POLYMER SOLUTIONS

PA 1102 Black

Material Data Sheet

PA 1102 BLACK

Product Description

PA 1102 black is a PA 11 based powder for processing in laser sintering systems. The black, additively manufactured parts are characterized by high impact resistance and elongation at break. They do not splinter even under high mechanical loads. Due to the mass-dyed polyamide 11 powder, parts made from PA 1102 black have a uniform black color and are therefore particularly suitable for visible areas that are subject to abrasive wear. As all other PA 11 powders at EOS, PA 1102 black is based on renewable resources (castor oil).

MAIN CHARACTERISTICS

- Color stability
- High ductility
- High impact resistance
- From renewable sources

TYPICAL APPLICATIONS

- Impact-resistant applications, which may not splinter when applied with a load, e.g, coverings or housings
- Functional parts that require a high elongation at break, e.g., clips or buckles
- Eye wear in the consumer goods industry

MECHANICAL PROPERTIES	DRY / CONDITIONED	UNIT	TEST STANDARD
Tensile Modulus			ISO 527-1/-2
X Orientation	1560 / -	MPa	
Y Orientation	1560 / -	MPa	
Z Orientation	1610 / -	MPa	
Tensile Strength			ISO 527-1/-2
X Orientation	48 / -	MPa	
Y Orientation	48 / -	MPa	
Z Orientation	48 / -	MPa	
Nominal Strain at Break			ISO 527-1/-2
X Orientation	30 / -	%	
Y Orientation	30 / -	%	
Z Orientation	15 / -	%	
Charpy Impact Strength (+23°C)			ISO 179/1eU
X Orientation	N / -	kJ/m²	
Y Orientation	N / -	kJ/m²	
Charpy Notched Impact Strength (+23°C)			ISO 179/1eA
X Orientation	7.8 / -	kJ/m²	
Y Orientation	7.8 / -	kJ/m²	
Z Orientation	6.5 / -	kJ/m²	

THERMAL PROPERTIES	DRY / CONDITIONED	UNIT	TEST STANDARD
Melting Temperature	201	°C	ISO 11357-1/-3

OTHER PROPERTIES	VALUE	UNIT	TEST STANDARD
Density	0.99	g/cm³	EOS Method
Powder Color	black	-	-
Components Color	black	-	-

HEADQUARTERS

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