



erpro group
INNOVATION & ADDITIVE TECHNOLOGIES

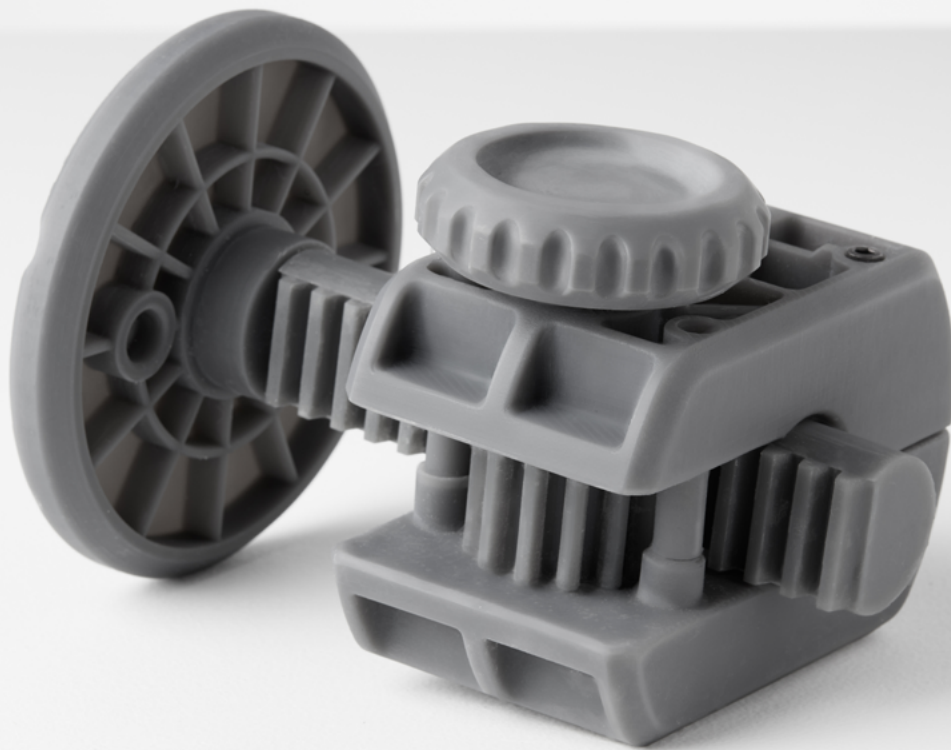
GOING BEYOND INNOVATION

MATERIAL DATA SHEET

Grey Pro

Photopolymer Resin for Form 2

Grey Pro Resin's high precision, moderate elongation, and resistance to deformation over time make it a versatile material suitable for a wide range of engineering applications. Supports print resolutions: 100 and 50 microns. **Requires Resin Tank LT.**



Material Properties Data

	METRIC ¹		IMPERIAL ¹		METHOD
	Green ²	Post-Cured ³	Green ²	Post-Cured ³	
Tensile Properties					
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
Flexural Properties					
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
Impact Properties					
Notched IZOD	not tested	18.7 J/m	not tested	0.351 ft-lbf/in	ASTM D256-10
Temperature Properties					
Head 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

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

²Data was obtained from green parts, printed using Form 2, 100 µm, Grey Pro settings, without additional treatments.

³Data 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:

Mechanical Properties	24 hr weight gain (%)	Mechanical Properties	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