

FREEPRINT® denture

ENGLISH

Light-curing resin based on (meth)acrylate, for the generative fabrication of denture bases for DLP printers with UV-LED 385 nm

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1. Introduction

The following instructions for use are for dentists and dental technicians who use FREEPRINT® denture as a denture base material for dentures.

2. Indications for use



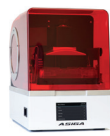

FREEPRINT® denture is a light-cured resin indicated for the fabrication of all types of denture bases, for instance full and partial removable dentures. FREEPRINT® denture is intended for continuous use in the oral environment, exclusively for professional dental work. FREEPRINT® denture can be used in combination with a stereolithographic 3D printer using a 385nm light source. A 3D-printer is not part of the device.

3. Special manufacturing requirements

3.1 File format

STL (see geometric presettings for CAD)

3.2. DLP printer and its operation software

Printer Manufacturer, Model	Rapidshape D30 II	Asiga Pro75	Asiga Max	Asiga Pico2
				
Light source	385 nm	385 nm	385 nm	385 nm
Pixel size x, y	±34 µm	±75 µm	±62 µm	±39 µm
Light intensity	2 mW/cm²	5,7 mW/cm²	6,1 mW/cm²	20 mW/cm²
Operation Software	Netfabb 2020	Composer 1.2.11	Composer 1.2.11	Composer 1.2.11

3.3. Printing Parameters

Printer Model	Rapidshape D30 II	Asiga Pro75	Asiga Max	Asiga Pico2
Parameter data set*	DETAX freeprint Denture 385nm	Detax_Freeprint denture UV_3.3	Detax_Freeprint denture UV_3.3	Detax_Freeprint denture UV_3.3
Curing time	3.8 s	2.7 s	2.5 s	0.9 s
Support point size:	0.3 mm	0.6 mm	0.6 mm	0.6 mm
Support density:	1.0 mm	3.0 mm	3.0 mm	3.0 mm
Spacing:	1.5 mm	2.0 mm	2.0 mm	2.0 mm
Slicing	100 µm	100 µm	100 µm	100 µm
Build speed	4 cm/hr	4 cm/hr	4 cm/hr	4 cm/hr
Build path	surface layer drawing path	surface layer drawing path	surface layer drawing path	surface layer drawing path
Recommended orientation angle (degree)	0-90	0-90	0-90	0-90

*The set of parameters includes all relevant material- and printer specific information

3.4 Environmental Conditions

Processing temperature 23 °C ± 2 °C.

3.5 Cleaning Kit

Rinse bath tubs, flush cutter, paper towel, squeeze bottle for isopropyl alcohol, Scraper

3.6. Curing light equipment

Model: Otoflash G171

Manufacture: NK Optik

4. Contraindications

Contains (meth)acrylics and phosphine oxide.

Some ingredients of FREEPRINT® denture may cause allergic reactions in predisposed persons. In such cases refrain from using the product.

FREEPRINT® denture only insert intraorally in completely polymerised state.

Technical Data:

ISO 20795-1-Type 4

Processing:

at 23 °C ± 2 °C

Storage:



Ordering information:

FREEPRINT® denture 385
pink-transparent
500 g bottle 02133
1.000 g bottle 02171


pink
1.000 g bottle 02971

FREEPRINT® tray 385
1.000 g bottle, green 04086

FREEPRINT® ortho 385
1.000 g bottle, clear 04095

FREEPRINT® splint 2.0 385
500 g bottle, clear 02080
1.000 g bottle, clear 02076

Glossary of Symbols on the Label:

 ► Consult Instructions for Use

 ► Catalogue Number


 ► Batch Code


 ► Use by Date

Rx only ► Caution: Federal U.S. law restricts this device to sale by or on the order of a dentist (or trained specialist personnel).

 ► Warning

 ► Warning

 ► Temperature limitation

 ► Keep away from sunlight

 ► Manufacturer

More information at
www.detax.de

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5. Safety information

- ▶ Avoid direct contact with the liquid material and the components before post-curing, in particular in pregnant / breastfeeding women. Irritating to eyes and skin (sensitization possible). Wear personal protective equipment (protective gloves, goggles) when handling the uncured material.
- ▶ Wear suitable personal protective equipment (protective gloves, goggles, face mask) when finishing the cured material.
- ▶ After contact with eyes rinse thoroughly with water immediately and consult a doctor.
- ▶ After contact with skin wash immediately with water and soap.
- ▶ Biocompatibility is only guaranteed with complete polymerisation.
- ▶ Refer to the relevant safety data sheet for hazard and safety information.

6. Storage conditions, expiry date and transport

FREEPRINT® denture is to be stored dry (at 15 °C - 28 °C) and protected from light. Minimal influence of light can already induce polymerisation.

7. Manufacturing process



Mixing

Before filling resin into the reservoir the material must be mixed. Use a bolted roller or mix/shake it by hand. Inadequate mixing could cause deviations of colour and print failures.



Filling of printer

Fill 3D printing resin in the reservoir of the printer. The 3D printing resin can remain in the vat for a maximum of two days (maximum 10 print cycles). It is not allowed to pour 3D printing resin from the reservoir of the printer back into the resin bottle. Visual inspection of 3D printing resin; in case the resin is visually contaminated, it may not be used and must be discarded.

Different batches of the same 3D printing resin may not be mixed.



Construction process

The print resin material must be stirred before use.

Visual inspection of print resin material: in case print resin material is visually contaminated, it may not be used and must be discarded.

Generate a print job complying with printer and material parameters.

For setting up the printer follow the instructions for use of the printer.

Data preparation and fabrication of the support structure according to the instructions of the CAD software manufacturer.

Remaining print resin material after printing is not allowed to be poured back into the resin bottle.

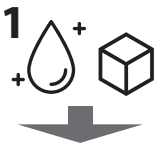


Post-processing / Removal of printed parts

If possible, post-processing should commence immediately following the construction process.

After raising the platform, a drip time of approx. 10 minutes is recommended.

Remove the platform from the printer and remove the construction components using appropriate device (e.g. knife).



Cleaning

Clean the construction components in a separate vessel with isopropyl alcohol (purity ≥ 98%) for 3 min. in an ultrasonic bath filled with water.

Then thoroughly clean the openings, cavities and gap areas, if necessary also with compressed air, and, if applicable, remove the construction components carefully from the support structure.



Further cleaning is performed in a separate vessel with fresh isopropyl alcohol (purity ≥ 98%) for 3 min. in an ultrasonic bath. Prior to post-exposure, check the openings and additional bore holes for residues. Then blow off with compressed air.

After cleaning the surface of the construction components must no longer be sticky (dry) and not shiny (matt).



Post-exposure

Post-exposure is performed with a xenon photoflash unit (e.g. Otofash G171) with 2 x 2000 flashes under inert gas conditions (nitrogen), rotate components in between.

CAUTION: Any unauthorized changes to the process equipment, parameter, or software may result in a device that is out of specification and is recommended. Contact DETAX for a list of compatible components.

8. Finishing

Remove any support structures and finish jobs if necessary, using conventional dental methods and instruments. Differences in color nuance may occur due to production in batches of the raw material and product of inadequate shaking of the original packaging before use or insufficient postcuring.

9. Disposal

Disposal of the contents/container must be carried out in accordance with the local/regional/national and international regulations.

10. Notes

- ▶ Always keep container tightly sealed, immediately close the container carefully after each use.
- ▶ Please follow the instructions on the safety data sheet!