



TPU 98A

FLEXIBLE AND CHEMICALLY RESISTANT

MADE FOR



bigrep **ONE**



bigrep **PRO**



bigrep **STUDIO**

COMPATIBLE
FFF 3D PRINTERS

BigRep's TPU 98A is a **flexible filament** that is strong, durable, UV-stabilized, and highly **chemically resistant**. Perfectly suited for industrial applications, especially where parts may be exposed to oil, grease, or chemicals, TPU 98A is also rugged. With **high impact strength**, tear strength, durability, and abrasion resistance, TPU parts can withstand heavy wear and tear.

Its great layer and bed adhesion result in **strong, geometrically accurate parts** with minimal warping or deformation. While being flexible, BigRep TPU 98A is a relatively rigid elastomere. The hard/softness of 3D printed parts can be tuned by altering slicing settings for more or less rigidity. With **excellent damping behavior**, TPU 98A is perfect for **manufacturing aids**, particularly those interfacing with sensitive parts and equipment.



Flexible with
Shore 98A



High Chemical
Resistance



Excellent Impact
Strength



Great Layer
Adhesion



Durable and
Abrasion Resistant



PHYSICAL PROPERTIES	TEST METHOD	VALUE
Density	ISO 1183	1.18 g/cm ³
Filament Diameter	-	2.85 mm +/- 0.05
Color Availability	-	Black, Red, Transparent
Filament Net Weight	-	2.5, 4.5, 8.0 kg
MECHANICAL PROPERTIES	TEST METHOD	VALUE
Shore A Hardness, 3s	ISO 7619-1	98A
Shore D Hardness, 15s	ISO 7619-1	52D
Compression Set at 23°C, 72h	ISO 815	35%
Compression Set at 70°C, 24h	ISO 815	42%
Abrasion Resistance	ISO 4649	25 mm ³
Stress at 100% Elongation	ISO 527	15 MPa
Stress at 300% Elongation	ISO 527	30 MPa
Stress at Break, TPE	ISO 527	40 MPa
Elongation at Break, TPE	ISO 527	450%
Charpy Notched Impact Strength, +23°C	ISO 179	No break
Tear Strength	ISO 34	175 kN/m
THERMAL PROPERTIES	TEST METHOD	VALUE
Vicat Softening Temperature	ISO 306	105 °C
Glass Transition Temperature (Tg)	DSC	-30 °C
Melting Temperature (Tm)	DSC	190 °C
Continuous Use Temp (UL Yellow Card)	UL 746	50 °C
COMPLIANCE	<input checked="" type="checkbox"/> REACH Compliant <input checked="" type="checkbox"/> RoHS Certified <input checked="" type="checkbox"/> FDA Compliant	

PROPERTIES	RECOMMENDED USAGE
Nozzle Temperature	210 - 240 °C
Bed Temperature	50 - 60 °C
Printer Compatibility	BigRep ONE, BigRep PRO, BigRep STUDIO, BigRep STUDIO G2
Fan Speed	0 - 50%
Surface Adhesion	<ul style="list-style-type: none"> Kapton (additional adhesion using glue, e.g. Magigoo) BigRep SWITCHPLATE
Drying	TPU 98A is highly hygroscopic. Recommended drying at 80 °C for 4 - 6 hours.
Storage and Shelf Life	Keep dry, avoid sunlight, and store at room temperature. Use BigRep SHIELD for best results. When stored properly, product has a shelf life of 24 months.
Handling	Use the BigRep Keep-Dry Box for best material printability.
Post-Processing	Wear gloves to avoid possible microdamage to skin. Use a dust mask and protective glasses when processing.
Support	<ul style="list-style-type: none"> Breakaway BigRep BVOH