e-Manufacturing Solutions

PA 2200 Performance 1.0

PA12 EOS GmbH - Electro Optical Systems

Mechanical properties	Value	Unit	Test Standard
Izod notched impact strength (+23ÁC)	**4.4**	kJ/m¦	ISO 180/1A
Shore D hardness	**75**	-	ISO 7619-1

3D Data	Value	Unit	Test Standard
The properties of parts manufactured using additive manufacturing technology (e.g. laser sintering, stereolithography, Fused Deposition Modelling, 3D printing) are, due to their layer-by-layer production, to some extent direction dependent. This has to be considered when designing the part and defining the build orientation.			
Tensile Modulus			ISO 527
X Direction	**1700**	MPa	
Y Direction	**1700**	MPa	
Z Direction	**1700**	MPa	
Tensile Strength			ISO 527
X Direction	**50**	MPa	
Y Direction	**50**	MPa	
Z Direction	**50**	MPa	
Strain at break			ISO 527
X Direction	**20**	%	
Y Direction	**20**	%	
Z Direction	**10**	%	
Charpy impact strength (+23ÁC, X Direction)	**53**	kJ/m¦	ISO 179/1eU
Charpy notched impact strength (+23ÁC, X Direction)	**4.8**	kJ/m¦	ISO 179/1eA
Flexural Modulus (23ÁC, X Direction)	**1500**	MPa	ISO 178

Thermal properties	Value	Unit	Test Standard
Melting temperature (20ÁC/min)	**176**	ÁC	ISO 11357-1/-3
Vicat softening temperature (50ÁC/h 50N)	**163**	ÁC	ISO 306

Other properties	Value	Unit	Test Standard
Density (lasersintered)	**930**	kg/m¡	EOS Method
Powder colour (ac. to safety data sheet)	**White**	-	-

Characteristics

Processing
Laser Sintering, Rapid Prototyping

Delivery form
Powder

Chemical Resistance
General Chemical Resistance

Certifications
FDA approval acc. to USP Biological test (classification VI/121ÁC)

The data correspond to our knowledge and experience at the time of publication. They do not on their own represent a sufficient basis for any part design, neither do they provide any agreement about or guarantee the specific properties of a product or part or the suitability of a product or part for a specific application. It is the responsibility of the producer or customer of a part to check its properties as well as its suitability for a particular purpose. This also applies regarding the consideration of possible intellectual property rights as well as laws and regulations. The data are subject to change without notice as part of EOS' continuous development and improvement processes.