formlabs

Flexible

Photopolymer Resin for Form 1+

MATERIAL PROPERTIES

Prepared: 12/15/2014

Formlabs Flexible resin has elastomeric properties allowing you to print parts on the Form 1+ 3D printer that are bendable and compressible. Parts are pliable when thin and resilient when thick. Flexible has compression characteristics that make it great for creating parts like custom grips, stamps, gaskets and wearable prototypes. It does not shatter upon failure making it ideal for high impact applications.

	Metric[1, 2]	Imperial[1, 2]	Method
Tensile Properties[3]			
Tensile Strength	5.95-6.56 MPa	863-951 psi	ASTM D 412-06(A)
Elongation at Failure	90%	90%	ASTM D 412-06(A)
Tear Properties[4]			
Tear Strength	7.50-8.57 kgf/cm	42-48 lbf/in	ASTM D 625-00
Hardness Properties			
Shore Hardness	80-90 A	80-90 A	Durometer Reading

NOTES:

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

[2]Data was obtained from post-cured parts, printed using 50 µm Flexible settings and exposed to 15 J/cm^2 of UV light for 1 hour.

[3]Tensile testing was performed after 3+ hours at 23 °C, using a Die C dumbbell and 20 in/min cross head speed.

[4]Tear testing was performed after 3+ hours at 23 °C, using a Die C tear specimen and a 20 in/min cross head speed.