OVERTURE PETG TECHNICAL DATA SHEET

OVERTURE PETG is an affordable PETG filament with balanced mechanical properties and ease of printing.

Physical Properties

Property	Testing method	Typical value
Density	ISO 1183, GB/T 1033	1.3 (g/cm3 at 20.7˚C)
Vicat Softening temperature*	ISO 306 GB/T 1633	75 (˚C)
Melt index	240 °C, 2.16 kg	8.8(g/10 min)
Melting temperature	DSC, 10°C/min	N/A

Tested with 3D printed specimen of 100% infill

Mechanical Properties

Property	Testing method	Typical value
Young's modulus (X-Y)	ISO 527, GB/T 1040	2311.1 ± 92.4 (MPa)
Young's modulus (Z)	ISO 527, GB/T 1040	2200.1 ± 52.4 (MPa)
Tensile strength (X-Y)	ISO 527, GB/T 1040	47.9 ± 4.8(MPa)
Tensile strength (Z)	ISO 527, GB/T 1040	45.7 ± 1.7 (MPa)
Elongation at break (X-Y)	ISO 527, GB/T 1040	9.3 ± 6.5 (%)
Elongation at break (Z)	ISO 527, GB/T 1040	3.5 ± 2.2 (%)
Bending modulus (X-Y)	ISO 178, GB/T 9341	2277.3 ± 198 (MPa)
Bending modulus (Z)	ISO 178, GB/T 9341	1958.72 ± 126.4 (MPa)
Bending strength (X-Y)	ISO 178, GB/T 9341	80.1 ± 3.5 (MPa)
Bending strength (Z)	ISO 178, GB/T 9341	57.6 ± 5.6 (MPa)
Charpy impact strength (X-Y)	ISO 179, GB/T 1043	20.2 ± 3.4 (kJ/㎡)
Notched Charpy impact strength (X-Y)	ISO 179, GB/T 1043	4.85 ± 0.35 (kJ/㎡)
Charpy impact strength (Z)	ISO 179, GB/T 1043	15.7 ± 3.9 (kJ/㎡)

All testing specimens were printed under the following conditions:
nozzle temperature = 240 °C, printing speed = 45 mm/s, build plate temperature = 80 °C, infill = 100%
All specimens were conditioned at room temperature for 24h prior to testing

Recommended Printing Conditions

Nozzle temperature	230 - 260 (˚C)
Drying temp. and time	60(˚C)/5H
Build surface material	OVERTURE Build Surface, Textured PEI
Build surface treatment	None, Applying PVA glue to the build surface
Build plate temperature	65-70 (˚C)
Cooling fan	Turned on
Printing speed	<300(mm/s)
Raft separation distance	0.1-0.2 (mm)
Retraction distance	0.8-3 (mm)
Retraction speed	20-80 (mm/s)
Threshold overhang angle	60 (˚)

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.