

Generative Resin GR-1

Instructions

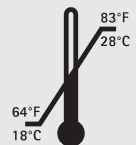
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Product description:
photopolymerizable
resin for production
of earpieces

Technical data:

- Colour: various
- Density:
ca. 1.1 g/ml
- Viscosity:
ca. 0,7 Pa s
- Green flex modulus:
Elastic modulus:
ca. 600 MPa
Flexural strength:
ca. 50 MPa
Elongation at break:
ca. 20 %
- Post cured
material: (depends
on postcuring unit)
Elastic modulus:
ca. 1700 MPa
Flexural strength:
ca. 90 MPa
Elongation at break:
ca. 10 %
Hardness:
ca. 80 Shore D
- Penetration depth:
Dp: 127 µm
(5,0 mils)
- Critical exposure:
Ec: 14,0 mJ/cm²
- Storage:



Ordering information:

Standard packing:

1kg bottle,

clear-transparent
item no.: A1000300

red-transparent
item no.: A1000302

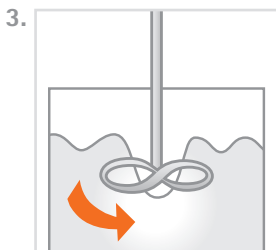
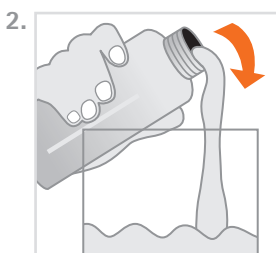
reddish-transparent
item no.: A1000303

blue-transparent
item no.: A1000304

beige-opaque
item no.: A1000350

reddish-orange
item no.: A1000311

These data result from
measurements of a
representative sample,
which were determined
within the scope of our
quality assurance.



1. Product description

pro3dure's generative resin **GR-1** is a laser-curing resin for the production of earmoulds and hearing aid shells based on a stereolithography process. The formulation of **GR-1** is optimized for the requirements of a robust production guaranteeing constant high quality. The **GR-1** is successfully tested for bio-compatibility, certainly meets all mechanical and application demands. The material can be used for build processes with layer thicknesses from 25 up to 100 µm. It is recommended to use the pro3dure medical curing device **CD-1** or **CD-2** for post curing.

2. Processing

- **GR-1** bottles should be well shaken before use (fig 1).
- Make sure that **GR-1** material is temperature adjusted up to 23 °C to 30 °C.
- Carefully pour **GR-1** into the vat of the SLA-unit (fig 2).
- Bubbles can be removed with a cleaned spatula or by a recoater routine.
- If it is possible, always store a bottle **GR-1** in your SLA unit in order to avoid temperature differences during refilling.
- For the SLA parameter adjustment please refer to the Technical Data Sheet.
- After the build process is finished a direct post treatment is recommended. If this cannot be guaranteed leave the produced objects in the liquid **GR-1** resin.
- After cleaning of the parts with isopropanol ≥ 97 % (approx. 3-5 min. in an ultrasonic bath) the objects are postcured in an adequate light curing unit (e.g. pro3dure's **CD-1** or **CD-2** for a period of 3-4 min.) in a protective gas atmosphere (N₂).
- The earmoulds and shells generated out of the generative resin **GR-1** can be coated and repaired as usual. For this purpose the pro3dure medical products e.g. L-1 UV lacquer are recommended.
- Impurity due to operation mistakes cannot be excluded. With respect to the low viscosity of the resin it is possible to filtrate the **GR-1**. It is recommended to filtrate and stir up the resin on a regular base. If opaque material is used additionally mix the content with a propeller mixer carefully (fig 3). To avoid bubbles let **GR-1** rest for 1 hour before usage.

Contains: Alkoxilated bisphenole-A-dimethacrylate, initiators, dyes, stabilisers, and pigments

3. Important

- To avoid detrimental effects on material quality do not expose the liquid material to irradiation under any circumstances.
- Deviations from the described manufacturing process may lead to different mechanical and optical properties of the **GR-1** material.
- Ensure personal protective gear during processing.
- Caution: Polymerised resins are chemically resistant - avoid stains on clothing!
- Avoid any contact with skin and eyes. In case of accidental contact, rinse with adequate running water, consulting a doctor if necessary.
- The lot number and the best before date are indicated on each **GR-1** packaging. In case of claims please always indicate the lot number of the product. Do not use the product after expiry of the best before date.

Safety advice

pro3dure medical GmbH is not liable for any damages caused by improper application of the material. To be used by trained specialist personnel for the purpose indicated only.

GR-1