WiroFast

Precision casting investment material for partial dentures – shock or conventional heating

Safety instructions

Please read and follow the instructions in the insert

“Safety instructions and general instructions for BEGO investment materials”!

WiroFast can be heated up rapidly (“shock heat”) or conventionally.
The possible insertion temperatures are: approx. 20 °C / 70 °F (conventional) or 700 °C to 900 °C / 1290 °F to 1830 °F (shock heat).

General instructions

- Liquid for shock and conventional preheating:
  BegoSol® (Freece protected! Storage and transport temperature: −10 °C to +35 °C / 14°F to 95°F).
- Before mixing, rinse out the clean mixing bowl with water and wipe off.
  Mixing bowls that are not clean or are dry withdraw moisture from the investment material!
- Processing width 20 °C / 70 °F: approx. 3.0 minutes
  Processing width 23 °C / 73 °F: approx. 2.5 minutes
- First put in liquid and add powder, mix thoroughly with a spatula for at least 15 seconds.
  Then mix in a mixing unit for 60 seconds under vacuum conditions, as far as possible.
  (Processing without mixing unit: mix for 2 minutes on the vibrator.)

Duplication

- Duplication can be carried out in gel moulds or in silicone moulds.
  When working with a pressure compaction unit, silicone moulds and the duplicate model must be made under the same conditions (2 – 4 bar)! Duplicate in gel moulds only without pressure!
- Fill duplication mould on the vibrator and then remove it immediately from the vibrator.

Mixing for 2 duplicate models

<table>
<thead>
<tr>
<th></th>
<th>WiroFast</th>
<th>Liquid</th>
<th>Aqua dest.</th>
<th>Total</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liquid: BegoSol®; gel duplication</td>
<td>1 × 400 g</td>
<td>56 ml</td>
<td>24 ml</td>
<td>80 ml</td>
<td>70 %</td>
</tr>
<tr>
<td>Liquid: BegoSol®; silicone duplication</td>
<td>1 × 400 g</td>
<td>59 ml</td>
<td>25 ml</td>
<td>84 ml</td>
<td>70 %</td>
</tr>
</tbody>
</table>

Removal from mould

- Gel (Castogel®, Wirodouble®, WiroGel® M)
  after 45 – 50 minutes

- Silicone (Wirosil®)
  after 30 – 60 minutes

Surface treatment

- Drying
  - 20 minutes (250 °C / 500 °F)
  - 10 minutes (80–100 °C / 180–210 °F)
  - 45 minutes (150 °C / 300 °F)

- Dipping/spraying
  - briefly 3 times (approx. 2 seconds)
  - spray with thin film
  - long 1 time (approx. 4 seconds)

- Subsequent drying
  - 5 minutes (250 °C / 500 °F)
  - (80–100 °C / 180–210 °F)

Please note: Only those models fabricated in gel moulds need immersion hardening with Durol or Durol E.
Models duplicated with silicone only have to be dried for 10 mins. before applying Durofluid.

Before investing, prepare the wax-up with Winopaint plus fine investment material or Aurofilm wetting agent (please follow the processing instructions for the products).

Fill mould ring on the vibrator and then take away from vibrator immediately.

Remove the mould ring 10 minutes after investment, if shock heating please insert the ring immediately in the hot furnace!

Mixing for 1 mould

<table>
<thead>
<tr>
<th></th>
<th>WiroFast</th>
<th>Liquid</th>
<th>Aqua dest.</th>
<th>Mixing liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 × 400 g</td>
<td>48 ml</td>
<td>32 ml</td>
<td>80 ml</td>
</tr>
</tbody>
</table>

Investment

Please read and follow the instructions in the insert

“Safety instructions and general instructions for BEGO investment materials”!

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Preheating

<table>
<thead>
<tr>
<th></th>
<th>Conventional preheating</th>
<th>Shock heat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Setting after investment</td>
<td>at least 30 minutes</td>
<td>10 minutes</td>
</tr>
<tr>
<td>Insertion temperature *</td>
<td>room temperature (20 °C)</td>
<td>900 °C / 1652 °F</td>
</tr>
<tr>
<td>Holding levels</td>
<td>250 °C / 500 °F (5 °C/min / 9 °F/min) **</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>570 °C / 1060 °F (7 °C/min / 12 °F/min) **</td>
<td>–</td>
</tr>
<tr>
<td>Final temperature</td>
<td>900 – 1050 °C / 1740 °F – 1920 °F</td>
<td>–</td>
</tr>
<tr>
<td>Holding times</td>
<td>30 – 60 minutes (depending on size and number of moulds)</td>
<td>–</td>
</tr>
</tbody>
</table>

* Shock heat: After insertion you can heat up to the final temperature immediately.
** Heating rate only applies to furnaces with computer control.

Risk of injury in connection with shock heating. Caution: Danger of darting flame!
Place all moulds in the furnace within 10 seconds – then keep the furnace door closed for 15 minutes!

After casting allow the moulds to cool down until warm to the touch, do not quench in water!
Investment materials contains quartz. Do not inhale dust! Danger of lung harms (silicosis, lung cancer).
To avoid dust during deflasking, place the moulds in water after they have cooled down completely after casting until they are thoroughly moistened.

Data

Processing time at 20 °C / 70 °F approx. 3.0 min

Characteristic material values in accordance with DIN EN ISO 15912

(70 % BegoSol®)

Beginning of setting (Vicat time) approx. 5.0 min
Compressive strength (after 2 hours) approx. 11.9 MPa
Linear thermal expansion approx. 0.8 %
Flowability approx. 141 mm

This product was made according to the specifications of DIN EN ISO 15912 and meets its requirements in all respects.

Availability and recommendations

<table>
<thead>
<tr>
<th>Material</th>
<th>Quantity</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>WireFast</td>
<td>1 carton</td>
<td>18 kg = 45 400 g bags</td>
</tr>
<tr>
<td></td>
<td>1 carton</td>
<td>6 kg = 15 400 g bags</td>
</tr>
<tr>
<td></td>
<td>Testkit</td>
<td></td>
</tr>
<tr>
<td>BegoSol®</td>
<td>1 bottle</td>
<td>1 000 ml</td>
</tr>
<tr>
<td></td>
<td>1 canister</td>
<td>5 000 ml</td>
</tr>
<tr>
<td>Castogel®</td>
<td>52052 (6 kg)</td>
<td></td>
</tr>
<tr>
<td>WiroDouble®</td>
<td>52050 (6 kg)</td>
<td></td>
</tr>
<tr>
<td>WiroGel® M</td>
<td>54351 (6 kg)</td>
<td></td>
</tr>
<tr>
<td>WiroSil®</td>
<td>52001 (2 kg)</td>
<td></td>
</tr>
<tr>
<td>WiroSil® duplicating flask system</td>
<td>52072 (small)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>52083 (large)</td>
<td></td>
</tr>
<tr>
<td>Kombi-duplicating flask</td>
<td>52090</td>
<td></td>
</tr>
<tr>
<td>Dural E</td>
<td>52148 (1000 ml)</td>
<td></td>
</tr>
<tr>
<td>Dural</td>
<td>52111 (1000 ml)</td>
<td></td>
</tr>
<tr>
<td>Duronfluid</td>
<td>52008 (100 ml)</td>
<td></td>
</tr>
<tr>
<td>Wiropaint plus</td>
<td>51100 (200 ml)</td>
<td></td>
</tr>
<tr>
<td>Aurofilm</td>
<td>52019 (100 ml)</td>
<td></td>
</tr>
</tbody>
</table>

Whether given verbally, in writing or by practical instructions, our recommendations for use are based upon our own experience and trials and can only be considered as standard values.
Our products are subject to a constant further development. Therefore alterations in construction and composition are reserved.

For particularly good results we recommend an alloy from the following groups, depending on the indication
Tel. Hotline +49 421 2028-282
www.bego.com

WIRONIUM®
(Only given to authorized laboratories)
Wironit®

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After casting

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