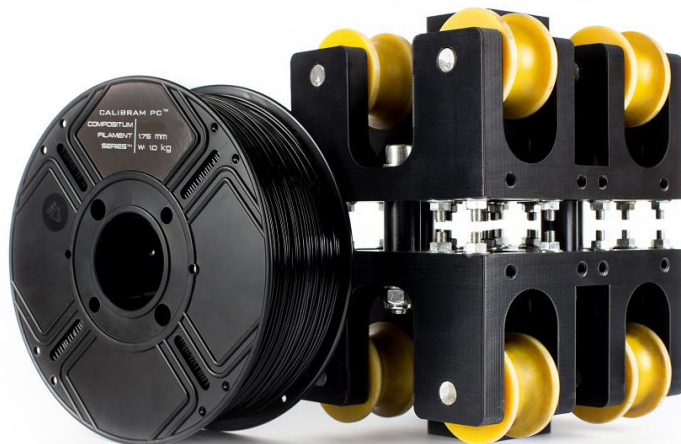


TECHNICAL DATA SHEET

- Proponitrile butadiene styrene filament with high manufacturing tolerances
- It doesn't require drying (hygroscopicity close to none)
- Working temperatures of printed items up to 100°C
- Low level of volatiles during printing
- Great cohesiveness of print layers allows for very fast print speeds (250 mm/s)
- Shrinkage not exceeding 0.4%



Recommended print parameters

Parameter	Value
Hotend temperature	245°C – 260°C
Bed temperature	90°C – 110°C
Print cooling	none

Material properties

Mechanical properties	Parameter	Value		Standard
Tensile modulus of elasticity [E_t]	5.0 mm/min	1910 MPa	277 022 psi	ASTM D 638
Secant modulus [E_{sec}]	5.0 mm/min	1830 MPa	265 419 psi	ASTM D 638
Stress at elongation $\times 1\%$ [σ_{x1}]	5.0 mm/min	26.8 MPa	3 887 psi	ASTM D 638
Tensile strength at yield [σ_y]	5.0 mm/min	44.2 MPa	6 411 psi	ASTM D 638
Tensile elongation at yield [ϵ_y]	5.0 mm/min	2.80%	2.80%	ASTM D 638
Ultimate strength [σ_M]	5.0 mm/min	44.2 MPa	6 411 psi	ASTM D 638
Tensile elongation at ultimate strength [ϵ_M]	5.0 mm/min	2.80%	2.80%	ASTM D 638
Tensile stress at break [σ_B]	5.0 mm/min	36 MPa	5 221 psi	ASTM D 638
Tensile elongation at break [ϵ_B]	5.0 mm/min	6.50%	6.50%	ASTM D 638
Tensile elongation at break [ϵ_B]	50 mm/min	44.80%	44.80%	ASTM D 638
Flexural strength [σ_{fM}]	2.8 mm/min	64.93 MPa	9 417 psi	ISO 178
Flexural modulus of elasticity [E_f]	2.8 mm/min	1986 MPa	288 045 psi	ISO 178
Rockwell hardness	R	R 110	R 110	ASTM D 785
Izod notched impact strength	3.2 mm; 23°C	313.81 J/m	5.87 ft-lb/in	ASTM D 256
Thermal properties	Parameter	Value		Standard
Heat deflection temperature	0.45 MPa	98 °C	208°F	ASTM D 648
Vicat softening temperature	B/50	106.7 °C	224°F	ASTM D 1525
Physical properties	Parameter	Value		Standard
Density		1.06 g/cm ³	66.1 lb/ft ³	ISO 1183
Melt flow index	220°C; 10.0 g	6.9 g/10 min	0.244 oz/10 min	ASTM D 1238

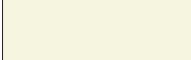
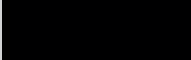

Recommended print parameters

Parameter	Value
Hotend temperature	245°C – 260°C
Bed temperature	90°C – 110°C
Print cooling	none
Enclosure temperature	45°C – 55°C

Filament manufacturing tolerances

	ø 1.75 mm	ø 2.85 mm
Diameter tolerance	± 0.03 mm	± 0.05 mm
Ovality tolerance	± 0.01 mm	± 0.02 mm

Colors manufactured

Color		ø 1.75 mm	ø 2.85 mm
ivory		●	●
black		●	●
custom		○	○

● standard ○ on request

Standard spool – net weight of 1 kg.

Other spools (net weight of 2 kg, 4 kg and more) available on request.