

Material datasheet CF/PEKK

Composite Filament theoretical	Value	Test method
Carbon Fiber: AS4 Fiber Volume Content: 60%		
Density (g/cm ³)	1.58	-
Tensile Modulus (GPa)	137	ASTM D 3039
Tensile Strength (MPa)	2350	ASTM D 3039
Flexural Modulus (GPa)	118	ASTM D 790
Flexural Strength (MPa)	1655	ASTM D 790
In-plane Shear Modulus (GPa)	5.2	ASTM D 3518
In-plane Shear Strength (MPa)	145	ASTM D 3518
Tg (°C)	159	DSC
Tm (°C)	337	DSC

Neat Plastic Filament	Value	Test method
Density (g/cm ³)	1.29	-
Tensile Modulus (GPa)	3.8	ISO 527-1BA
Tensile Strength (MPa)	110	ISO 527-1BA
Elongation at Yield (%)	5.2	ISO 527-1BA
Elongation at Break (%)	20	ISO 527-1BA
Tg (°C)	162	DSC
Tm (°C)	331	DSC

The information contained in this document was established through tests under controlled conditions. No warranty is implied regarding the accuracy of the information. The end user is in all cases liable to the use, application, handling or processing of the products described.

Material datasheet CF/PA12

Composite Filament printed and consolidated	Value	Test method
Carbon Fiber: AS4 Fiber Volume Content: 60%		
Density (g/cm ³)	1.46	-
Tensile Modulus (GPa)	133	ISO 527-5
Tensile Strength (MPa)	1820	ISO 527-5
Flexural Modulus (GPa)	110	ISO 14125
Flexural Strength (MPa)	768*	ISO 14125
In-plane Shear Modulus (GPa)	2	ISO 14129
In-plane Shear Strength (MPa)	45	ISO 14129
Tg (°C)	40	DSC
Tm (°C)	178	DSC

Neat Plastic Filament	Value	Test method
Density (g/cm ³)	1.02	-
Tensile Modulus (GPa)	1.4	ISO 527
Tensile Strength (MPa)	43	ISO 527
Stress at Break (MPa)	50	ISO 527
Elongation at Yield (%)	260	ISO 527
Elongation at Break (%)	5	ISO 527
Tg (°C)	39	ISO 11357-1/-2
Tm (°C)	171	ISO 11357-1/-3

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