

PCTPE

Nylon TPE

PCTPE has several unique features that allow any user to print a highly flexible part with the added durability of our nylon polymers. This combination of polymers was developed specifically to allow anyone using current FFF 3D Printers to print parts from durable prosthetics to complete cosplay wearable outfits, cell phone enclosures as well as highly flexible utility/industrial parts. The flexibility of PCTPE means that the end parts will have the smooth lustrous texture of nylon, the added flexibility offered by a rubber like TPE, yet maintain the high durability and non-delaminating benefits of all 3D Printing materials.

Mechanical Properties	Standard	Value	Unit
Ultimate Tensile Strength		34.79	MPa
Tensile Modulus			MPa
Elongation at Break		497.6	%
Flexural Strength			MPa
Flexural Modulus			MPa
Hardness Shore	Standard	Value	Unit
Hardness			

Thermal Properties	Standard	Value	Unit
HDT @ 0.45 MPa			°C
Glass Transition Temp		74	°C
Physical Properties	Standard	Value	Unit
Density		1.113	g/cm ³
Certifications and Tests	Standard	Value	Unit
Flammability (UL 94)		HB	
Flammability (UL 94)	@ 1.5 mm	V-2	

Characteristics

- Low shrinkage
- Super layer to layer bonding that allows for single perimeter walls to be folded along thread axis.

- Takes on any acid-based color dye (RITT) very fast = 5 min @ 140F
- Takes on acid based antimicrobial coatings for footwear and prosthetics.

Applications

- Prosthetics
- Cell phone enclosures

- Wearable texture
- Flexible utility and industrial parts

Considerations

Printing Skill & Experience: Beginner Intermediate Advanced Expert

Printer Compatibility

<input type="checkbox"/> 3ntr A2v4	<input type="checkbox"/> 3ntr A4v4	<input checked="" type="checkbox"/> EVO-T	<input checked="" type="checkbox"/> EVO22-T
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Available colors from [Airwolf 3D](#): Black, Natural