ZYYX proCarbon™

An Engineering Material for the ZYYX Pro line of 3D Printers

The proCarbon™ is a nylon based filament reinforced with carbon fibers. It is developed to allow professionals to rapidly produce customized, high-strength parts on their desks. Using the ZYYX proCarbon, you can easily create functional prototypes and strong end-use parts such as tools, jigs, and fixtures.

The ZYYX proCarbon™ comes pre-dried, vacuum packed, and ready to print out of the box. The proCarbon shall be used with a hardened Carbon SwiftTool™. The Carbon SwiftTool's hot-end nozzle is made of hardened steel and optimized for the abrasive proCarbon material.

Technical Data – ZYYX proCarbon™

Property	Specification
Chemical name	Polyamide reinforced with 20 % carbon fiber strands
Density	1.24 g/cm^3
Colour	Natural (dark grey)
Net spool size	1.0 kg
Extruder temperature	255-265 °C
Recomm. chamber temperature	65-75 °C
Filament diameter	1.75 ±0.025 mm
Heat distortion temperature	155 °C
Tensile strength	140 MPa
Elongation at break	10 %
Bending strength	140 MPa
Flexural modulus	4 300 MPa
Izod impact strength	19 kJ/m²
Typical printing shrinkage	~0.6 % (x and y directions), 0 % (z direction)
ZYYX printer compatibility	ZYYX Pro II and ZYYX Pro with the PA/Nylon build-surface
Recommended storage	Vacuum sealed (avoid moisture), inside heated chamber, or dry-box
Water absorption	1.0 weight-%/day
Volume resistivity	<10^3 Ω·cm

All specifications can be changed without prior notice.

Print examples