FL105PP

FL105PP is a next generation polypropylene (PP) filament designed to provide superior dimensional accuracy, inherently low density, high fatigue, and high moisture resistance for use in Fused Filament Fabrication (FFF).

Additionally, FL105PP provides a balance of impact resistance and dimensional accuracy while enabling the production of watertight, lightweight and chemically resistant parts.

Recommended Print Settings

Parameter	Units	Range
Extruder Temperature	℃	220 - 230
*Recommended Bed Temperature / Substrate	℃ / Type	60-80 / PP bed adhesion solution stick (water soluble)
**Alternate Bed Temperature / Substrate	℃ / Type	20-40 / Multi-purpose adhesive spray
Printing Speed (First Layer)	mm/sec	35 - 65
Fan Speed	%	50 - 100
Extrusion Multiplier	–	0.90 – 1.10
Overlap Percentage	%	20 – 40
Brim	Layers	≥ 5
Raft Air Gap	mm	0.1

* Recommended to use a bed adhesive specifically designed for Polypropylene filaments.

** Traditional bed adhesive solutions used for PLA and ABS (such as blue tape, glue sticks, hair spray) will not properly adhere PP to the built plate

Printed Part Properties

Parameter	Method	Units	Value
Density	D 792	g/cm³	0.89
Tensile Strength at Yield [a]	D 638	MPa	11
Tensile Elongation at Yield [a]	D 638	%	17
Youngs Modulus [a]	D 638	MPa	1020
Flexural Modulus – Chord Modulus [a]	D 790	MPa	840
Charpy Impact Strength at 23℃ [a]	ISO 179	kJ/m²	11.7
Deflection Temperature (at 0.455 MPa)	D 648	℃	93
Vicat Softening Temperature (at 10 N)	D 1525	℃	130

Note: Printed part properties obtained using test specimens printed in X-Y direction under the following conditions: printing temperature 220°C, bed temperature 20°C, print speed 4000 mm/min, 75% of grid (±45°) infill, 3 perimeter layers, 0.35 mm nozzle and 0.15mm layer height

Notes

1. Recommended process conditions and printed part properties may be changed at any moment without previous communication from Braskem.
2. This resin does not contain the substance Bisphenol A (BPA, CAS: 80-05-7) in its composition.
3. For information on about safety, handling, individual protection, first aids and waste disposal, please see MSDS.
4. In case of questions regarding utilization or regulatory information, please contact our technical assistance area.