

Model

A fast-printing material for production of high-accuracy restorative models

Model Resin was developed to meet the precision, reliability, and throughput requirements of restorative dentistry. Print accurate models and dies with crisp margins and contacts, delivering high-quality results on fast-paced timelines.

Crown and bridge models

Implant analog models

Orthodontic models

Diagnostic models



V3

FLDMBE03

* May not be available in all regions

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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

Model Resin

	METRIC ¹		IMPERIAL ¹		METHOD
	Green ²	Post-Cured ³	Green ²	Post-Cured ³	
Mechanical Properties					
Ultimate Tensile Strength	27 MPa	48 MPa	3970 psi	6990 psi	ASTM D 638-14
Tensile Modulus	1.1 GPa	2.3 GPa	160 ksi	331 ksi	ASTM D 638-14
Elongation at Break	14%	4.8%	14%	4.8%	ASTM D 638-14
Flexural Properties					
Flexural Strength	25 MPa	85 MPa	3640 psi	12300 psi	ASTM D 790-15
Flexural Modulus	0.67 GPa	2.2 GPa	97 ksi	320 ksi	ASTM D 790-15
Impact Properties					
Notched Izod	23 J/m	24 J/m	0.43 ft-lbs/in	0.45 ft-lbs/in	ASTM D 256-10
Unnotched Izod	300 J/m	325 J/m	5.6 ft-lbs/in	6.1 ft-lbs/in	ASTM D 4812-19
Thermal Properties					
Heat Deflection Temp. @ 1.8 MPa	41 °C	56 °C	104 °F	133 °F	ASTM D 648-16
Heat Deflection Temp. @ 0.45 MPa	47 °C	75 °C	117 °F	167 °F	ASTM D 648-16
Thermal Expansion	108 µm/m/°C	76 µm/m/°C	60 µin/in/°F	43 µin/in/°F	ASTM E 813-13

¹ Material properties may vary based on part geometry, print orientation, print settings, and temperature.

² Data for green samples were measured on Type IV tensile bars printed on a Form 3 printer with 100 µm Model Resin settings and washed in a Form Wash for 10 minutes in ≥99% Isopropyl Alcohol.

³ Data for post-cured samples were measured on Type IV tensile bars printed on a Form 3 printer with 100 µm Model Resin settings, washed in a Form Wash for 10 minutes in ≥99% Isopropyl Alcohol, and post-cured at 60°C for 5 minutes in a Form Cure.

SOLVENT COMPATIBILITY

Percent weight gain over 24 hours for a printed and post-cured 1 x 1 x 1 cm cube immersed in respective solvent:

Solvent	24 hr weight gain, %	Solvent	24 hr weight gain, %
Acetic Acid 5%	0.2	Mineral oil, heavy	0.2
Acetone	0.9	Mineral oil, light	0.2
Bleach ~5% NaOCl	0.1	Salt Water (3.5% NaCl)	0.2
Butyl Acetate	< 0.1	Skydrol 5	0.4
Diesel Fuel	0.1	Sodium hydroxide solution (0.025% pH = 10)	0.2
Diethyl glycol monomethyl ether	< 0.1	Strong Acid (HCl Conc)	< 0.1
Hydraulic Oil	0.1	TPM	0.2
Hydrogen peroxide (3%)	0.1	Water	0.2
Isooctane	< 0.1	Xylene	< 0.1
Isopropyl Alcohol	< 0.1		