

RPU 70

VERSION 1

RPU 70 is a tough, heat resistant material that is a perfect fit for the production of parts that require a high strength-to-weight ratio and moderate heat resistance.

Notes: Test specimens were prepared using a Carbon M1 printer and a Type C cassette. Print parameters were generated using software v.0.3.0. Tensile data were generated using printed Type V samples (per ASTM D638). All other test specimens were printed following standard ASTM test geometries. All test specimens were printed, cleaned, and post-processed per instructions provided in the Carbon User Manual. Liquid property measurements were carried out using fully mixed resins. Results provided herein are representative of these processes and may vary if these established protocols are not followed.

TENSILE PROPERTIES (ASTM D638)

	METRIC	IMPERIAL
Ultimate Tensile Strength	42 - 47 MPa	6100 - 6800 psi
Tensile Strength at Yield	42 - 47 MPa	6100 - 6800 psi
Modulus	1700 - 2200 MPa	250 - 320 ksi
Elongation-at-Break	90 - 120 %	90 - 120 %

FLEXURAL PROPERTIES (ASTM D790)

	METRIC	IMPERIAL
Flexural Strength	55 - 71 MPa	7970 - 10300 psi
Flexural Modulus	1500 - 2200 MPa	220 - 320 ksi

IMPACT PROPERTIES (ASTM D256, ASTM D4812)

	IMPACT STRENGTH		IMPACT ENERGY	
	METRIC	IMPERIAL	METRIC	IMPERIAL
Machined Izod notch	21 - 23 J/m	0.39 - 0.43 ft-lb/in.	2.1 - 2.3 kJ/m ²	1.0 - 1.1 ft-lb/in ²
Izod Unnotched	500 - 560 J/m	9.4 - 10.4 ft-lb/in.	49 - 55 kJ/m ²	24 - 26 ft-lb/in ²

THERMAL PROPERTIES

	METRIC	IMPERIAL
Heat Deflection Temperature @ 0.45 MPa/66 psi (ASTM D648)	70°C	160°F
Heat Deflection Temperature @ 1.82 MPa/264 psi (ASTM D648)	55°C	130°F
T _g (DMA, E')	80°C	176°F
T _g (DMA, tan(d))	119°C	246°F

LIQUID PROPERTIES

Viscosity (@25°C, cP)	2100 - 2300
Liquid Density (g/mL, @25°C)	1.01 - 1.02