

RPU 61

RPU 61 is a tough, and abrasion-resistant higher resolution material that is a good choice for parts that require rigidity, strength, and durability.

Tensile Properties —ASTM D638, TYPE V 10MM/MIN	Metric	U.S.
Tensile Modulus	1.50 ± 0.10 GPa	218 ± 15 ksi
Ultimate Tensile Strength	42 ± 3 MPa	6.10 ± 0.45 kpsi
Tensile Strength at Yield	40 ± 2 MPa	5.80 ± 0.29 ksi
Elongation at Yield	6 ± 1%	6 ± 1%
Elongation at Break	120 ± 10 %	120 ± 10 %

Flexural Properties —ASTM D790	Metric	U.S.
Flexural Strength	37 ± 2 MPa	5.4 ± 0.3 ksi
Flexural Modulus	1.10 ± 0.10 GPa	160 ± 15 ksi

Impact Properties —ASTM D256, ASTM D4812	Metric	U.S.
Notched Izod (machined), ASTM D256	27 ± 2 J/m	0.50 ± 0.04 ft-lb/in.
Unnotched Izod, ASTM D4812	1.2 ± 0.2 kJ/m	22 ± 4 ft-lb/in.

Thermal Properties	Metric	U.S.
Heat Deflection Temperature @ 0.45 MPa/66 psi, ASTM D648	59 °C	137 °F
Heat Deflection Temperature @ 1.82 MPa/264 psi, ASTM D648	48 °C	119 °F

Electrical Properties	Metric
Dielectric Constant, 1MHz, ASTM D150	3.10
Dissipation Factor, 1MHz, ASTM D150	0.017

NOTES—Test specimens were prepared using a Carbon M1 printer and a Type C cassette. Print parameters were generated using software 1.5-158.60. 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.