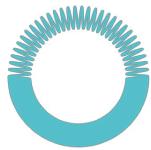


*Technical Data Sheet*

# *PolyFlex™ TPU95*

[www.polymaker.com](http://www.polymaker.com)  
V5.1



PolyFlex™  
TPU95

PolyFlex™ TPU95 is a thermoplastic polyurethane (TPU) based filament specifically engineered to work on most desktop 3D printers. It has a shore hardness of 95A and can stretch more than 3 times its original length.

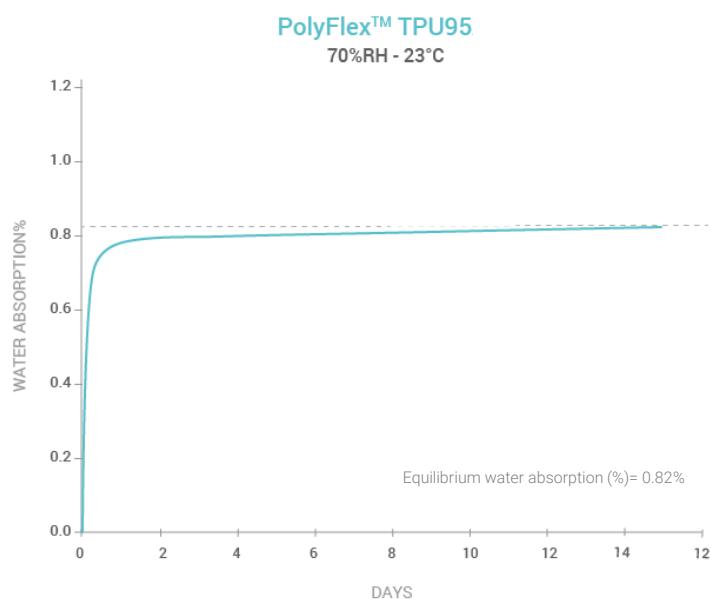
## **PHYSICAL PROPERTIES**

Property	Testing Method	Typical Value
Density	ISO1183, GB/T1033	1.20-1.24 g/cm <sup>3</sup> at 23 °C
Melt index	210°C, 1.2 kg	3-6 g/10min
Light transmission	N/A	N/A
Flame retardancy	N/A	N/A

## CHEMICAL RESISTANCE DATA

Property	Testing Method
Effect of weak acids	Not resistant
Effect of strong acids	Not resistant
Effect of weak alkalis	Not resistant
Effect of strong alkalis	Not resistant
Effect of organic solvent	No data available
Effect of oils and grease	No data available

## MOISTURE ABSORPTION CURVE



## MECHANICAL PROPERTIES

Property	Testing Method	Typical Value
100% modulus (X-Y)	ISO 37, GB/T 528	9.4 ± 0.3 MPa
Young's modulus (X-Y)	ISO 37, GB/T 528	29 ± 2.8 MPa
Elongation at break (X-Y)	ISO 37, GB/T 528	330.1 ± 14%
Shore hardness	ISO 7619-1, GB/T 531.1	95A

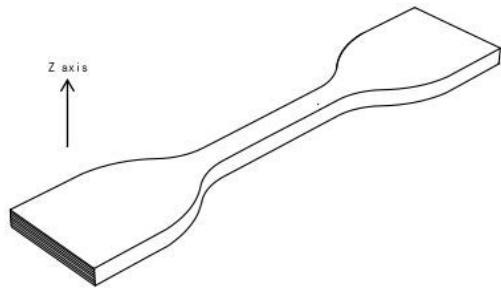
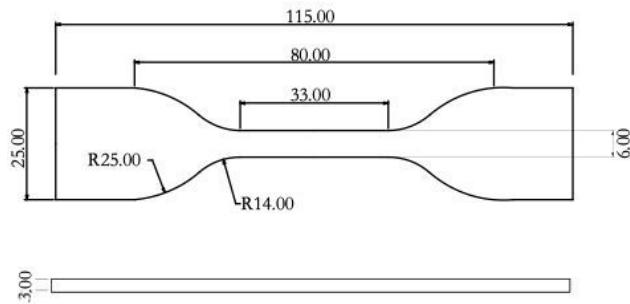
## RECOMMENDED PRINTING CONDITIONS

\* Based on 0.4 mm nozzle and Simplify 3D v.4.0. Printing conditions may vary with different nozzle diameters

Parameter	
Nozzle temperature	210 – 230 (°C)
Build surface material	BuildTak®, Glass, Blue Tape
Build surface treatment	PVA or PVP glue, Magigoo
Build plate temperature	25 - 60 (°C)
Cooling fan	ON
Printing speed	20-40 (mm/s)
Raft separation distance	0.2 (mm)
Retraction distance	3 (mm)
Retraction speed	40 (mm/s)
Environmental temperature	Room temperature
Threshold overhang angle	35 (°)
Recommended support material	PolySupport™ and PolyDissolve™ S1

## TENSILE TESTING SPECIMEN

ISO 37, GB/T 528



## HOW TO MAKE SPECIMENS

\*All specimens were conditioned at room temperature for 24h prior to testing

Printing temperature	225 °C
Bed temperature	30 °C
Shell	2
Top & bottom layer	4
Infill	100%
Environmental temperature	25 °C
Cooling fan	ON

## **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.