

ULTEM® AM1010F FILAMENT

BY MINIFACTORY ULTRA 3D PRINTER

SABIC'S ULTEM® AM1010F filament is made from ULTEM® 1010 resin (polyetherimide) which is an amorphous, high performance polymer that combines excellent properties and exceptional dimensional stability.



MECHANICAL	TEST METHOD	VALUE		
		XY	XZ	ZX
Tensile Strength, Ultimate (Type 1, 0.125", 0.2"/min)	ASTM D638	94 ± 5 MPa	92 ± 3 MPa	46 ± 5 MPa
Tensile Modulus (Type 1, 0.125", 0.2"/min)	ASTM D638	3,140 MPa	3,100 MPa	2,670 MPa
Tensile Elongation at Break (Type 1, 0.125", 0.2"/min)	ASTM D638	5,0 %	4,2 %	2,0 %

MECHANICAL	TEST METHOD	VALUE	
		XY Orientation	ZX Orientation
Flexural Strength (Method 1, 0.05"/min)	ASTM D790	154 MPa	71 MPa
Flexural Modulus (Method 1, 0.05"/min)	ASTM D790	3,220 MPa	2,530 MPa
Flexural Strain at Break (Method 1, 0.05"/min)	ASTM D790	no break	3 %
Flexure strain (Extension) at Tensile strength	ASTM D790	7,6 %	-
IZOD Impact, notched (Method A, 23 °C)	ASTM D256	68 J/m	17 J/m
IZOD Impact, un-notched (Method A, 23 °C)	ASTM D256	548 J/m	149 J/m
Compressive Strength, Yield (Method 1, 0.05"/min)	ASTM D695	140 MPa	139 MPa

ULTEM® AM1010F FILAMENT

BY MINIFACTORY ULTRA 3D PRINTER

PHYSICAL	TEST METHOD	VALUE
Specific Gravity	ASTM D792	1.27g/cm ³
Water Absorption, 24 hours	ASTM D570	0,25%

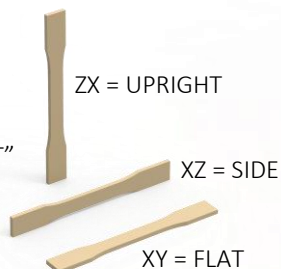
THERMAL	TEST METHOD	VALUE
Glass Transition Temperature (T _g)	ASTM D7426-08	217°C
HDT, 1.82Mpa, 3,2mm	ASTM D648	210°C
Thermal Conductivity	ASTM C177	0,22W/m-°C
Coefficient of Thermal Expansion	ASTM E831	51µm/m-°C
UL94 Flame Class Rating	UL94	V0 -

ELECTRICAL	TEST METHOD	VALUE
Volume Resistivity, XY	ASTM D257	6.24E+14Ohm-cm
Dielectric Constant – 1,9GHz, (23 °C)	ASTM D150	2,9
Dissipation Factor - 1,9GHz, (23 °C)	ASTM D150	0.003

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"



MINIFACTORY 

Kampusranta 9
60320 Seinäjoki
Finland
www.minifactory.fi

ULTEM® is a trademark of SABIC or its subsidiaries or affiliates

The information presented are typical values intended for reference and comparison purposes only. They should not be used for design specifications or quality control purposes. The performance characteristics of these materials may vary according to application, operating conditions, or end use. Each user is responsible for determining that the material is safe, lawful, and technically suitable for the intended application. miniFactory makes no warranties of any kind, express or implied, including, but not limited to, the warranties of merchantability, fitness for a particular use, or warranty against patent infringement.