Denture Base and Teeth

Long-lasting materials for truly lifelike permanent prosthetics

Formlabs is expanding access to digital dentures with an efficient, cost-effective manufacturing solution. Class II long-term biocompatible Digital Denture Resins enable dental professionals to produce 3D printed full dentures accurately and reliably.



 Prepared
 09.16.2020

 Rev.
 01
 09.16.2020

To the best of our knowledge the information contained herein is accurate. However, Formlabs, Inc. makes no warranty, expressed or implied, regarding the accuracy of these results to be obtained from the use thereof.

MATERIAL PROPERTIES DATA

Denture Base and Teeth Resins

| Denture Base | METRIC ¹ | METHOD |
|-----------------------|----------------------------------------------------|--------------|
| | Post-Cured ² | |
| Mechanical Properties | | |
| Flexural Strength | > 50 MPa | ISO 10477 |
| Density | 1.15 g/cm ³ < X <1.25 g/cm ³ | ASTM D792-00 |
| Denture Teeth | METRIC ¹ | METHOD |
| | Post-Cured ² | |
| Mechanical Properties | | |
| Flexural Strength | >65 MPa | ISO 20795-1 |
| Density | 1.15 g/cm ³ < X <1.25 g/cm ³ | ASTM D792-00 |

Denture Base and Teeth resins were tested for biological evaluation of medical devices at WuXi Apptec, 2540 Executive Drive, St. Paul, MN, and is certified biocompatible per EN-ISO 10993-1:2009/ AC:2010:

| ISO Standard | Description |
|----------------------|------------------|
| EN-ISO 10993-3:2014 | Not mutagenic |
| EN-ISO 10993-5:2009 | Not cytotoxic |
| EN-ISO 10993-10:2010 | Not an irritant |
| EN-ISO 10993-10:2010 | Not a sensitizer |
| EN-ISO 10993-11:2006 | Non toxic |

The product was developed and is in compliance with the following ISO Standards:

| Denture Base ISO Standards | Description |
|----------------------------|------------------------------------------------------------------------------|
| EN-ISO 22112:2017 | Dentistry - Artificial teeth for dental prostheses |
| EN-ISO 10477 | Dentistry - Polymer-based crown and veneering materials (Type 2 and Class 2) |

| Denture Theeth ISO Standards | Description |
|------------------------------|-----------------------------------------------------------|
| EN-ISO 20795-1:2013 | Dentistry - Base Polymers - Part 1: Denture Base Polymers |

¹ Material properties can vary with part geometry, print orientation, print settings, and temperature. 2 Data refers to post-cured properties obtained after exposing green parts to 108 watts each of Blue UV-A (315 – 400 nm), in a heated environment at 80 $^\circ$ C (140 $^\circ$ F) and 1hr, with six (6) 18W/78 lamps (Dulux blue UV-A)