MATERIAL DATA SHEET

Model Resin

Model Resin for High-Precision, High-Accuracy

Designed for crown and bridge models with removable dies, Model Resin is a high-precision, high-accuracy resin. Print crisp margins and contacts within ± 35 microns, and removable dies with consistently tight fit. A smooth, matte surface finish and color similar to gypsum make it easy to switch from analog to digital model production.

V2 **FLDMBE02** * May not be available in all regions

formlabs | dental

Prepared		02 . 10 . 2017
Rev	01	02 . 10 . 2017

Material Properties Data

	METRIC[1]		IMPERIAL[1]		METHOD
	Green[2]	Post-Cured[3]	Green[2]	Post-Cured[3]	
Mechanical Properties					
Tensile Strength at Yield	33 MPa	61 MPa	4800 psi	8820 psi	ASTM D 638-14
Tensile Modulus	1.0 GPa	2.7 GPa	230 ksi	397 ksi	ASTM D 638-14
Elongation at Failure	25 %	5 %	25 %	5 %	ASTM D 638-14
Flexural Properties					
Flexural Modulus	0.95 GPa	2.5 GPa	138 ksi	365 ksi	ASTM D 790-15
Flexural Strength at 5% Strain	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 D256-10
Thermal Properties					
Heat Deflection Temp. @ 264 psi	32.8 °C	45.9 °C	91.1 °F	114.6 °F	ASTM D 648-16
Heat Deflection Temp. @ 66 psi	40.4 °C	48.5 °C	104.7 °F	119.3 °F	ASTM D 648-16

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

[2] Data was obtained from green parts, printed using Form 2, 100 µm, Model settings, washed and air dried without post cure.

[3] Data was obtained from parts printed using Form 2, 100 µm, Model settings, and post-cured with 1.25 mW/cm^2 of 405 nm LED light for 60 minutes.

Solvent Compatibility

G = Good resistance.
Parts exposed to this solvent should not experience a decrease in mechanical properties. (≤ 1% weight gain, ≤ 1% 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)

Solvent	Green	Post-Cured	Solvent	Green	Post-Cured
Acetic Acid, 5 %	G	G	Isooctane	G	G
Acetone	X	X	Isopropyl Alcohol	X	G
Bleach, ~5 % NaOCl	G	G	Sodium hydroxide (0.025 %, pH = 10)	G	G
Butyl Acetate	X	G	Salt Water (3.5 % NaCl)	G	G
Diethyl glycol monomethyl ether	X	G	Water	G	G
Hydrogen Peroxide (3 %)	G	G	Xylene	X	G