

# Generative Resin GR-19 OA

## Instructions

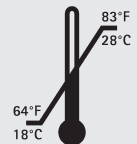
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**Product description:**  
photopolymerizable  
resin for 3D-printing  
systems (SLA, DLP)  
with irradiation  
sources ( $\lambda \leq 405$  nm)  
for orthodontic  
appliances

### Technical data:

- Colour:  
clear and rose  
transparent,  
light blue
- 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
- Storage:



### Ordering information:

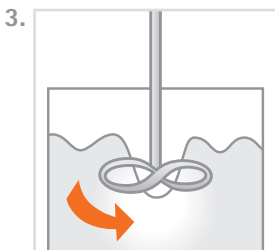
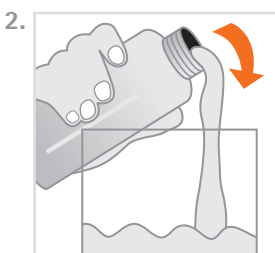
#### Standard packing:

1 kg bottle,  
clear transparent  
item no.: D1001493

1 kg bottle,  
rose transparent  
item no.: D1001492

1 kg bottle,  
light blue  
item no.: D1001491

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-19 OA** is a resin for 3D-printing systems (SLA, DLP) with irradiation sources ( $\lambda \leq 405$  nm) for orthodontic appliances. The formulation of **GR-19 OA** is optimized for the requirements of a robust production guaranteeing constant high quality. The **GR-19 OA** is successfully tested for biocompatibility, certainly meets all mechanical and application demands. The material can be used for build processes with layer thicknesses from 25 up to 100  $\mu$ m. It is recommended to use the pro3dure medical curing device **CD-1** or **CD-2** for post curing.

## 2. Processing

- **GR-19 OA** bottles should be well shaken before use (fig 1).
- Make sure that **GR-19 OA** material is temperature adjusted up to 23 °C to 30 °C.
- Carefully pour **GR-19 OA** into the vat of the image projection 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-19 OA** in your production unit in order to avoid temperature differences during refilling.
- For the build parameter adjustment please refer to the machine 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-19 OA** 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.
- The dental objects generated out of the generative resin **GR-19 OA** can be coated and repaired as usual.
- Impurity due to operation mistakes cannot be excluded. With respect to the low viscosity of the resin it is possible to filtrate the **GR-19 OA**. It is recommended to filtrate and stir up the resin on a regular base (fig 3). To avoid bubbles let **GR-19 OA** rest for 1 hour before usage.

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

## 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-19 OA** 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-19 OA** 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-19  
OA**