

# Grey Pro

## Grey Pro Resin for Versatile Prototyping

Grey Pro Resin offers high precision, moderate elongation, and low creep. This material is great for concept modeling and functional prototyping, especially for parts that will be handled repeatedly. Requires Resin Tank LT.

Form and fit testing

Injection molded product prototypes

Mold masters for plastics, and silicones

Jigs and fixtures for manufacturing



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# Material Properties Data

	METRIC <sup>1</sup>		IMPERIAL <sup>1</sup>		METHOD
	Green <sup>2</sup>	Post-Cured <sup>3</sup>	Green <sup>2</sup>	Post-Cured <sup>3</sup>	
<b>Tensile Properties</b>					
Ultimate Tensile Strength	35 MPa	61 MPa	5076 psi	8876 psi	ASTM D 638-14
Tensile Modulus	1.4 GPa	2.6 GPa	203 ksi	377 ksi	ASTM D 638-14
Elongation	32.5 %	13 %	32.5 %	13 %	ASTM D 638-14
<b>Flexural Properties</b>					
Flexural Stress at 5% Strain	39 MPa	86 MPa	5598 psi	12400 psi	ASTM D 790-15
Flexural Modulus	0.94 GPa	2.2 GPa	136 ksi	319 ksi	ASTM D 790-15
<b>Impact Properties</b>					
Notched IZOD	not tested	18.7 J/m	not tested	0.351 ft-lbf/in	ASTM D256-10
<b>Temperature Properties</b>					
Heat Deflection Temp. @ 1.8 MPa	not tested	62.4 C	not tested	144.3 °F	ASTM D 648-16
Heat Deflection Temp. @ 0.45 MPa	not tested	77.5 C	not tested	171.5 °F	ASTM D 648-16
Thermal Expansion (-30 to 30° C)	not tested	78.5 um/m/C	not tested	43.4 µin/in/°F	ASTM E 831-13

<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 2, 100 µm, Grey Pro settings, without additional treatments.

<sup>3</sup>Data was obtained from parts printed using Form 2, 100 µm, Grey Pro settings and post-cured with a Formcure for 120 minutes at 80 C.

## 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 %	0.75	Hydrogen Peroxide (3 %)	0.75
Acetone	10.77	Isooctane	0.02
Isopropyl Alcohol	1.56	Mineral Oil, light	0.35
Bleach, ~5 % NaOCl	0.65	Mineral Oil, heavy	0.27
Butyl Acetate	0.84	Salt Water (3.5 % NaCl)	0.64
Diesel	0.08	Sodium hydroxide (0.025 %, pH = 10)	0.72
Diethyl glycol monomethyl ether	2.38	Water	0.83
Hydraulic Oil	0.16	Xylene	0.42
Skydrol 5	0.54	Strong Acid (HCl Conc)	8.21