Case Study

Dental Model

for the Thermoforming Technique

W2P

Dental Model for the Thermoforming Technique

Application: Dental Splints

Dental splints are used for various medical and aesthetic reasons.
For the production of aligner, bleaching or bite splints, first, individual thermoforming models are 3D printed. In a second step, the splints are formed by means of deep drawing with a thermoforming foil.

Requirements

Material: temperature-resistant
Prodution Method: high accuracy, quick and easy production

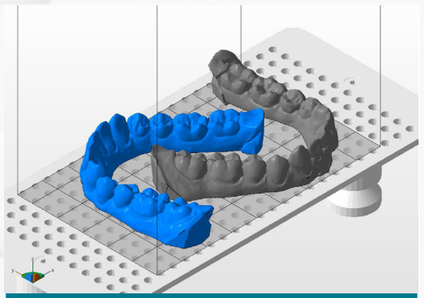
Recommended Materials

SolFlex Model Beige / SolFlex Model Blue

Digital Workflow

Preparation: Prior to the printing process, the models have to be prepared for printing.
A 3D printing software helps to place the model on the building platform. When placed horizonally, no support structures have to be added.

3D Model



Support Structures

Printing Process: In the next step, the prepared files are being processed by the printer.
In this specific case the models were 3D printed under the following conditions:

3D printer:	SolFlex 170 PLUS
Layer thickness:	100 µm
Printing time:	18 min.
Resin:	SolFlex Model Beige
Number of printed objects:	2
Resin use:	12 g
Total resin use (incl. support structures):	12 g
Total resin costs:	€ 3.24

Depending on the size of the 3D printer's building platform, a different number of thermoforming models can be 3D printed.

Number of models that fit on the building platform:

SolFlex 650:	6
SolFlex 363:	4
SolFlex 350:	3
SolFlex 170:	2

Post-Processing: The 3D printed models are post-cured in a UV light box and have to be cleaned.

Finished Objects