EOS PA 2200 Performance 1.0

Polyamide 12

EOS GmbH

Message:

This whitish fine powder PA 2200 on the basis of polyamide 12 serves with its very well-balanced property profile a wide variety of applications.
Laser-sintered parts made from PA 2200 possess excellent material properties:
high strength and stiffness
good chemical resistance
excellent long-term constant behaviour
high selectivity and detail resolution
various finishing possibilities (e.g. metallisation, stove enamelling, vibratory grinding, tub colouring, bonding, powder coating, flocking)
bio compatible according to EN ISO 10993-1 and USP/level VI/121 °C
approved for food contact in compliance with the EU Plastics Directive 2002/72/EC (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 e.g. for prostheses, the high abrasion resistance allows e.g. the realisation of movable part connections.
100 µm layer thickness:
Performance is the parameter set of choice for parts with high demands on mechanical properties and fracture behaviour, especially when the part is going to be subjected to multiaxial loading in all three directions. Performance parts are characterized by the highest degree of isotropic strength and rigidity. The choice of 100 µm layer thickness results in fine resolution and also very high surface quality and detail resolution.

General Information	
Features	Biocompatible
	Food Contact Acceptable
	Good Abrasion Resistance
	Good Chemical Resistance
	High Rigidity
	High Stiffness
	High Strength
	Outstanding Surface Finish
Uses	Engineering Parts
	Medical/Healthcare Applications
	Prosthetics
	Prototyping
Agency Ratings	EU 2002/72/EC
	ISO 10993
	USP Class VI
Appearance	White
Forms	Powder
Processing Method	3D Printing, Laser Sintering/Melting

Physical	Nominal Value	Unit	Test Method
Density	0.930	g/cm³	Internal Method

Thickness - Layer	100.0	µm	
Hardness	**Nominal Value**	**Unit**	**Test Method**
Shore Hardness (Shore D, 15 sec)	75		ISO 868
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus [1]	1700	MPa	ISO 527-2
Tensile Stress [2]	50.0	MPa	ISO 527-2
Tensile Strain			
Break [3]	20	%	ISO 527-2
Break [4]	10	%	ISO 527-2
Flexural Modulus [5] (23°C)	1500	MPa	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength [6] (23°C)	4.8	kJ/m²	ISO 179/1eA
Charpy Unnotched Impact Strength [7] (23°C)	53	kJ/m²	ISO 179/1eU
Notched Izod Impact Strength (23°C)	4.4	kJ/m²	ISO 180/1A
Thermal	**Nominal Value**	**Unit**	**Test Method**
Vicat Softening Temperature	163	°C	ISO 306/B50
Melting Temperature	176	°C	ISO 11357
NOTE			
1.	X Direction		
2.	Z Direction		
3.	X Direction		
4.	Z Direction		
5.	X Direction		
6.	X Direction		
7.	X Direction		

The information and data on this page are provided by manufacturers and document providers. SHANGHAI SUSHENG assumes no legal liability. It is strongly recommended to verify all technical data with material suppliers before final material selection.All rights belong to the original authors. If any infringement occurs, please contact us immediately.

Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China