

# Polyethylene Filament

SKU: FL300PE

Xtellar PE filament is a 100% Polyethylene (PE) filament designed to be easy to print, lightweight, highly moisture, and chemical resistant. This filament is ideal for packaging, prototyping, and consumer goods applications. This grade is an excellent solution where traditional HDPE resins are typically required.

## Recommended Print Settings

Parameter	Units	Range
Extruder Temperature	°C	210 - 230
*Bed Temperature / Substrate (First Layer)	°C / Type	20-40 (90) / adhesion solution stick for glass-filled polyolefin filaments
**Alternate Bed Temperature / Substrate (First Layer)	°C / Type	20-40 (90) / Polyolefin adhesive solution
Printing Speed (First Layer)	mm/s	20 - 65 (60% speed)
Fan Speed	%	40 - 100
Extrusion Multiplier	–	0.90 – 1.10
Overlap Percentage	%	20 – 40
Brim	mm	≥ 10

## Printed Part Properties

Parameter	Method	Units	Value
Density	D 792	g/cm <sup>3</sup>	0.954
Ultimate Tensile Strength*	D 638	MPa	18.5
Tensile Elongation at Break*	D 638	%	208
Young's Modulus*	D 638	MPa	752
Flexural Modulus – Chord Modulus*	D 790	MPa	731.5
Charpy Impact Strength at 23°C*	ISO 179	kJ/m <sup>2</sup>	79
Deflection Temperature (at 0.455 MPa)	D 648	°C	66
Vicat Softening Temperature (at 10 N)	D 1525	°C	125

## Notes

1. Recommended process conditions and printed part properties may be changed at any moment without previous communication from Xtellar.
2. Printed part properties obtained using test specimens printed in X-Y direction under the following conditions: printing temperature 230°C, bed temperature 20°C (90°C first layer), print speed 20 mm/s, 100% of lines infill, 0 perimeter layers, 0.15 mm layer height, 0.4 mm brass nozzle.
3. Traditional bed adhesive solutions used for PLA & ABS (such as blue tape or hair spray) will not properly adhere PP, PE, or EVA to the build plate.
4. This resin does not contain the substance Bisphenol A (BPA, CAS: 80-05-7) in its composition.
5. For information on about safety, handling, individual protection, first aids and waste disposal, please see SDS. In case of questions regarding utilization or regulatory information, please contact our technical assistance area.