

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

TECHNICAL DATA SHEET

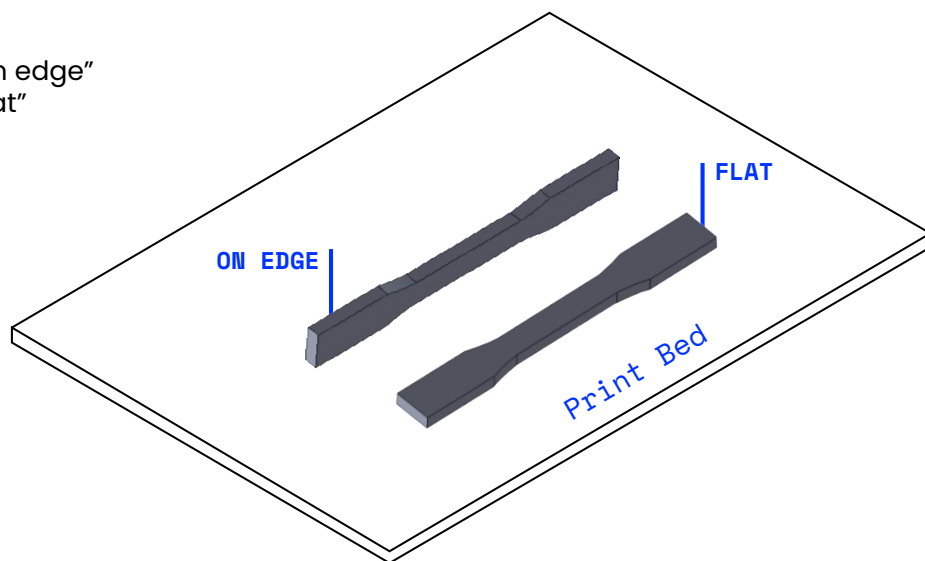
Roboze Functional-Nylon

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.

DISCLAIMER

All the information contained in this document reflect the current state of our knowledge and is based on the analysis of representative samples of this material and not in the actual shipped material. All the information and data contained herein doesn't extend, apply or relate to the use of this material in combination with any other substance and/or process or to the finished product or device manufactured using this material. All information and statements on potential applications of the materials are for informational purposes only. The user is the only responsible in the assumption of all the risks and liabilities related to the use of this material and the information expressed in the present document. The user alone is responsible to finally determine suitability, safety and adequacy of this material and the accuracy of the information contained herein for any contemplated or intended use, as well as to ensure that any results of the processing, transformation and/or treatment of this material are usable and/or marketable in accordance with all applicable laws. Roboze makes no and disclaims all warranties of accuracy of data or merchantability, fitness for a particular purpose or non-infringement of the materials. Roboze, or any of its affiliated companies, shall have no liability for any loss, injury, damage or expense arising out of the use or misuse of this material or the information and data contained herein.