DURABIO™ Filament



- DURABIO™ is a transparent bio-based engineering material which combines the properties of Polycarbonate (PC) and Polymethacrylate (PMMA)
- Excellent optical and mechanical properties
- High heat, scratch and abrasion resistance
- UV resistant
- BPA free, based on a renewable source
- Main applications: Concept modelling for the building, electrical and automotive industry.

Filament Specifications

Size	Ø tolerance	Roundness
1.75mm	± 0.05mm	≥95%
2.85mm	± 0.10mm	≥95%

Material properties

Description	Test method	Typical value
Density	ISO 1183	1.31 g/cm^3
MVR 230°C/2.16 kg	ISO 1133	10 cm^3/10min
MFR 230°C/2.16 kg	ISO 1133	13 gr/10 min
Elongation at break	ISO 527	130 %
Tensile strength	ISO 527	64 Mpa
Tensile modulus	ISO 527	2300 MPa
Flexural modulus	ISO 178	2100 Mpa
Flexural strength	ISO 178	94 MPa
Impact strength - Charpy method 23°C	ISO 179	9 kJ/m2
Moisture absorption	MCC Method	0.2 %
Coefficient of linear thermal expansion (-20~80°C)	ISO 11359-2	7.3E-05
Heat deflection temperature 1.80 MPa	ISO 75-1	82°C
Transparency	ISO 13468	2 %

Values calculated on injection moulded material tests

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Recommended printer set up

Extrusion temperature	230±10°C
Melting temperature	235°C
Bed temperature	100°C
Printing speed	50 mm/s
Fan speed (can be changed to 0% is the model is warping)	10%

Filaments Available

Colour	Part Number		RAL ref.	Diameter	Weight
White	55150		9003	1.75 mm	500 g
Clear	55151		N/A	1.75 mm	500 g
Black	55152		9005	1.75 mm	500 g
White	55153		9003	2.85 mm	500 g
Clear	55154		N/A	2.85 mm	500 g
Black	55155		9005	2.85 mm	500 g

Verbatim filament is manufactured from high quality materials to extremely rigid standards. The filaments are manufactured from the highest quality materials and produced to extremely tight tolerances to ensure consistent feed and stable printing. The filaments are distributed in vacuum-sealed bags with desiccant, and wound onto a custom spool that has been designed for strength, uniform dynamic performance and trouble-free dispensing.

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