

# Draft

A cutting-edge material designed to print accurate orthodontic models — fast

Draft Resin is our fastest printing material, capable of printing a dental model in under 20 minutes. This highly accurate resin prints with a smooth surface finish, making Draft Resin the ideal material for aligner and retainer production. Use 200 micron settings for fastest print speeds and same day appliances, or use 100 micron settings for more detailed models.

**Rapid model production**

**Orthodontic models**



**FLDRGR02**

\* 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

# Draft Resin

	METRIC <sup>1</sup>			IMPERIAL <sup>1</sup>			METHOD
	Green <sup>2</sup>	Post-Cured at Room Temperature <sup>3</sup>	Post-Cured at 60 °C <sup>4</sup>	Green <sup>2</sup>	Post-Cured at Room Temperature <sup>3</sup>	Post-Cured at 140 °F <sup>4</sup>	
<b>Tensile Properties</b>							
Ultimate Tensile Strength	24 MPa	36 MPa	52 MPa	3481 psi	5221 psi	7542 psi	ASTM D638-14
Tensile Modulus	0.8 GPa	1.7 GPa	2.3 GPa	122 ksi	247 ksi	334 ksi	ASTM D638-14
Elongation at Break	14%	5%	4%	14%	5%	4%	ASTM D638-14
<b>Flexural Properties</b>							
Flexural Modulus	0.6 GPa	1.8 GPa	2.3 GPa	87 ksi	261 ksi	334 ksi	ASTM D 790-17
<b>Impact Properties</b>							
Notched Izod	26 J/m	29 J/m	26 J/m	0.5 ft-lbf/in	0.5 ft-lbf/in	0.5 ft-lbf/in	ASTM D256-10
<b>Thermal Properties</b>							
Heat Deflection Temp. @ 1.8 MPa	37 °C	44 °C	57 °C	99 °F	111 °F	135 °F	ASTM D 648-16
Heat Deflection Temp. @ 0.45 MPa	43 °C	53 °C	74 °C	109 °F	127 °F	165 °F	ASTM D 648-16

<sup>1</sup> Material properties can vary with part geometry, print orientation, print settings, and temperature.

<sup>2</sup> Data was obtained from green parts, printed using Form 3, 200 µm, Draft Resin settings, washed for 5 minutes in Form Wash and air dried without post cure.

<sup>3</sup> Data was obtained from parts printed using a Form 3, 200 micron, Draft Resin settings, and post-cured with Form Cure at room temperature for 5 minutes.

<sup>4</sup> Data was obtained from parts printed using a Form 3, 200 micron, Draft Resin settings, and post-cured with Form Cure at 60 °C for 5 minutes.

## 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 (Light)	< 1.0
Acetone	4.2	Mineral oil (Heavy)	< 1.0
Bleach ~5% NaOCl	0.1	Salt Water (3.5% NaCl)	0.3
Butyl Acetate	0.1	Skydrol 5	0.3
Diesel Fuel	0.1	Sodium Hydroxide solution (0.025% PH 10)	0.3
Diethyl glycol Monomethyl Ether	0.8	Strong Acid (HCl conc)	< 1.0
Hydraulic Oil	< 0.1	Tripropylene glycol monomethyl ether	0.3
Hydrogen peroxide (3%)	0.2	Water	< 1.0
Isooctane (aka gasoline)	< 1.0	Xylene	< 1.0
Isopropyl Alcohol	< 1.0		