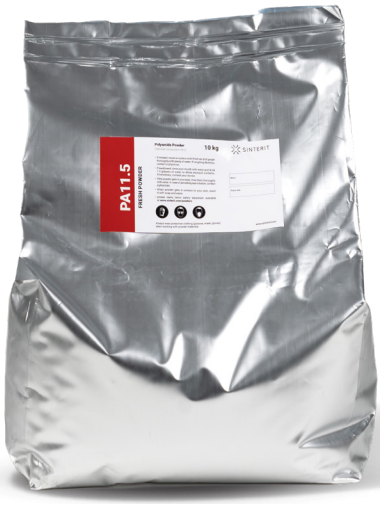
PA11.5

TDS for SUZY/Lisa X

Material Technical Data Sheet

Outstanding impact resistance, high durability, and an excellent surface finish make it well-suited for robust, functional parts. Strong material properties ensure reliable performance in demanding, long-term applications.

Compatible with: SUZY, LISA X *

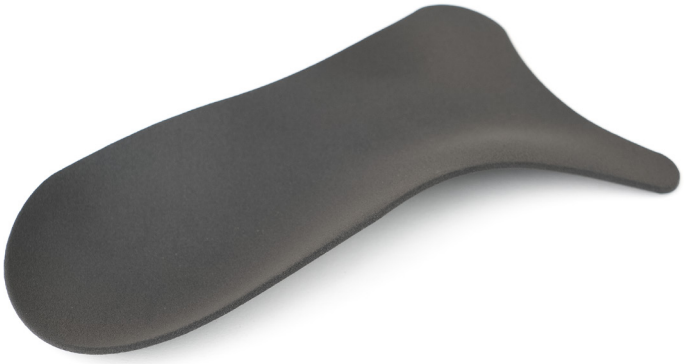


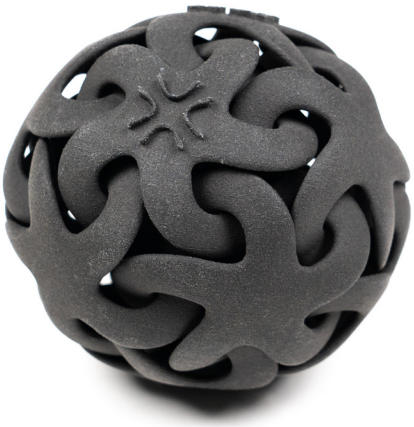
FEATURES

- high elongation
- good surface quality
- high impact resistance

APPLICATIONS

- orthopedic insoles





General properties			Test method
Material Type	Nylon 12	-	
Nitrogen needed	No	-	
Colour	Dark grey	-	internal
Refresh ratio[1]	30	%	internal
Bulk density powder	0.55	g/cm^3	PN-EN ISO 60:2011
Printout density	0.98	g/cm^3	PN-EN ISO 845:2010
Mean particle size D50	55	µm	ISO 13320

* soon available

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Mechanical properties			Test method
Tensile Strength (X direction)	35.67	MPa	PN-EN ISO 527-1:2012
Tensile Strength (Y direction)	35.71	MPa	PN-EN ISO 527-1:2012
Elongation at Break (X direction)	26.35	%	PN-EN ISO 527-1:2012
Elongation at Break (Y direction)	27.75	%	PN-EN ISO 527-1:2012
Impact strength X (Charpy - unnotched)	116	kJ/m^2	PN-EN ISO 179-1:2010
Impact strength Y (Charpy - unnotched)	117	kJ/m^2	PN-EN ISO 179-1:2010
Shore Hardness in D scale	73	-	PN-EN ISO 868:2005

Thermal properties			Test method
Powder melting temperature (10°C/min)	187	°C	PN-EN ISO 11357-3:2018
Softening point (Vicat A50)	95	°C	PN-EN ISO 306:2014-02

Roughness			Test method
Ra	Top surface: 12.51	µm	internal
Ra	Side surface: 14.29	µm	internal

Material Behavior and Powder Reuse

Fresh PR powder may exhibit slightly different behaviour compared to reused or blended material, which can affect surface quality. If visual imperfections such as an orange peel-like texture appear on printed parts, it is recommended to increase the bed temperature by approximately +0.5 °C compared to the previous build. This adjustment enhances layer adhesion and facilitates a smoother surface finish.

[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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