MATERIAL PA12

Datasheet for polyamide parts produced by Selective Laser Sintering

This whitish fine powder on the basis of polyamide 12 serves with its very well-balanced property profile a wide variety of applications. Laser-sintered parts made from material PA12 possess excellent material properties:

- high strength and stiffness
- good chemical resistance and excellent long-term constant behaviour
- bio compatible according to EN ISO 10993-1 and EU regulation No 10/2011
- approved for food contact in compliance with exception high alcoholic foodstuff

Typical applications of the material are fully functional plastic parts of highest quality. Due to the excellent mechanical properties the material is often used to substitute typical injection moulding plastics. The biocompatibility allows its use for various medical applications (e.g. surgical guides, protheses) and food contact applications.

Material PA12 which is processed in our ISO9001 can be polished, coloured and coated. PA12 can also be processed in our ISO13485 certified production environment. Products processed in ISO13485 cannot be polished, coloured and coated.

Part properties	Value	Unit
Part colour	White	-
Part density	0.93	g/cm^3
Minimum wall thickness	0.7	mm
Layer thickness	0.1 – 0.12	mm
Max. product size	675 x 366 x 545	mm
Tensile modulus	1650	MPa
Tensile strength XY	48	MPa
Tensile strength Z	42	MPa
Strain at break XY	18	%
Strain at break Z	4	%
Shore hardness	75	Shore D
Melting temperature	185 - 189	°C

Please note that all mentioned mechanical properties are optimum values according to manufacturer. Due to the layer by layer production process and the specific design of each individual product values may differ. *If specific properties and/or dimensions are critical, always contact us so we can inform you how to obtain required specifications!*

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