

QUADRANT EPP PRODUCT DATA SHEET

PC 1000

June 2001

Engineering Polycarbonate (PC)

PC 1000 is a strong amorphous thermoplastic (no melt point - a significant temperature is the glass transition temperature, T_g), with excellent mechanical strength, creep resistance and impact strength.

- High mechanical strength
- Physiologically inert
- Good stiffness retention over a wide range of temperatures
- Very high impact strength (even at low temperatures)
- Good creep resistance
- Very good dimensional stability

Common applications: Safety glazing; Insulating parts for electrical engineering; Components for the food, medical and pharmaceutical industries.

Delivery Programme

Rod 1m & 3m long			
Diameter (mm):	6 (Min)	200 (Max)	
Plate 620mm wide			
Thickness (mm):	15 (Min)	50 (Max)	
Length:	1m & 3m		

Technical Specification

Property	ISO Methods	Units	PC 1000
Colour	-	-	Translucent
Density	1183	g/cm ³	1.20
Water absorption			
Saturation in air (23°C / 50% RH)	-	%	0.15
Saturation in water (23°C)	-	%	0.35
Tensile strength* ¹	527	N/mm ²	70
Tensile modulus of elasticity* ¹	527	N/mm ²	2400
Elongation at break* ¹	527	%	>50
Impact - Charpy* ¹	179/1eU	kJ/m ²	no break
Impact - Izod notched* ¹	180/2A	kJ/m ²	9
Hardness	Rockwell	-	M75
	Shore D	-	-
Melt point	-	°C	$T_g = 150$
Max allowable service temp in air			
for short periods	-	°C	135
continuously for 20,000hrs	-	°C	115
Linear thermal expansion coefficient	-	K ⁻¹ x 10 ⁻⁵	6.5
Thermal conductivity	-	W/(K.m)	0.21
Flammability* ² (6mm thickness)	-	-	HB
Volume resistivity* ¹	IEC93	Ohm.cm	>10 ¹⁵
Dielectric strength* ¹	IEC243	kV/mm	28
Outside applications - UV resistance	-	-	C
Acids - strong (pH < 3)	-	-	C
Alkalis - strong (pH > 11)	-	-	B
Chlorinated hydrocarbons	-	-	A
Hot water	-	-	B

Distributor

**Gilbert Curry
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'A' - Acceptable service; 'B' - Limited service; 'C' - Unacceptable.

*¹ Measured on dry test specimens (where applicable)

*² Tests completed by Quadrant EPP, using UL test methods

Not all material sizes shown within the delivery programme section of this data sheet are available as standard. Please contact Quadrant EPP UK Ltd for further details.

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