



## Material: PEI 1000 (Ultem®)

PEI 1000 stock shapes are produced from ULTEM® resin. High max allowable service temperatures, high strength and stiffness, excellent hydrolysis resistance, dimensional stability and resistance against high energy radiation (gamma and x-rays). Good electrical insulating and dielectric properties.

### Technical Specification

Property	Test Method	Units	Value
Colour	-	-	Amber/Translucent
Density	ISO 1183	g/cm <sup>3</sup>	1.29
Water Absorption - saturation in air (23°C/50%RH)	-	%	0.75
Water Absorption - saturation in water (23°C)	-	%	1.35
Tensile stress at yield/break* <sup>1</sup>	ISO 527	Mpa	105/-
Tensile modulus of elasticity* <sup>1</sup>	ISO 527	Mpa	3400
Tensile strain at break* <sup>1</sup>	ISO 527	%	10
Impact - Charpy	179/1eU	kJ/m <sup>2</sup>	No break
Impact – Charpy notched	179/1eA	kJ/m <sup>2</sup>	3.5
Hardness	Rockwell ISO 2039-2	-	M114
Glass transition temperature	-	°C	215
Max service temp in air short periods	-	°C	200
Max service temp continuously for 20000hrs	-	°C	170
Linear thermal expansion coefficient (23-100°C)	-	m/(m.k)	45x10 <sup>-6</sup>
Linear thermal expansion coefficient (23-150°C)	-	m/(m.k)	45x10 <sup>-6</sup>
Linear thermal expansion coefficient (+150°C)	-	m/(m.k)	45x10 <sup>-6</sup>
Thermal Conductivity	-	W/(K.m)	0.22
Flammability (3mm thickness)	-	-	VO
Electric Strength	ISO 60243	kV/mm	27
Volume resistivity* <sup>1</sup>	ISO 60093	Ohm.cm	10 <sup>18</sup>
Surface resistivity* <sup>1</sup>	ISO 60093	Ohm	10 <sup>17</sup>
* <sup>1</sup> Measured on dry test specimens (where applicable)			

#### Availability:

Please call for further details.

#### Applications:

Medical devices and analytical instrumentation

Tel: 01604 700 880

Web: [www.abgrp.co.uk](http://www.abgrp.co.uk)

Email: [sales@abgrp.co.uk](mailto:sales@abgrp.co.uk)

The data shown are typical values and are not intended to represent specifications. Their aim is to guide the user toward a material choice.

Not all material sizes shown within the availability programme of this data sheet are available as standard.

Please contact ABG Rubber and Plastics Ltd for further details.