

TPU 90 A Filament

Jabil Engineered Materials TPU 90 A is an easy processing, standard product for printing jobs requiring elastomeric properties like compression set or soft touch to prevent scratching and marring, with high impact strength. Applications include jigs, fixtures and tooling, touch pads, grips, feet and other parts that requiring elastomeric properties. This material has a print profile available on Ultimaker Cura Marketplace and produces excellent surface parts that can be printed at max speeds with minimal shrinkage.

ADVANTAGES

Easy printability, excellent elastomeric properties and impact strength, abrasion resistance and soft touch properties. This product has very consistent lot to lot print properties with an ISO 9001 Certificate of Analysis with every spool.

STORAGE AND USE

TPU is highly hygroscopic, meaning it will absorb and retain moisture from the atmosphere, affecting visual quality and mechanical properties. For best results, print and store filament in a dry environment. If necessary, dry filament in an oven at 80 °C (175 °F) for 3 hours.

PROPERTIES

MECHANICAL PROPERTIES¹

	Test Condition	Typical Value	Method
Tensile Modulus (psi)	XY coupons, Ambient	2800	ASTM D638
Tensile Elongation at Break (%)	XY coupons, Ambient	450	ASTM D638
Tensile Yield Strength (psi)	XY coupons, Ambient	580	ASTM D638
Ultimate Tensile Strength (psi)	XY coupons, Ambient	1900	ASTM D638
Tear Strength (N/mm)	Ambient	84	ASTM D624
Hardness (Shore A)	Ambient	90-95	ASTM D2240

¹Typical values are for reference only.



THERMAL PROPERTIES

	Test Condition	Typical Value	Method
Heat Deflection Temperature (°C)	0.45 MPa	44	ASTM D648-16, Method B
Melting Point (°C)	Ambient	220	DSC

OTHER PHYSICAL PROPERTIES

	Test Condition	Typical Value	Method
Density (g/cm ³)	Ambient	1.2	ASTM D792-13, Method A

DIMENSIONAL PROPERTIES

	Test Condition	Typical Value	Method
Diameters: Mean, X, Y, and Z (mm)	Ambient	+/- 0.05	Laser Micrometer

Disclaimer: The information in this technical data sheet, including material properties, are obtained from testing representative samples under carefully controlled conditions and are provided for reference only. Material properties may be impacted by storage, handling, processing equipment/parameters, and product design, among other factors. The information is not a substitute for user testing to determine fitness for any specific use and the user is responsible for ensuring safe and lawful use of the product.

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