

Quadrant EPP PC 1000

Polycarbonate

Quadrant Engineering Plastic Products

Message:

Quadrant EPP PC 1000 is a Polycarbonate (PC) product. It is available in Europe. Primary characteristic: flame rated.

General Information			
Appearance	Clear/Transparent		
	Natural Color		
	Translucent		
Forms	Disc		
	Preformed Parts		
	Rod		

Physical	Nominal Value	Unit	Test Method
Density	1.20	g/cm ³	ISO 1183
Water Absorption			ISO 62
23°C, 24 hr, 3.00 mm	0.18	%	
Saturation, 23°C	0.35	%	
Equilibrium, 23°C, 50% RH	0.15	%	
Water Absorption			ISO 62
23°C, 3.00 mm ¹	13.0	mg	
23°C, 3.00 mm ²	0.33	%	
23°C, 3.00 mm ³	23.0	mg	
Service Temperature - Minimum	-60	°C	

Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale, 10.0 mm)	75		ISO 2039-2
Ball Indentation Hardness (10.0 mm)	120	MPa	ISO 2039-1

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus ⁴	2400	MPa	ISO 527-2/1B/1
Tensile Stress ⁵ (Yield)	70.0	MPa	ISO 527-2/1B/20
Tensile Strain ⁶ (Break)	> 50	%	ISO 527-2/1B/20
Tensile Creep Modulus (1000 hr)	17.0	MPa	ISO 899-1
Compressive Stress			ISO 604/1
5% Strain	72.0	MPa	
2% Strain	35.0	MPa	
1% Strain	18.0	MPa	

Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength	9.0	kJ/m ²	ISO 179/1eA

Charpy Unnotched Impact Strength	No Break		ISO 179/1eU
Notched Izod Impact Strength ⁷	9.0	kJ/m ²	ISO 180/2A
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (1.8 MPa, Unannealed)	130	°C	ISO 75-2/A
Continuous Use Temperature			
-- ⁸	115	°C	
-- ⁹	125	°C	
-- ¹⁰	135	°C	
Glass Transition Temperature	150	°C	
CLTE - Flow			
23 to 100°C	6.5E-5	cm/cm/°C	
23 to 150°C	6.5E-5	cm/cm/°C	
Thermal Conductivity (23°C)	0.21	W/m/K	
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity ¹¹	> 1.0E+15	ohms	IEC 60093
Volume Resistivity ¹²	> 1.0E+15	ohms·cm	IEC 60093
Electric Strength ¹³ (1.00 mm, in Oil)	28	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
100 Hz ¹⁴	3.00		
1 MHz ¹⁵	3.00		
Dissipation Factor			IEC 60250
100 Hz ¹⁶	1.0E-3		
1 MHz ¹⁷	8.0E-3		
Comparative Tracking Index ¹⁸	350	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
3.00 mm	HB		
6.00 mm	HB		
Oxygen Index	25	%	ISO 4589-2
NOTE			
1.	Weight, 24 hrs		
2.	96 hrs		
3.	Weight, 96 hrs		
4.	Conditioned		
5.	Conditioned		
6.	Conditioned		
7.	Conditioned		
8.	20000 hrs		
9.	5000 hrs		
10.	Short periods		
11.	Conditioned		

12.	Conditioned
13.	Conditioned
14.	Conditioned
15.	Dry
16.	Dry
17.	Conditioned
18.	Conditioned

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