TECHNICAL DATA SHEET

V1.0



Polymaker™ TPU95 Matte

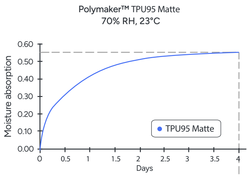
Polymaker™ TPU95 Matte is an easy-to-print, general-purpose TPU filament that retains true 95A flexibility and toughness, with a genuine matte finish and a wide color range.

WWW.POLYMAKER.COM

PHYSICAL PROPERTIES

PROPERTY	TESTING METHOD	TYPICAL VALUE
Density	ISO 1183-1: 2015	1.17 g/cm³ at 23°C
Melt index	ISO 1133-1: 2022 200°C 2.16kg	25.36 g/10min

MOISTURE ABSORPTION CURVE



THERMAL PROPERTIES

PROPERTY	TESTING METHOD	TYPICAL VALUE
Glass transition temp.	ISO 11357-1: 2023; ISO 11357-2: 2020	-26.6°C
Melting temp.	ISO 11357-1: 2023; ISO 11357-2: 2020	198.6°C
Crystallization temp.	ISO 11357-1: 2023; ISO 11357-2: 2020	130.2°C
Decomposition temp.	ISO 11358-1: 2022	309.6°C

MECHANICAL PROPERTIES

PROPERTY	TESTING METHOD	TYPICAL VALUE
Stress at 100% strain (X-Y)	ISO 37; GB/T 528	11.3±0.20 MPa
Stress at 200% strain (X-Y)	ISO 37; GB/T 528	13.9±0.30 MPa
Stress at 300% strain (X-Y)	ISO 37; GB/T 528	16.8±0.20 MPa
Stress at 400% strain (X-Y)	ISO 37; GB/T 528	18.7±0.20 MPa
Tensile strength (X-Y, as printed)	ISO 37; GB/T 528	19.5±0.30 MPa
Tensile strength (Z, as printed)	ISO 527; GB/T 1040	10.87±0.67 MPa
Elongation at break (X-Y, as printed)	ISO 37; GB/T 528	510±20 %
Elongation at break (Z, as printed)	ISO 527; GB/T 1040	361±8.4 %
Bending modulus (X-Y, as printed)	ISO 178; GB/T 9341	69.2±1.77 MPa
Z-axis tear strength(as printed)	ISO 13937	42.01±1.64 kN/m
85° GU	GB/T 9754-2025	1.0-2.3
Shore hardness	ISO 7619-1; GB/T 531.1	95A

RECOMMENDED PRINTING CONDITIONS

Nozzle temperature	220-240°C
Build plate temperature	35°C
Build surface treatment	NO
Cooling fan	100%
Chamber temperature	NO

Printing speed	50-250mm/s
Drying temp. and time	70°C/6H
Retraction distance (Direct Drive)	0.8mm-1.2mm
Retraction Speed (Direct Drive)	30mm/s

*Based on 0.4mm nozzle. Printing conditions may vary with different nozzle diameters.



PolyBox™ or PolyDryer™ Box

NOTE

It is highly recommended to use the PolyBox™ or PolyDryer™ Box when printing or storing Polymaker™ TPU95 Matte.

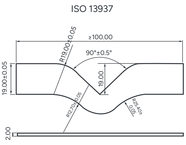
HOW TO MAKE SPECIMENS

Printing temperature	230°C
Bed temperature	35°C
Top & bottom layer	3
Environmental Temperature	Ambient

Infill	100%
Shell	2
Cooling fan	ON

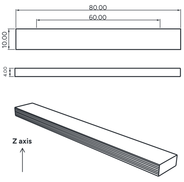
TEAR STRENGTH

ISO 13937



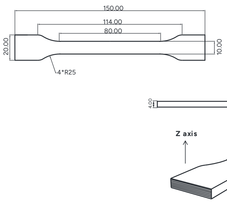
FLEXURAL TESTING SPECIMEN

ISO 178, GB/T 9341

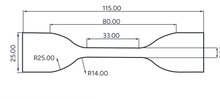


TENSILE TESTING SPECIMEN

ISO 527, GB/T 1040



ISO 37, GB/T 528



DISCLAIMER

The typical values presented in this data sheet are intended for reference and comparison purposes only. They should not be used for design specifications or quality control purposes. Actual values may vary significantly with printing conditions. End- use performance of printed parts depends not only on materials, but also on part design, environmental conditions, printing conditions, etc. Product specifications are subject to change without notice.
Each user is responsible for determining the safety, lawfulness, technical suitability, and disposal/recycling practices of Polymaker™ materials for the intended application. Polymaker™ makes no warranty of any kind, unless announced separately, to the fitness for any use or application. Polymaker™ shall not be made liable for any damage, injury or loss induced from the use of Polymaker™ materials in any application.