

## CPE HG100

### Description:

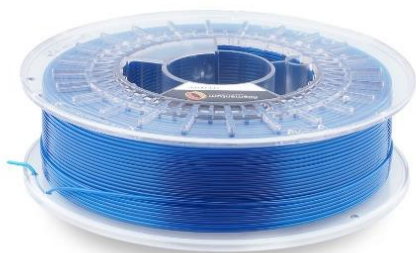
Filament from co-polyester can be with advantages used for 3D printing of technical objects. The material is durable and tough. CPE has higher tensile, flexural and impact strength, better thermal and chemical resistance in comparison with ABS or PLA filaments.

Thanks to its ease of processing this type of filament is an excellent choice for your prints requiring better properties. Another advantage of the material is less odor produced during the printing and less shrinkage as compared with ABS.

This co-polyester contains bio-based monomer and can be recycled. Therefore, it is a human-friendly and eco-friendly material. For all the colours we guarantee the certificate for food contact.

Filament has great optical properties, very high gloss and clarity. The transparency and strength are also preserved in thin-wall prints from transparent colours.

Fillamentum guarantees high precision of filament dimensions within the tolerance +/- 0,05 mm, which is strictly controlled throughout production.



Workability of 3D printing filament is at least 12 months from delivery.

The information was processed with the best knowledge of the manufacturer and it is for information only.

Physical properties	Typical Value	Test Method	Test Condition
Material density	1,25 g/cm <sup>3</sup>	ASTM D792	
Melt flow index	1,6 g/10 min	ASTM D1238	230 °C, 1,2 kg
	5,9 g/10 min	ASTM D1238	230 °C, 3,8 kg
Diameter tolerance	± 0,05 mm		
Weight	750 g of filament (+ 250 g spool)		
Mechanical properties	Typical Value	Test Method	Test Condition
Tensile strength	47 MPa	ASTM D638	at yield, 50 mm/min
	48 MPa	ASTM D638	at break, 50 mm/min
Elongation at break	150 %	ASTM D638	50 mm/min
Flexural strength	71 MPa	ASTM D790	1,27 mm/min
Flexural modulus	1860 MPa	ASTM D790	1,27 mm/min
Izod impact strength	no break	ASTM D256	23 °C, notched
Rockwell hardness	115	ASTM D785	R-Scale
Thermal properties	Typical Value	Test Method	Test Condition
Heat distortion temperature	80 °C	ASTM D648	0,455 MPa
Glass transition temperature	90 °C	ASTM D1525	
Optical properties	Typical Value	Test Method	Test Condition
Haze	< 1,0 %	ASTM D1003	
Transmittance	90 %	ASTM D1003	
Printing properties	Recommended	Notes	
Print temperature	255-275 °C	Recommended settings! It may differ according to the printer and the object. Try your own settings before printing.	
Hot pad	70-85 °C		
Bed adhesive	Magigoo	Use of adhesive is necessary to prevent damage of the pad!	
Conditions to re-dry	60 °C, 3-4 hours	Moisture sensitive! Keep in protective bag. If stringing occurs, the filament is too moist.	