

PA 2202 black

PA12

EOS GmbH - Electro Optical Systems

Product Texts

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PA 2202 black is a pigment-filled polyamide 12 powder for manufacturing laser sintered parts that are black throughout.

All other part properties are comparable to those of PA 2200. Typical applications for the material are fully functional parts in design quality subject to high mechanical or thermal loads. The parts are black and often look better in technical areas than white parts. As this colour is throughout, scratches or subsequent holes do not degrade the appearance. The parts are also less susceptible to soiling, as soiling is less conspicuous against the black background. The black colour can also be used to differentiate the parts from parts in other colours to prevent confusion.

Mechanical properties	Value	Unit	Test Standard
Shore D hardness (15s)	75	-	ISO 868

3D Data	Value	Unit	Test Standard
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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 527-1/-2
X Direction	1850	MPa	
Y Direction	1850	MPa	
Z Direction	1800	MPa	
Tensile Strength			ISO 527-1/-2
X Direction	50	MPa	
Y Direction	50	MPa	
Z Direction	48	MPa	
Strain at break			ISO 527-1/-2
X Direction	12	%	
Y Direction	12	%	
Z Direction	6	%	
Flexural Modulus (23°C, X Direction)	1350	MPa	ISO 178
Flexural Strength (X Direction)	53	MPa	ISO 178
Temp. of deflection under load			ISO 75-1/-2
1.80 MPa, X Direction	75	°C	
0.45 MPa, X Direction	154	°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	75	°C	
0.45 MPa	154	°C	

Other properties	Value	Unit	Test Standard
Density (lasersintered)	980	kg/m ³	EOS Method
Powder colour (ac. to safety data sheet)	Black	-	-

Characteristics

Processing

Laser Sintering, Rapid Prototyping

Special Characteristics

Heat stabilized or stable to heat

Delivery form

Powder