

PA 11 Onyx

Material's Technical Data Sheet

Bio-derived nylon powder with great mechanical properties and impact strength. Ideal for elements working in difficult conditions.



Compatible with:



FEATURES

- high mechanical strength
- high toughness
- dimension stability
- high ductility



APPLICATIONS

- prototypes with great mechanical properties
- snap-fit designs
- end-use parts
- living hinges
- toolings
- holders



General information

General information		Test method	
Material type	Nylon 11		
Software	Sinterit Studio Advanced		
Nitrogen needed	Yes		
Refresh ratio ¹	33	%	
Colour	black		
Particle size	20-80	µm	ISO 13320
Mean particle size	40	µm	ISO 13320
Printout density	1.03	g/cm ³	PN-EN ISO 845:2010
Printout water absorption	0.5	%	PN-EN ISO 62:2008

1. Refresh ratio is the amount of refreshing powder that is required to be mixed after the printing with unsintered material.

Information provided within this document are average values for reference and comparison only. All tests were performed with print samples from Lisa/Lisa Pro 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.

Mechanical properties

			Test method
Tensile Strength	48	MPa	PN-EN ISO 527-2:2012
Elongation at Break	55	MPa	PN-EN ISO 527-2:2012
Tensile Modulus	1680	MPa	PN-EN ISO 527-2:2012
Flexural Strength	62	MPa	PN-EN ISO 178:2019
Flexural Modulus	1420	MPa	PN-EN ISO 178:2019
Shore hardness in type D scale	76		PN-EN ISO 868:2005
Impact strength (Charpy method - unnotched)	179	kJ/m ²	PN-EN ISO 179-1/1eU:2010

Thermal properties

			Test method
Melting point	200	°C	PN-EN ISO 11357-3:2018
Heat Deflection Temperature A at 1.8 MPa	47	°C	PN-EN ISO 75-2:2013-06 / PN-EN ISO 75-2:1998