PA12 Industrial

Material's Technical Data Sheet

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

Compatible with: LISA X, NILS 480

FEATURES

- very good dimensional 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

1. Tested for non irritant, non cytotoxicity and not a sensitizer. 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.

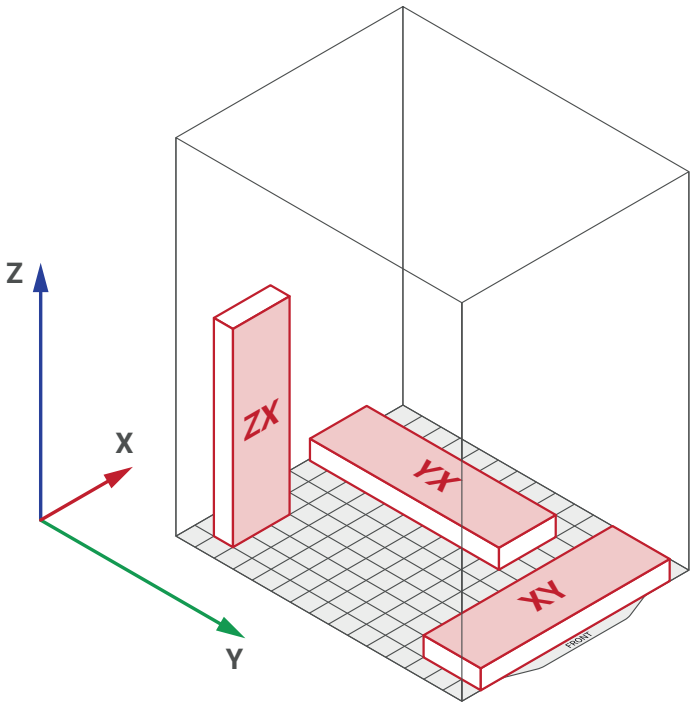
SINTERIT
www.sinterit.com

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

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 10993-10	not a sensitizer
ISO 10993-23	no irritant



Surface roughness[5]

Print orientation	Ra [um]	Rz [um]
Flat XY	11.203	68.016
Flat YX	14.210	86.486
Upright ZX	18.113	107.679

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.
5. Roughness of test specimens surfaces printed with layer thickness of 125 [µm].

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