PA12 Industrial

Material's Technical Data Sheet

A high resistance nylon 12 with very good dimensioning accuracy of prints. Perfect for functional prototyping, jinks and fixtures and end use parts.

Compatible with: LISA X, NILS 480

FEATURES

- very good dimensioning accuracy
- biocompatibile[1]
- excellent mechanical properties
- high chemical resistance

APPLICATIONS

- final parts
- functional prototypes
- jigs and fixtures
- parts with very good dimensioning

General information			Test method
Material type	Nylon 12		
Software	Sinterit Studio Basic		
Nitrogen needed	No		
Refresh ratio[2]	30	%	
Colour	grey mat		
Mean particle size D50	62	µm	ISO 8130/13
Bulk density	505	kg/m^3	ISO 60
Printout density	1.03[3]	g/cm^3	PN-EN ISO 845:2010
Printout water absorption	0.63[3]	%	PN-EN ISO 62:2008

Mechanical properties			Test method
Tensile Strength	52.3	MPa	PN-EN ISO 527- 2:2012
Elongation at Break	7.8	MPa	PN-EN ISO 527- 2:2012
Tensile Modulus	1840	MPa	PN-EN ISO 527- 2:2012
Flexural Strength	60.6	MPa	PN-EN ISO 178:2019
Flexural Modulus	1380	MPa	PN-EN ISO 178:2019
Shore hardness in type D scale	75		PN- EN ISO 868:2005
Impact strength (Charpy method - unnotched)	29.5	kJ/m^2	PN-EN ISO 179- 1/1eU:2010

1. Tested for non irritant and non cytotoxicity. When producing the 3D prints, it is the manufacturer's responsibility to confirm the specifications for the final use.
2. Refresh ratio is the amount of refreshing powder that is required to be mixed after the printing with unsintered material.
3 Cubic test samples with sides of 3 cm.

Thermal properties			Test method
Melting point	184.4	°C	PN-EN ISO 11357-3:2018

Biocompatibility Information[4]	
Test method	**Description**
ISO 10993-5	non-cytotoxic
ISO 10993-23	no irritant

4. Tests were carried out in accordance with ISO 10993-1:2018. When producing the 3D prints, it is the manufacturer's responsibility to confirm the specifications for the final use. Material properties may vary based on the design and manufacturing practices.

Information provided within this document are average values for reference and comparison only. All tests were performed with print samples from Lisa X printers. Parameters presented in this specification are subject to change without notice. Final part properties may vary based on printed part design, print orientation and material handling.
Rev: 05-10-2022