



Dental Model

Photopolymer Resin for Form 2

FLDMBE01 MATERIAL PROPERTIES

Prepared: 02/10/2017

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.

Designed for crown and bridge models with removable dies, Dental Model Resin is a high-precision, high-accuracy resin. Print crisp margins and contacts within +/- 35 microns, and removable dies with consistently tight fit. Printed models have a smooth, matte surface finish and color similar to analog stone models.

	METRIC ¹		IMPERIAL ¹		METHOD
	Green ²	Postcured ³	Green ²	Postcured ³	
Tensile Properties					
Tensile Strength at yield	33 MPa	61 MPa	4800 psi	8820 psi	ASTM D 638-10
Young's Modulus	1.6 GPa	2.7 GPa	230 ksi	397 ksi	ASTM D 638-10
Elongation at Failure	25%	5%	25%	5%	ASTM D 638-10
Flexural Properties					
Flexural Modulus	0.95 GPa	2.5 GPa	138 ksi	365 ksi	ASTM C 790-10
Flexural Strain at 5%	33.9 MPa	95.8 MPa	4910 psi	13900 psi	ASTM D 790-15
Impact Properties					
Notched IZOD	27 J/m	33 J/m	0.5 ft-lbf/in	0.6 ft-lbf/in	ASTM D 256-10
Temperature Properties					
Heat deflection temp. @ 264 psi	40.1 °C	55.9 °C	104.2 °F	132.6 °F	ASTM D 648-07
Heat deflection temp. @ 66 psi	47.5 °C	67 °C	117.5 °F	152.6 °F	ASTM D 648-07

NOTES:

¹Material properties can vary with part geometry, print orientation, print settings and temperature.

²Data was obtained from green parts, printed using Form 2, 100 µm, Dental Model settings, without additional treatments. Was IPA wiped rather than soaked.

³Data refers to post-cured properties obtained after exposing green parts to 1.25 mW/cm² of 405 nm light at 60 °C for 1 hour.

SOLVENT COMPATIBILITY

G = Good resistance.

Parts exposed to this solvent should not experience a decrease in mechanical properties.
(\leq 1% weight gain, \leq 1% width increase over 24 hours for a 1 x 1 x 1 cm cube)

A = Acceptable resistance.

Parts exposed to this solvent may experience a small decrease in mechanical properties.
(1 – 2% weight gain, 1 – 2% width increase over 24 hours for a 1 x 1 x 1 cm cube)

X = Unacceptable resistance.

Parts exposed to this solvent will experience a significant decrease in mechanical properties as well as visible degradation. (> 2% weight gain, > 2% width increase over 24 hours for a 1 x 1 x 1 cm cube)

DENTAL MODEL FLDMBE01

	GREEN	POST CURED
Acetic Acid, 5%	G	G
Acetone	X	X
Bleach (~5% NaOCl)	G	G
Butyl Acetate	X	G
Diethyl glycol monomethyl ether	X	G
Hydrogen Peroxide (3%)	G	G
Isooctane	G	G
Isopropyl alcohol	X	G
Sodium hydroxide (0.025%, pH = ~10)	G	G
Salt Water (3.5% NaCl)	G	G
Water	G	G
Xylene	X	G