

Ultem® GF30

Polyetherimide (PEI + glass-fibre)

PEI is an amorphous high-performance thermoplastic, reinforced with glass-fibre. Exhibiting an exceptional strength-to-weight ratio, higher rigidity, dimensional stability, and heat resistance (over unreinforced PEI).

Properties	Test method	Unit	Value
Mechanical			
Tensile strength	ASTM D638	PSI	17000
Elongation at break	ASTM D638	%	3
Modulus of elasticity (tensile)	ASTM D638	KSI	800
Modulus of elasticity (flexural)	ASTM D790	KSI	850
Notch impact strength	ASTM D256	KJ / m ²	1
Flexural strength	ASTM D790	psi	27000
Compressive strength	ASTM D695	psi	32000
Compressive modulus	ASTM D695	psi	625000
Rockwell hardness	ASTM D785	M	114
Rockwell hardness	ASTM 2240	R	127
Ball indentation hardness	-	-	-
Thermal			
Melting temperature	-	°C	-
Glass transition temperature (Tg)	-	°C	-
Thermal conductivity	ASTM C117	x 10 ⁻⁴ cal/cm-sec-°C	5.37
Coef. of linear thermal expansion	-	-	-
Long term service temperature	See note *	°C	-50 → 170
Short term service temperature	See note *	°C	-
Heat deflection temperature	ASTM D648	°C at 264 psi	210
Flammability	UL 94	-	V0
Flammability (oxygen index)	-	%	-
Electrical			
Dielectric constant at 1MHz	ASTM D150	10 ⁶ Hz	3.7
Dissipation factor at 1MHz	ASTM D150	10 ⁶ Hz	0.0015
Volume resistivity	-	-	-
Surface resistivity	ASTM D257	Ω	≥ 10 ¹³
Dielectric strength	ASTM D149	V / mil	770
Tracking resistance (CTI)	-	-	-
Additional Data			
Density	ASTM D792	g / cm ³	1,51
Water absorption (saturation)	ASTM D570	%	0,9
Humidity absorption (saturation)	-	%	-
Food compliance	EEC	-	No
Food compliance	FDA	-	No
Coefficient of Friction (pin-on-disk)	-	-	-
Shapes (inches)	Rod (0,375" → 3" Ø)	-	-
Colour	Brown (Tan)	-	-

- **Glass filled Ultem®** allows for high static loads over long periods (even at high temperature conditions).

The conditioned material values stated are average test results. The data provides information about our products and offers a guide for material selection. This does not provide an assurance of specific properties or the products suitability for a particular application.

It solely remains the customers responsibility to test and assess the suitability and compatibility of Plastim's products for its intended applications, processes and uses. The customer undertakes all liability in respect of the application, processing or use of the aforementioned information or product.

- * Long term service temperature are based on the thermal ageing of the polymer by oxidation, resulting in a decrease in mechanical capabilities
- * Short term service temperature only applies to very low mechanical stress for a very limited time only.

Properties can vary depending on the raw shape selected and the degree of crystallisation. The actual property values of a finished product may differ from the indicated values stated.