

# Generative Resin GR-10

## Instructions

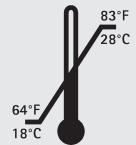
pro3dure medical GmbH

Am Burgberg 13  
D - 58642 Iserlohn  
Tel. +49 (0)2374 920050-0  
Fax +49 (0)2374 920050-50  
info@pro3dure.com  
www.pro3dure.com

**Product description:**  
photopolymerizable  
resin for production  
of earpieces by image  
projection systems

### Technical data:

- Colour: various
- Density: ca. 1.1 g/ml
- Viscosity: ca. 0,7 Pa s
- 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
- Storage:



### Ordering information:

**Standard packing:**  
1 kg bottle,

**clear-transparent**  
item no.: A1000800

**reddish-transparent**  
item no.: A1000803

**red-transparent**  
item no.: A1000802

**blue-transparent**  
item no.: A1000804

**beige-opaque**  
item no.: A1000850

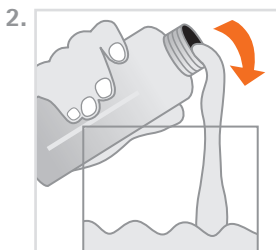
**reddish-orange**  
item no.: A1000811

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



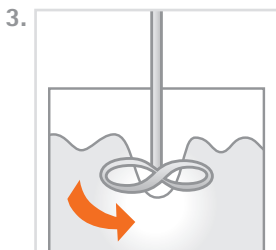
## 1. Product description

pro3dure's generative resin **GR-10** is a resin for the production of earmoulds and hearing aid shells based on a image projection system ( $\leq 405$  nm). The formulation of **GR-10** is optimized for the requirements of a robust production guaranteeing constant high quality. The **GR-10** is successfully tested for biocompatibility, certainly meets all mechanical and application demands. The material can be used for build processes with layer thicknesses from 10 up to 100  $\mu\text{m}$ . It is recommended to use the pro3dure medical curing device **CD-1** or **CD-2** for post curing.



## 2. Processing

- **GR-10** bottles should be well shaken before use (fig 1).
- Make sure that **GR-10** material is temperature adjusted up to 23 °C to 30 °C.
- Carefully pour **GR-10** into the vat of the image projection-unit (fig 2).
- Bubbles can be removed with a cleaned spatula or by a recoater routine.
- For the machine 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-10** resin.
- After cleaning of the parts with isopropanol  $\geq 97$  % (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 ( $\text{N}_2$ ).
- The earmoulds and shells generated out of the generative resin **GR-10** can be coated and repaired as usual. For this purpose the pro3dure products e.g. L-1 UV lacquer are recommended.
- Impurities due to operation mistakes cannot be excluded. With respect to the low viscosity of the resin it is possible to filtrate the **GR-10**. 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. To avoid bubbles let **GR-10** rest for 30 min. 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-10** 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-10** 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-10**