



Dental Model

Photopolymer Resin for Form 2

FLDMBE01 MATERIAL PROPERTIES

Prepared: 02/10/2017

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)

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	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