PA 3200 GF

PA12-GB — EOS GmbH - Electro Optical Systems

Mechanical properties	Value	Unit	Test Standard
Izod notched impact strength (+23°C)	**4.2**	kJ/m²	ISO 180/1A
Izod impact strength (+23°C)	**21**	kJ/m²	ISO 180/1U
Shore D hardness	**80**	-	ISO 7619-1
Ball indentation hardness	**98**	MPa	ISO 2039-1

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	**3200**	MPa	
Y Direction	**3200**	MPa	
Z Direction	**2500**	MPa	
Tensile Strength			ISO 527
X Direction	**51**	MPa	
Y Direction	**51**	MPa	
Z Direction	**47**	MPa	
Strain at break			ISO 527
X Direction	**9**	%	
Y Direction	**9**	%	
Z Direction	**5.5**	%	
Charpy impact strength (+23°C, X Direction)	**35**	kJ/m²	ISO 179/1eU
Charpy notched impact strength (+23°C, X Direction)	**5.4**	kJ/m²	ISO 179/1eA
Flexural Modulus (23°C, X Direction)	**2900**	MPa	ISO 178
Flexural Strength (X Direction)	**73**	MPa	ISO 178
Temp. of deflection under load			ISO 75-1/-2
1.80 MPa, X Direction	**96**	°C	
0.45 MPa, X Direction	**157**	°C	

Thermal properties	Value	Unit	Test Standard
Melting temperature (20°C/min)	**176**	°C	ISO 11357-1/-3
Temp. of deflection under load			ISO 75-1/-2
1.80 MPa	**96**	°C	
0.45 MPa	**157**	°C	
Vicat softening temperature			ISO 306
50°C/h 10N	**179**	°C	
50°C/h 50N	**166**	°C	

Other properties	Value	Unit	Test Standard
Density (lasersintered)	**1220**	kg/m³	EOS Method
Powder colour (ac. to safety data sheet)	**White**	-	-

Characteristics

Processing

Laser Sintering, Rapid Prototyping

Features

Tribologic Grade

Delivery form

Powder