

Rebound

Rebound Resin: Production-Ready Elastic 3D Printing Material

With five times the tear strength, three times the tensile strength, and two times the elongation of other production-grade elastomeric materials on the market, Rebound Resin is perfect for 3D printing springy, resilient parts.

End-use production

Gaskets, seals, and grommets

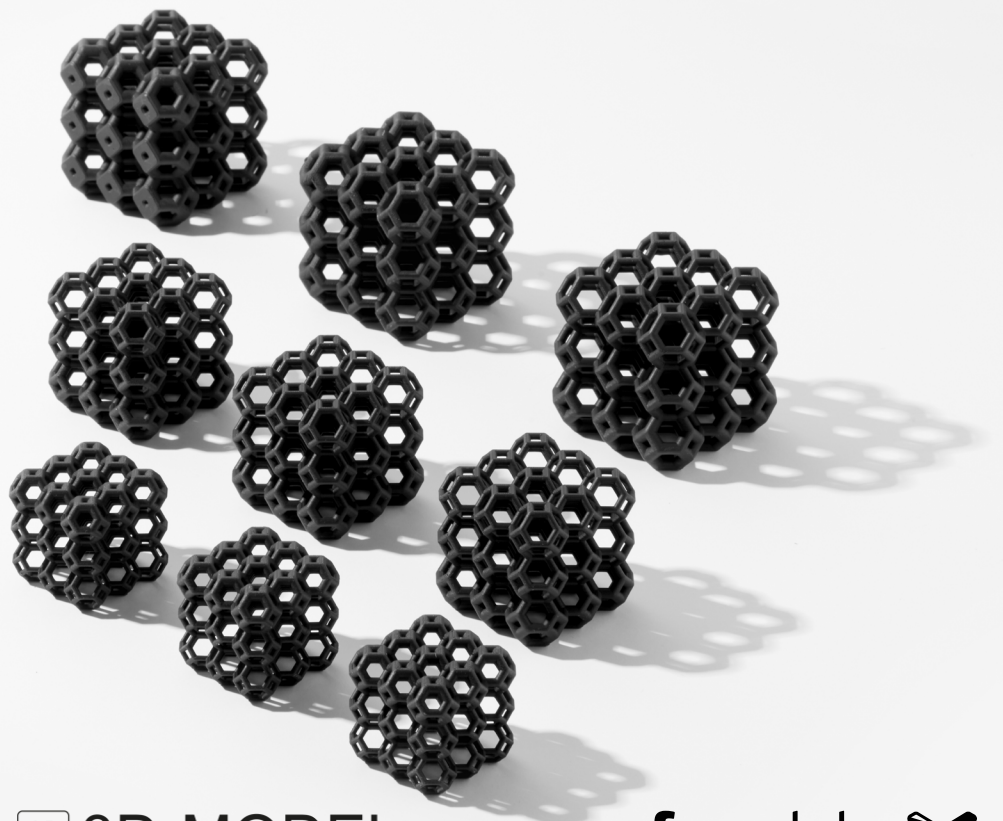
Compliant robotics

Custom cases

Handles, grips, and overmolds

Complex geometries

This material is available exclusively through partnership with Formlabs and requires a minimum quantity **commitment to get started**. After you contact us, you'll have the opportunity to request a standard sample, purchase a run of custom samples to evaluate, and finally, buy a turnkey package of the equipment needed to print in Rebound Resin at your facility. consulting@formlabs.com



FLRBBL01



3D-MODEL

formlabs

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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 Metric

	METRIC ¹	IMPERIAL ¹	METHOD
	Post-Cured	Post-Cured	
Mechanical Properties			
Ultimate Tensile Strength	22 MPa	3,391 psi	ASTM D 412-06 (A)
Modulus at 50% Elongation	3.46 MPa	501.83 psi	ASTM D 412-06 (A)
Elongation at Break	300 %		ASTM D 412-06 (A)
Compression set at 25 °C for 22 hrs	16 %		ASTM D 395-03 (B)
Compression set at 70 °C for 22 hrs	40 %		ASTM D 395-03 (B)
Tear Strength	110 kN/m	0.628 lbf/in	ASTM D 624-00
Hardness, Shore A	86 A		ASTM D 2633
Bayshore Rebound Resilience	57 %		ASTM D 2633
Abrasion	101 mm ³		ISO 4649, 40 rpm, 10 N load
Ross Flexing Fatigue	> 50,000 cycles (no crack propagation)		ASTM D1052, (notched), 23 °C, 60 degree bending, 100 cycles/minute
Ross Flexing Fatigue	> 50,000 cycles (no crack propagation)		ASTM D1052, (notched) -10 °C, 60 degree bending, 100 cycles/minute
Dielectric Properties			
Dielectric Constant	7.7		ASTM D150, 1MHz
Dissipation Factor	0.069		ASTM D150, 1MHz
Temperature Properties			
Glass Transition Temperate	-50 °C	-58 °F	DSC

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

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 (%)
Water	9	Dichloromethane	367
Salt Water	7	Propylene Glycol Diacetate	9
Isopropyl Alcohol	8	Diethylene Glycol Monomethyl Ether	16
Acetone	37	Mineral Oil (Light)	< 1
Hexane	1	Castor Oil	< 1
Butyl Acetate	26	Hydraulic Oil	< 1