

ULTEM® AM9085F FILAMENT

BY MINIFACTORY ULTRA 3D PRINTER

SABIC's ULTEM® AM9085F filament is made from ULTEM® 9085 resin (Polyetherimide) which is an amorphous thermoplastic that is strong, lightweight and flame-retardant. It is ideal for the aerospace & automotive industries due to its high strength-to weight ratio.



MECHANICAL	TEST METHOD	VALUE		
		XY	XZ	ZX
Tensile Strength, Ultimate (Type 1, 0.125", 0.2"/min)	ASTM D638	74 ± 4 MPa	80 ± 4 MPa	38 ± 3 MPa
Tensile Modulus (Type 1, 0.125", 0.2"/min)	ASTM D638	2,490 MPa	2,590 MPa	2,430 MPa
Tensile Elongation at Break (Type 1, 0.125", 0.2"/min)	ASTM D638	4,3 %	7,1 %	1,7 %

MECHANICAL	TEST METHOD	VALUE	
		XY Orientation	ZX Orientation
Flexural Strength (Method 1, 0.05"/min)	ASTM D790	115 MPa	60 MPa
Flexural Modulus (Method 1, 0.05"/min)	ASTM D790	2,470 MPa	2,110 MPa
Flexural Strain at Break (Method 1, 0.05"/min)	ASTM D790	no break	3 %
Flexure strain (Extension) at Tensile strength	ASTM D790	7,3 %	-
IZOD Impact, notched (Method A, 23 °C)	ASTM D256	134 J/m	n.a.
IZOD Impact, un-notched (Method A, 23 °C)	ASTM D256	989 J/m	135 J/m
Compressive Strength, Yield (Method 1, 0.05"/min)	ASTM D695	100 MPa	103 MPa

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PHYSICAL	TEST METHOD	VALUE
Specific Gravity	ASTM D792	1.34g/cm ³
Water Absorption, 24 hours	ASTM D570	0,17%

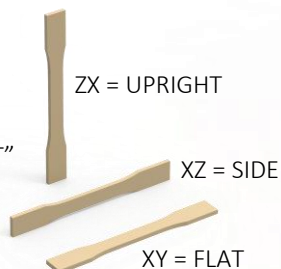
THERMAL	TEST METHOD	VALUE
Glass Transition Temperature (T _g)	ASTM D7426-08	187°C
HDT, 1.82Mpa, 3,2mm	ASTM D648	175°C
Coefficient of Thermal Expansion	ASTM E831	57,1µm/m-°C
UL94 Flame Class Rating	UL94	V0 -

ELECTRICAL	TEST METHOD	VALUE
Volume Resistivity, XY	ASTM D257	1.07E+15Ohm-cm
Dielectric Constant – 1000MHz, (23 °C)	ASTM D150	2,52
Dissipation Factor - 1000MHz, (23 °C)	ASTM D150	0.004

PRINTING PARAMETERS	VALUE
Print Speed	25mm/s
Infill % / Infill Angle	100% / 45°/-45°
Layer Height	0,25mm
Material Pre-Drying	120°C / 24h

ORIENTATION:

- XY "FLAT"
- XZ "SIDE"
- ZX "UPRIGHT"



Kampusranta 9
60320 Seinäjoki
Finland
www.minifactory.fi

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