TECHNICAL DATA SHEET

Roboze Functional-Nylon

Overview

Roboze Functional Nylon is one of the techno polymers that is widely used thanks to a good value for money. The low friction coefficient and the self-lubricating properties, combined with the excellent mechanical resistance, make Functional the ideal material for the realization of tribological components and, in general, the suitable solution for all those applications that require a good flowability and wear resistance.

	MECHANICAL PROPERTIES	Test Method	English		SI	
			XZ	XY	XZ	XY
Tensile	Strength (Ultimate)	ASTM D638	7832 psi	7396 ps	54 MPa	51 MPa
	Modulus	ASTM D638	232 ks	217 ksi	1.6 GPa	1.5 GPa
Flexural	Strenght	ASTM D790	-	10152 psi	-	70 MPa
	Modulus	ASTM D790	-	275 ksi	-	1.9 GPa

THERMAL PROPERTIES	Test Method	English	SI
HDT	ASTM D648	194 °F (@ 263 psi)	90 °C (@ 1.82 MPa)
Continuous Use Temperature	ASTM D 3045	248 °F	120 °C

PHYSICAL PROPERTIES	Test Method	English	SI
Density	ASTM D792	0.043 lb/in^3	1.20 g/cm^3
Water Absorption	ASTM D570	9%	
Moisture Absorption	ASTM D570	2.8%	
Volume Resistivity	ASTM D257	1.96*10^{13} Ω*in	5.00*10^{13} Ω*cm

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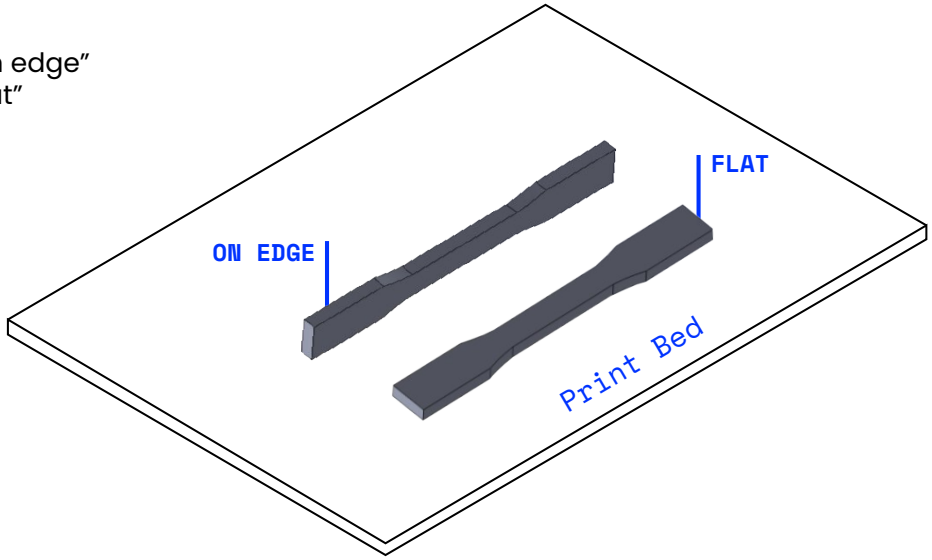
Test Specimen Setting For Mechanical Testing

All tests have been made with samples printed in two different orientations on EDGE (XZ) and FLAT (XY), with 100% infill density.

H.D.T. is the acronym of Heat Deflection Temperature. The international standard norm ASTM D648 provides the terms to determine the operating temperature of polymers.

XZ= X or “on edge”
XY= Y or “flat”



The performance properties of these materials may vary according to the operating conditions. Each user is responsible for determining that Roboze material is safe, technically suitable, and lawful for the intended application, as well as for identifying the proper disposal (or recycling) method consistent with applicable environmental laws and regulations.

The information presented in this document are typical values intended for reference and comparison purposes only.

They should not be used for design specifications or quality control purposes.
Actual values will vary with build conditions.