formlabs

Tough

Photopolymer Resin for Form 1+ and Form 2

FLTOTL02 MATERIAL PROPERTIES

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Formlabs Tough resin displays a balance of strength and elongation, allowing you to print tough plastic parts on the Form 1+ and Form 2 3D printers. Parts are less brittle and more impact-resistant, making this resin ideal for various engineering applications. Parts require thorough postcure to achieve final mechanical properties.

	METRIC[1]	IMPERIAL[1]	METHOD
	Post-Cured[2]	**Post-Cured[2]**	
Tensile Properties			
Tensile Strength at Yield	41.3 MPa	5990 psi	ASTM D 638-10
Young's Modulus	2.10 GPa	305 ksi	ASTM D 638-10
Elongation at Failure	31%	31%	ASTM D 638-10
Flexural Properties			
Flexural Stress at 5% Strain	39.4 MPa	5720 psi	ASTM D 790-10, Procedure A
Flexural Modulus	1.16 GPa	168 ksi	ASTM D 790-10, Procedure A
Impact Properties			
Notched Izod	51.1 J/m	0.96 ft-lbf/in	ASTM D 256-10, Test Method A
Temperature Properties			
Heat Deflection Temp. @ 66 psi	43.2 °C	109.8 °F	ASTM D 648-07, Method B

NOTES:

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

[2]Data refers to post-cured properties obtained after exposing green parts for 2 hours in a 30 W UVA curing chamber.