

FL600R

FL600R is a **recycled resin** designed for use in material extrusion based Additive Manufacturing while maximizing sustainably sourced content. Primarily sourced from **recycled bottle caps**, FL600R is a **recycled polyolefin blend** containing **over 90% sustainably sourced material**, providing a more sustainable solution without sacrificing printability. This environmentally friendly filament provides the same low density as well as water, chemical, and impact resistance inherent to virgin polyolefin-based materials.

Recommended Print Settings

Parameter	Units	Range
Extruder Temperature	°C	220 - 240
*Recommended Bed Temperature / Substrate	°C / Type	60 / PP-GF bed adhesion solution stick (water soluble)
*Initial Bed Temperature / Substrate	°C / Type	110 / PP-GF bed adhesion solution stick (water soluble)
Printing Speed (First Layer)	mm/s	30 - 65 (50% speed)
Fan Speed	%	50 - 100
Extrusion Multiplier	–	0.90 – 1.10
Overlap Percentage	%	20 – 40
**Brim	Layers	≥ 5

* Recommended to use a bed adhesive specifically designed for Polypropylene or glass-filled Polypropylene filaments. For longer prints it may be necessary to lower the bed temperature to 30 °C then increase the temperature to remove the part.

** Depends on geometry and length of print. Some prints will not require a brim.

Material Properties

Parameter	Method	Units	Value
Density	D 792	g/cm ³	0.95
Hardness ^a	D 2240	Shore D	54
Ultimate Tensile Strength ^a	D 638	MPa	15.5
Tensile Elongation at Break ^a	D 638	%	514
Youngs Modulus ^a	D 638	MPa	703
Flexural Modulus – Chord Modulus ^a	D 790	MPa	547
Charpy Impact Strength at 23 °C ^a	ISO 179	kJ/m ²	83.9
Izod Impact Strength at 23 °C ^a	D 256	J/m	414
Deflection Temperature (at 0.455 MPa) ^a	D 648	°C	51
Vicat Softening Temperature (at 10 N) ^a	D 1525	°C	99

^aPrinted part properties obtained using test specimens printed in X-Y direction under the following conditions: printing temperature 230 °C, bed temperature 60 °C (initial temperature 110 °C), print speed 1800 mm/min (1200 mm/min first two layers), 100% line infill, 0 perimeter/shell layers, 0.4 mm nozzle, 0.2 mm layer height, 5 brim layers, and Magigoo PP-GF bed adhesive.

Notes

1. Read Safety Data Sheet before use.
2. Recommended process conditions and printed part properties may be changed at any moment without previous communication from Braskem.
3. For product stewardship information, please contact Braskem at us_compliance@braskem.com.
4. In case of questions regarding utilization, or for other applications, please contact Braskem at 3dprinting@braskem.com.

Braskem does not guarantee printed part conditions, these represent estimated values based on internal test methods. Properties may vary based on print conditions.