PA12 ECO

TDS for Lisa X

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.

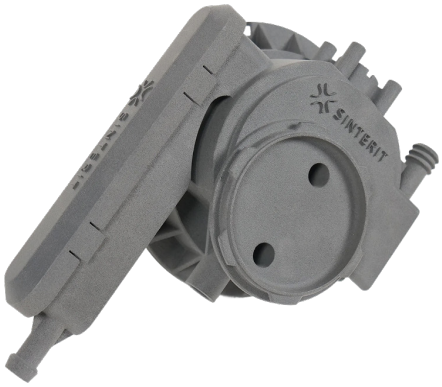
Compatible with: LISA X

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]	No refresh	%	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

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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)	2152.16	MPa	PN-EN ISO 527-1:2012
Elongation at Break (X direction)	13.48	%	PN-EN ISO 527-1:2012
Elongation at Break (Y direction)	18.04	%	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)	163	°C	PN-EN ISO 306:2014-02

The printing process may take slightly longer compared to virgin PA12, but the economic and sustainable advantages make it an excellent choice for technical applications.

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

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