

Composite Filament theoretical

Carbon Fiber: AS4

Fiber Volume Content: 60%

	Value	Test method
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
T _g (°C)	159	DSC
T _m (°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
T _g (°C)	162	DSC
T _m (°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.

Composite Filament printed and consolidate

Carbon Fiber: AS4

Fiber Volume Content: 60%

	Value	Test method
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
T _g (°C)	40	DSC
T _m (°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 Break (%)	260	ISO 527
Elongation at Yield (%)	5	ISO 527
T _g (°C)	39	ISO 11357-1/-2
T _m (°C)	171	ISO 11357-1/-3

* will be retested

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.