Workflow Guide · dx rapid cast

3D printing of cast shells that can be removed without any tools – the dx rapid cast material.

This guide will lead you through the process of designing, manufacturing, preparing, filling and removing the cast shell.

Workflow

1. Design

Time	Design Parameter	Wall Thickness Cast	Filling Cone
Approx. 10 min	**Compatible with all types of design software (no additional settings required)**	**min. 0.8 mm**	**Use a filling cone or second stand as a support cone.**

Make sure that you place the filling cone on top of the cast shell.

2. Create Print Job

Time	Note
Approx. 5 min	**Use the validated parameter files for Rapid Cast.**

Please use thicker support bars as by hard cast shells.

3. Printing Process

Time	Note
Approx. 45 min	**Use a Detax-validated 3D printer.**

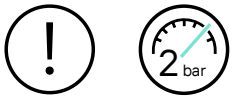
4. Post Process

4.1. Cleaning

Time

- **Ultrasonic bath: 2 x 2 min in iso-propyl alcohol (purity ≥ 98 %)**
  Please use two separate containers.
- **Software controlled device:**
  Use the following settings:
  Detax Rapid cast

Note



- **Between the two cycles and after the washing process, careful blow out with compressed air with max. 2 bar.**
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Attention

Handle the cast molds always with care.

Don´t remove the cast shell from the supports, wash it in one part.
Please make sure that the cast shell is complete floated with IPA during the washing process (no air bubbles inside).

4.2. Post Curing

Time	**Otoflash G171 N²**	**Rapidshape RScure**	**Dreve PCU LED**
Depending on device	2 x 1000 flashes with nitrogen	Medicalprint cast	2:30 min with Nitrogen Light intensity 33%

If necessary, carefully remove the cast shells from the support structure after post-curing.
Don't pull them off, use a cutter.

5. Filling the Cast Molds

Note

No cast separator is required.

Pressure

Working pressure of the pneumatic mixing gun is 2 bar.

6. Setting of the Silicone and Removal Process

Time

- **Softwear 2.0**
- **Approx. 15 min**

Water Temperature

35-40°C

Pressure

2-3 bar

Place the filled cast shells in a pressure pot filled with water to cure. The cast shells must be surrounded by water.

Please check in the IFU of the silicone.

7. Demolding Process

The demolding process starts when the silicone starts to cure.

Time

Few seconds

Tools

Your hands

No tools are necessary to remove the cast shells.

After the specified curing time of the silicone, you can remove the cast shells from the pressure pot and start to remove the cast shell.