CarbonMide

PA12-CF

3D Data

	Value	Unit	Test Standard
The properties of parts manufactured using additive manufacturing technology (like e.g. laser sintering, stereolithography, fused deposition modelling, 3D printing) are, due to the ray-by-ray production, to some extent dependent. This has to be considered when designing the part and defining the requirements.			
Tensile Modulus			ISO 527
X Direction	6100	MPa	
Y Direction	3400	MPa	
Z Direction	2200	MPa	
Tensile Strength			ISO 527
X Direction	72	MPa	
Y Direction	56	MPa	
Z Direction	25	MPa	
Strain at break			ISO 527
X Direction	4.1	%	
Y Direction	6.3	%	
Z Direction	1.3	%	
Charpy impact strength			ISO 179/1eU
+23 °C, X Direction	20.5	kJ/m²	
+23 °C, Y Direction	27.5	kJ/m²	
+23 °C, Z Direction	5.5	kJ/m²	
Charpy notched impact strength			ISO 179/1eA
+23 °C, X Direction	5.3	kJ/m²	
+23 °C, Y Direction	4.4	kJ/m²	
+23 °C, Z Direction	2.1	kJ/m²	
Volume resistivity			
X Direction	0.0463	Ohm·m	IEC 62631-3-1
Y Direction	0.107	Ohm·m	IEC 60093
Z Direction	3.08	Ohm·m	IEC 60093

Thermal properties

	Value	Unit	Test Standard
Melting temperature (20 °C/min)	176	°C	ISO 11357-1/-3

Other properties

	Value	Unit	Test Standard
Density (as sintered)	1040	kg/m³	EOS Method

Characteristics

Processing
Laser Sintering, Rapid Prototyping

Special Characteristics
Increased electrical conductivity