formlabs

Ceramic

An Experimental Material for Engineering, Art, and Design

Parts 3D printed in silica-filled Ceramic Resin can be fired to create a fully ceramic piece. This experimental Form X material requires more trial and error than other Formlabs products. Please read the usage guide prior to printing.
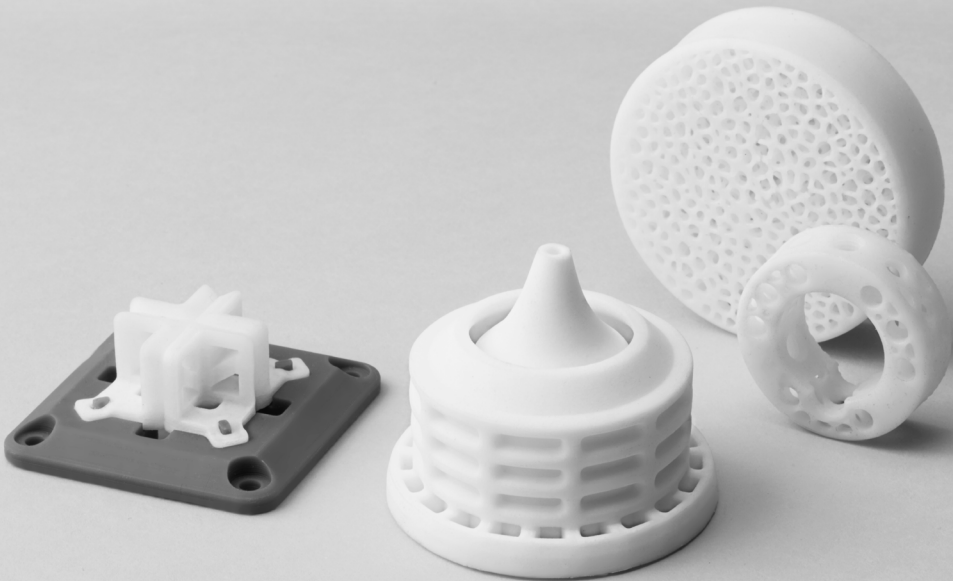
Available only for the Form 2.

Technical experimentation

Fine art and sculpture

Research and development

Jewelry

V1   **FLCEWH01**   *** 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   **Ceramic Resin**

	METRIC [1]		IMPERIAL [1]		METHOD
	Green [2]	**Fired [3]**	**Green [2]**	**Fired [3]**	
Tensile Properties					
Ultimate Tensile Strength	5.1 MPa	N/A	740 psi	N/A	ASTM D638-14
Tensile Modulus	1 GPa	5.1 GPa	149 ksi	740 ksi	ASTM D638-14
Elongation	1.4%	N/A	1.4%	N/A	ASTM D638-14
Flexural Properties					
Flexural Stress at Break	10.3 MPa	10.3 MPa	1489 psi	1489 psi	ASTM D790-15e2
Flexural Modulus	995 MPa	N/A	144 ksi	N/A	ASTM D790-15e2
Impact Properties					
Notched Izod	18.4 J/m	N/A	0.35 ft-lb/in	N/A	ASTM D256-10e1
Thermal Properties					
Heat Deflection Temp. @ 1.8 MPa	75 °C	75 °C	155 °F	155 °F	ASTM D648-16, Method B
Heat Deflection Temp. @ 0.45 MPa	> 290 °C	> 290 °C	> 554 °F	> 554 °F	ASTM D648-16, Method B

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

[2] Data was obtained from green parts, printed using Form 2, 100 μm, Ceramic settings, washed, air dried, and post-cured in Form Cure at 60 °C for 60 minutes.

[3] Data was obtained from fired parts, printed using Form 2, 100 μm, Ceramic settings, which were washed, dried and post-cured in Form Cure at 60 °C for 60 minutes. Parts had been printed with a pre-applied scale factor and fired using an 30 hr schedule to a maximum firing temperature of 1275 °C as laid out in the Formlabs usage guide.