OVERTURE HIGH SPEED TPU TECHNICAL DATA SHEET

OVERTURE HIGH SPEED TPU is thermoplastic polyurethane (TPU) based filament with high flow properties. Featuring shore hardness of 95A, it strikes the ideal balance between softness and resilience.

Physical Properties

Property	Testing method	Typical value
Density	ISO 1183, GB/T 1033	1.19 (g/cm$_3$ at 21.5˚C)
Melt index	210 °C, 1.2 kg	9.5 (g/10 min)

Tested with 3D printed specimen of 100% infill

Mechanical Properties

Property	Testing method	Typical value
100% modulus (X-Y)	ISO 527, GB/T 1040	14.9 ± 0.7 (MPa)
Tensile strength (X-Y)	ISO 527, GB/T 1040	27.1 ± 1.2 (MPa)
Elongation at break (X-Y)	ISO 527, GB/T 1040	301.8 ± 12.6 (%)
Shore hardness	ISO 7619, GB/T 31	~95A

All testing specimens were printed under the following conditions:
nozzle temperature = 225 °C, printing speed = 30 mm/s, build plate temperature = 30 °C, infill = 100%
All specimens were conditioned at room temperature for 24h prior to testing

Recommended Printing Conditions

Nozzle temperature	200 - 240 (˚C)
Build surface material	OVERTURE Build Surface, Textured PEI, Blue Tape
Build surface treatment	None, Applying PVA glue to the build surface
Build plate temperature	25 - 60 (˚C)
Cooling fan	Turned on
Printing speed	60-90 (mm/s)
Raft separation distance	0.1-0.2 (mm)
Retraction distance	1-3 (mm)
Retraction speed	20-40 (mm/s)
Threshold overhang angle	35 (˚)

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

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 OVERTURE materials for the intended application. OVERTURE makes no warranty of any kind, unless announced separately, to the fitness for any use or application. OVERTURE shall not be made liable for any damage, injury or loss induced from the use of OVERTURE materials in any application.