statements

Pictogram



Signal word
Hazard statements

Warning

H317 May cause an allergic skin reaction
H413 May cause long lasting harmful effects to the aquatic life.

Precautionary statements (Prevention):

P280 Wear protective gloves
P261 avoid breathing dust/fumes/gas/mist/vapours/spray
P272 Contaminated work clothing should not be allowed out of the workplace.
P273 avoid release to the environment

Precautionary statements (Response):

P303+P352 IF ON SKIN (or hair): wash with plenty of soap and water
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses
P333+P313 If skin irritation or a rash occurs: Get medical advice/attention.
P362+P364 Take of contaminated clothing and wash before reuse.

Precautionary statements (Disposal):

P501 Dispose of contents/container to hazardous or special waste collection point.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Monomer based on methacrylic ester with low levels of stabiliser, pigments and accelerator.

HAZARDOUS INGREDIENT(S)	CAS No.	EC No.	EU registration No.	% By Weight	Classification
Ethoxylated Bisphenol A	41637-38-1	609-946-4	N/A for the moment	>60	Aquatic Chronic 4: H413
Methacrylic oligomer	-	-	N/A for the moment	15 - 25	Skin Sens. 1: H317
Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	162881-26-7	423-340-5	N/A for the moment	<2.5	Skin Sens. 1: H317 Aquatic Chronic 4: H413
Phenylphosphinate	84434-11-7	282-810-6	N/A for the moment	<2.5	Aquatic Chronic 3: H412

For full text of H and P phrases see section 2.

4. FIRST AID MEASURES

- Inhalation: Remove patient from exposure and to fresh air. Obtain immediate medical attention.
- Skin Contact: Remove contaminated clothing. Wash skin immediately with soap and lukewarm water. If symptoms (irritation or blistering) occur obtain medical attention.
- Eye Contact: Irrigate with eyewash solution or clean water, holding the eyelids apart, for at least 15 minutes. Obtain immediate medical attention.
- Ingestion: Do not induce vomiting. If ingested, drink plenty of water/milk immediately. If person is vomiting, continue to offer water of milk. Never give anything by mouth to an unconscious person. Obtain medical attention.

Further Medical Treatment

Symptomatic treatment and supportive therapy as indicated.

5. FIRE-FIGHTING MEASURES

May polymerise on heating. Sealed container may rupture explosively if hot.

Suitable extinguishing media: Foam, dry chemicals and CO₂.

Unsuitable extinguishing media: Direct jet of water.

Special exposure hazards: High temperatures may cause spontaneous polymerizing reaction generating heat/pressure. Closed containers may rupture or explode during a runaway polymerization. Use a water spray or fog to reduce or direct vapours. Water may not be efficient in actually extinguishing a fire involving this product

Fire-Fighting Protective Equipment: A self contained breathing apparatus and full protective clothing should be worn in fire conditions.

6. ACCIDENTAL RELEASE MEASURES

Eliminate sources of ignition. Ensure suitable personal protection (including respiratory protection) during removal or spillage. Prevent entry into drains. Adsorb spillages onto sand, earth or any other suitable adsorbent material. DO NOT adsorb onto sawdust or other combustible materials. Transfer to a container for disposal or recovery. Spillages or uncontrolled discharges into watercourses must be alerted to appropriate regulatory body. Do not discharge into drains/surface waters/groundwater. Maximize ventilation after accidental release.

7. HANDLING AND STORAGE

7.1. HANDLING

Avoid contact with skin and eyes. Avoid inhalation of high concentrations of vapours. Use only in well ventilated areas. Material must be kept from sources of ignition. Take precautionary measures against static discharges. Keep away from food, drinks and animal feed.

7.2. STORAGE

Keep in dry, cool, well ventilated place, separate from oxidising agents. Keep away from sources of ignition – No smoking. Keep away from heat and direct (sun) light. Container may be filled for only 80%. Keep the container closed to avoid evaporation of the product.
Storage temperature: Preferably not exceeding 25°C

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. EXPOSURE LIMIT VALUES

Occupational Exposure limits

components	TWA 8 hr (mg/m ³)	TWA 8hr (ppm)
Methacrylic oligomers	Not listed	Not listed
Phosphine oxides	1.0 (Skin)	No vapour
Colorants and pigments	Not listed	Not listed

8.2. EXPOSURE CONTROLS

Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded.

The following information is given as general guidance.

Respirators:	Wear suitable respiratory equipment if exposed to level above the occupational exposure limit is likely. A suitable mask with filter type A may be appropriate.
Eye Protection:	Safety spectacles/goggles
Gloves:	Wear suitable gloves. The most appropriate glove depends on consideration of a number of factors including the physical strength of the glove, the degree of manual dexterity required, the amount of permeation through the glove material and the duration of wear. There are a wide variety of elastomeric and laminate gloves available. Common elastomeric glove material include latex (natural rubber), neoprene (polyisoprene), nitrile rubber (ABS rubber), butyl rubber, polyvinyl alcohol (PVA), polyvinyl chloride (PVC) and fluoroelastomers. Laminate gloves are made from heat sealed sheets of PVA between layers of polyethylene. In permeations tests PVA/Polyethylene laminate and supported PVA gloves performed best (note that PVA can be rendered ineffective by contact with water if the laminate layer is breached). Butyl and nitrile rubber gloves offer short-term protection. Latex surgical gloves offer little protection. Gloves should be stored correctly and changed regularly, especially if excessive exposure has occurred.
Other:	Keep working clothes separately. Take off contaminated clothing immediately. Keep away from food, drinks and animal feed. Wash hands thoroughly after handling

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Opaque viscous liquid
Odor:	Ester like
pH:	Not applicable
Boiling point (deg.C)	> 100deg.C
Flash point (deg.C)	> 93deg.C
Ignition temperature (deg.C)	430°C
Flammability limits (vol-%)	No data available
Relative density:	1.11-1.15 (water = 1)
Explosive properties:	No data available
Oxidizing properties:	No data available
Vapor pressure:	No data available
Solubility:	No data available
Solubility in water (g/l, 20deg.C)	No data available
Partition coefficient: n-octanol/water:	No data available
Viscosity:	No data available
Melting Point :	No data available
Evaporation Rate	No data available
Vapor Density	No data available
Volatile organic compounds (VOC) content:	No data available

10. STABILITY AND REACTIVITY

10.1. CONDITIONS TO AVOID

The product is stabilised. However polymerisation may occur when the expiry date and/or storage temperature is considerable exceeded. Keep out of direct sunlight and ultra violet radiation.

10.2. MATERIALS TO AVOID

When heated above the flash point, flammable vapours are emitted which can mix with air and can burn or be explosive. Vapours are heavier than air and may travel to the source of ignition and flash back. Heat can cause polymerisation with rapid release of energy which may rupture the container explosively.

Incompatible materials: strong oxidizers, strong reducers, inert gases and oxygen scavengers.

10.3. HAZARDOUS DECOMPOSITION PRODUCTS

Oxides of carbon when burned.

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity:

Ethoxylated Bisphenol A

LD50 acute oral rat: >2000 mg/kg

LD50 acute dermal rat: >2000 mg/kg

Phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide

LD50 acute oral rat: >2000 mg/kg

LD50 acute dermal rat: >2000 mg/kg

Inhalation:

Irritating to respiratory system. High atmospheric concentrations may lead to irritation of the respiratory tract, dizziness, headache and anaesthetic effects.

Skin contact:

May cause sensitisation by skin contact. Irritating to skin, Repeated and/or prolonged contact may cause dermatitis.

Eye contact:

High vapour concentration may cause irritation.

Ingestion:

Low oral toxicity, but ingestion may cause irritation of the gastrointestinal tract.

12. ECOLOGICAL INFORMATION

12.1. ENVIRONMENTAL FATE AND DISTRIBUTION

Liquid with low volatility. The product is slightly soluble in water. The product as low potential for bioaccumulation in small amounts.

12.2. ENVIRONMENTAL EXPOSURE CONTROLS

The product should not be allowed to drain in sewers.

13. DISPOSAL CONSIDERATIONS

Disposal should be in accordance with local, state or national legislation. Incinerate under approved controlled conditions, using incinerators for the disposal for organic chemicals. Decontaminate empty drums before recycling.

14. TRANSPORT INFORMATION

No hazardous material as defined by the prescriptions. No specific regulation for transport necessary.

15. REGULATORY INFORMATION

EC Classification: IRRITANT, SENSITIZING AND HARMFUL

Hazard Symbol: Xi: Irritating

Health Phrases: H317: May cause an allergic skin reaction
H412: Harmful to aquatic life with long-lasting effects.
H413: May cause long lasting harmful effect to aquatic life

High atmospheric concentrations may lead to irritation of the respiratory tract and anaesthetic effects.
Repeated and/or prolonged contact may cause dermatitis.

16. OTHER INFORMATION

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of publication. The information given is designed only as 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.