

PA12 ECO

TDS for Lisa X - beta version

Material Technical Data Sheet

PA12 ECO is a recycled PA12 powder for SLS 3D printing. It offers a cost-effective alternative to virgin PA12 while maintaining a strong balance of strength and flexibility.



Compatible with:

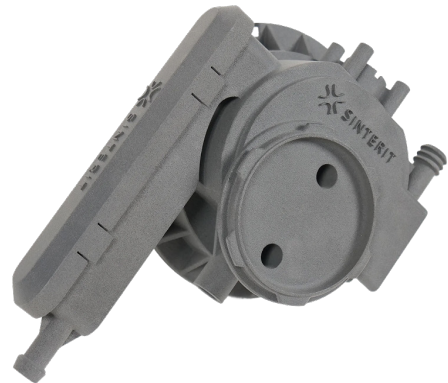


FEATURES

- high mechanical strength
- good elongation at break (flexibility)
- durable and resistant to mechanical stress
- recycled feedstock (ECO)

APPLICATIONS

- cheap prototyping
- functional parts
- fixtures and jigs
- spare parts



General properties		Test method	
Material Type	Nylon 12	-	-
Nitrogen needed	Yes	-	-
Colour	Grey	-	internal
Refresh ratio ¹	40	%	internal
Bulk density powder	0.45	g/cm ³	PN-EN ISO 60:2011
Printout density	0.92	g/cm ³	internal
Mean particle size D50	50.5	µm	ISO 13320

* nitrogen / protective atmosphere required

Mechanical properties

			Test method
Tensile Strength (X direction)	47.69	MPa	PN-EN ISO 527-1:2012
Tensile Strength (Y direction)	48.07	MPa	PN-EN ISO 527-1:2012
Tensile modulus (E-modulus)	2082	MPa	PN-EN ISO 527-1:2012
Elongation at Break (X direction)	6.93	%	PN-EN ISO 527-1:2012
Elongation at Break (Y direction)	6.92	%	PN-EN ISO 527-1:2012
Impact strength X (Charpy - unnotched)	39.75	kJ/m ²	PN-EN ISO 179-1:2010
Impact strength Y (Charpy - unnotched)	39.0	kJ/m ²	PN-EN ISO 179-1:2010
Shore Hardness in D scale	75.8	-	PN-EN ISO 868:2005

Thermal properties

			Test method
Powder melting temperature (10°C/min)	172	°C	PN-EN ISO 11357-3:2018
Softening point (Vicat A50)	165	°C	PN-EN ISO 306:2014-02

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. 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. This is a beta version of the TDS; final specifications and values may change based on ongoing validation and customer feedback.