PEI – ULTEM 1010

Polyether Imide (PEI) Ultem **1010** is an amorphous, amber to transparent thermoplastics with a glass transition temperature (Tg) of 217 °C and performs in continuous use up to 170 °C. This inherently flame retardant plastic has UL94 VO and 5VA ratings. Our PEI Filament has unique properties because it does not come into contact with water during the production process and is directly packaged in a vacuum packaging. These properties make the PEI Filament particularly suitable for usage in FDM and FFF 3D printers. The material has an excellent adhesion between layers which results in great improvement of the impact resistance, strength, durability and the printing process.

FILAMENT PROPERTIES

			Typical Values
PROPERTIES	**TEST METHODS**	**UNITS**	**PEI 1010**
Diameter	INS-6712	mm	1.75 ± 0.05
Specific gravity	ISO 1183	g/cm3	1.27
Moisture rate	INS-6711	%	< 1
MFI(@360°C – 5 kg)	ISO 1133	g/10min	23
Glass transition Tg	ISO 11357	°C	217
Melting temperature		°C	350- 400
	TEST METHOD	**UNITS**	**PEI 9085**
Tensile Strength	ISO 527	Mpa	50- 60
Tensile Elongation	ISO 527	%	3
Tensile Modulus	ISO 527	GPa	2.5-3.0
Flexural Strength	ISO 178	MPa	112
Flexural Modulus	ISO 178	GPa	2.6
Heat Distortion Temp. 0.45 Mpa	ISO 75	°C	200
Continuous Service Temp.	UL 746B	°C	180
Flammability Behaviour	UL	Rating	(V-0) @1.5mm

PRINT RECOMMANDATION	PEI 9085
Nozzle Temp	360 to 380 °C
Bed Temp	135 °C
Print Speed	25 to 30 mm/sec
Nozzle	0.4 mm/
Infill	100 % +/- 45
Bed Adhesion	PEI

Disclaimer: The testing has been done in house so we extend no warranties what so ever, expressed or implied, including but not limited to, any implied fitness for any particular purpose. From the moment the product is shipped it is beyond our control. The information in this document is believed to be correct at the time of writing. However, handling, processing, settings, the type of 3D printer, slicing and other variables are completely up to the user. The method through which the product is used can be varied. It is up for the customer to determine how it is 3D printed and whether it is fit for purpose or suited to a particular application.

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