

# PR 25

PR 25 is a rapid production material that has excellent resolution, prints quickly, and is able to withstand moderate functional testing.

<b>Tensile Properties</b> ASTM D638, Type I, 50 mm/min	<b>Metric</b>	<b>US</b>
Tensile Modulus	1400 MPa	200 ksi
Ultimate Tensile Strength	30 MPa	4.4 ksi
Elongation at Break	5%	5%

<b>Tensile Properties</b> ASTM D638, Type V, 10 mm/min	<b>Metric</b>	<b>US</b>
Tensile Modulus	1300 MPa	190 ksi
Ultimate Tensile Strength	30 MPa	4.4 ksi
Elongation at Break	5%	5%

<b>Flexural Properties</b> ASTM D790-B	<b>Metric</b>	<b>US</b>
Flexural Stress at 5% strain	80 MPa	10 ksi
Flexural Modulus (Chord, 0.5-1%)	1500 MPa	220 ksi

<b>Impact Properties</b>	<b>Metric</b>	<b>US</b>
Notched Izod (Machined), 23 °C, ASTM D256	20 J/m	0.4 ft-lb/in
Notched Charpy (Machined), ISO 179-1/1eA	12 kJ/m <sup>2</sup>	0.6 ft-lb/in <sup>2</sup>

<b>Thermal Properties</b>	<b>Metric</b>	<b>US</b>
Heat Deflection Temperature at 0.455 MPa/66 psi, ASTM D648	50 °C	122 °F
Heat Deflection Temperature at 1.82 MPa/264 psi, ASTM D648	40 °C	104 °F

<b>General Properties</b>	
Viscosity, liquid (25 °C)	1600 cP
Density (liquid resin)	1.10 g/cm <sup>3</sup>

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Parts were processed using an M series printer and a Smart Part Washer with VF 1 as the solvent. Samples were post-cured using an APM LED UV-Cube II at 100% intensity according to instructions in the Carbon MPI. Deviations from the post processing method listed above may yield different results.

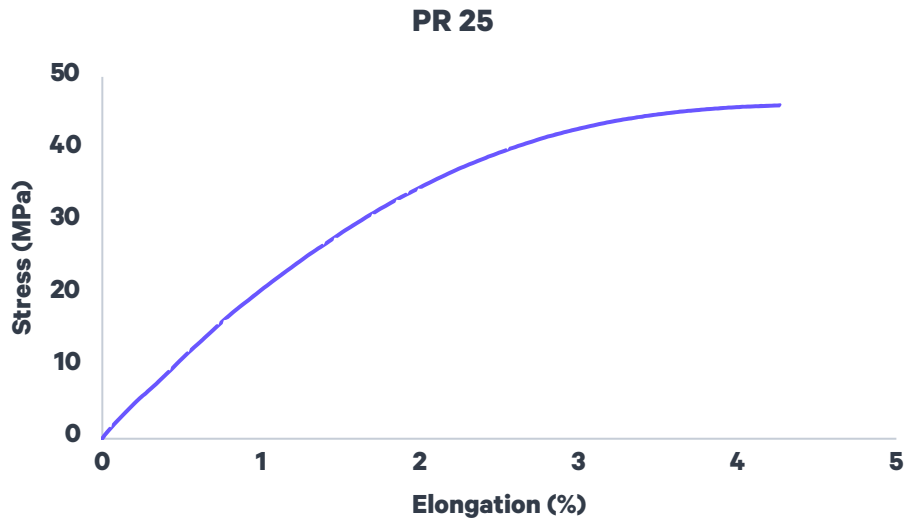
# PR 25

## Extended TDS

# PR 25 Mechanical Properties

## Representative Tensile Curve

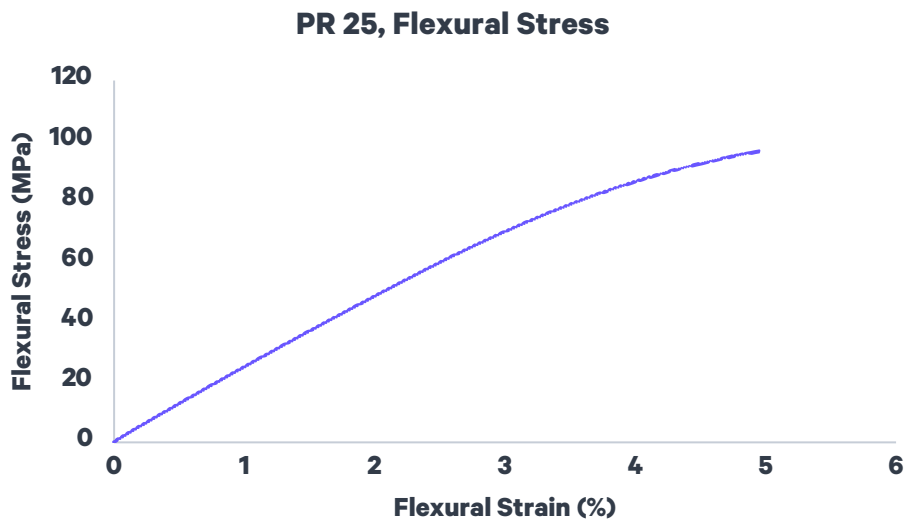
ASTM D638, Type I, 50 mm/min



## Representative Flexural Curve

ASTM D790-B

Samples are tested at 5% extension.



# PR25 Biocompatibility

## Biocompatibility Testing

Printed parts were provided to NAMSA for evaluation in accordance with ISO 10993-5, *Biological evaluation of medical devices - Part 5: Tests for in vitro cytotoxicity*. Parts were printed using an M series printer and washed with isopropyl alcohol (IPA). The results indicated that PR 25 passed the requirements for biocompatibility according to the above test. **Carbon has not conducted ISO 10993-10, *Biological evaluation of medical devices - Part 10: Tests for irritation and skin sensitization (GPMT)* testing. Carbon makes no representation and is not responsible for the results of any biocompatibility tests other than those specified above.**

## Disclaimer

Biocompatibility results may vary based on printing and/or post-processing procedures.

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