EON PA12

This fine powder EON PA12 on the basis of polyamide 12 serves with its very well-balanced property profile a wide variety of applications. Laser-sintered parts made from EON PA12 are highly detailed and feature excellent properties.

Mechanical Properties (1)	Typical Value (2)	Method
Ultimate Tensile Strength	50 MPa	ASTM D638 Type 1
Tensile Modulus	1850 MPa	
Elongation at Break (X/Y)	11 %	
Elongation at Break (Z)	6 %	
Flexural Strength	66 MPa	ASTM D790-15
Flexural Modulus	1600 MPa	
Notched Izod	32 J/m	ASTM D256-10

Thermal Properties (1)	Typical Value (2)	Method
Heat Deflection Temp. (1.8 MPa)	87° C	ASTM D648
Heat Deflection Temp. (0.45 MPa)	171° C	
Vicat Softening Temperature	175° C	ASTM D1525

Other Properties (1)	Typical Value (2)	Method
Water Absorption (printed part)	0,66 %	ASTM D570

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Samples printed with EON PA12 have been evaluated in accordance with ISO 10993-1:2018, and has passed the requirements for the following biocompatibility risks:

ISO Standard	Result
ISO 10993-5:2009	Non-Cytotoxic
ISO 10993-10:2010/(R)2014	Non-Irritant
ISO 10993-10:2010/(R)2014	Non-Sensitizer
ISO 10993-11:2017(Material Mediated Pyrogenicity)	Non-Pyrogenic
ISO 10993-11:2017 (Acute Systemic Toxicity)	No Evidence of Systemic Toxicity

Flammability Properties	
Testing Standard	**Rating**
UL 94 Section 7	HB *

* Thickness of the sample tested = 3,00mm

Notes:

1) Material properties may vary with part geometry, print orientation and temperature.

2) Parts were printed using a SLS printer with EON PA12. Parts were conditioned at 50% relative humidity and 23 °C for 7 days before testing.