

ULTEM 1010

Product Description

ULTEM 1010 is a high-performance thermoplastic, PolyEtherImide (PEI), which offers excellent strength, thermal stability and the ability to withstand steam autoclaving. ULTEM 1010 offers the high heat resistance, chemical resistance and tensile strength and is ideal for aerospace, automotive applications and other areas.

PHYSICAL PROPERTIES	TEST METHOD	UNITS	TYPICAL VALUE
Density	ASTM D792	g/cm ³	1.27
Glass transition temperature	DSC, 10°C /min	°C	215
Heat Deflection Temperature	ASTM D648, 0.45MPa, 6.4mm	°C	207
Flame Classification	UL 94	—	V0(1.5mm), V0, 5VA(3mm)
Water Absorption	ASTM D570, 24hours	%	0.25
	ASTM D570, Equilibrium, 23°C	%	1.25
Hardness	Rockwell M	—	109

MECHANICAL PROPERTIES	TEST METHOD	UNITS	TYPICAL VALUE
Tensile strength	ASTM D638	MPa	90
Young's modulus	ASTM D638	MPa	3427
Elongation at break	ASTM D638	%	3.3
Flexural strength	ASTM D790	MPa	126
Flexural modulus	ASTM D790	MPa	3197
Impact strength	ASTM D256, notched	J/m	32

Note:

1. All testing specimens were printed using a FUNMAT HT 3D PRINTER under the following conditions:
Printing temperature = 370 °C, printing speed = 45 mm/s, number of shells = 2, and 100% infill.

Disclaimer

The typical values presented in this document are intended for reference and comparison purposes only. They should not be used for design specifications or quality control purposes. Actual values may vary significantly with printing conditions. End-use performance of printed parts properties can be impacted by, but not limited to, part design, environmental conditions, printing conditions, etc. Product specifications are subject to change without notice.

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