SABIC® PC PC0703R resin

Polycarbonate

SABIC Innovative Plastics Asia Pacific

Message:

PC0703R resin is a low flow (MFR = 7 at 300°C/1.2kg), heat and UV stabilized, polycarbonate product with mold release designed for use in the extrusion market. It is available exclusively at www.sabicpc.com

General Information	
UL YellowCard	E45329-101295405
Additive	heat stabilizer demoulding UV stabilizer
Features	Low liquidity
RoHS Compliance	RoHS compliance
Processing Method	Profile extrusion molding Injection molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.20	g/cm³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	7.0	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	6.50	cm³/10min	ISO 1133
Molding Shrinkage - Flow			Internal method
-- [1]	0.50 - 0.70	%	Internal method
3.20 mm	0.50 - 0.70	%	Internal method
Water Absorption			
Saturated, 23°C	0.35	%	ISO 62
Equilibrium, 23°C	0.35	%	ASTM D570
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness			
Class r	120		ASTM D785
R scale	120		ISO 2039-2
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus			
-- [2]	2350	MPa	ASTM D638
--	2350	MPa	ISO 527-2/1
Tensile Strength			
Yield [3]	63.0	MPa	ASTM D638
Yield	63.0	MPa	ISO 527-2/50
Tensile Elongation			

Yield [4]	6.0	%	ASTM D638
Yield	6.0	%	ISO 527-2/50
Fracture [5]	> 70	%	ASTM D638
Fracture	> 70	%	ISO 527-2/50
Flexural Modulus			
50.0mm span [6]	2300	MPa	ASTM D790
-- [7]	2300	MPa	ISO 178
Flexural Stress			
--	90.0	MPa	ISO 178
Yield, 50.0mm span [8]	90.0	MPa	ASTM D790
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact			
23°C	900	J/m	ASTM D256
-30°C [9]	12	kJ/m²	ISO 180/1A
23°C [10]	70	kJ/m²	ISO 180/1A
Unnotched Izod Impact			
23°C	No Break		ASTM D4812, ISO 180/1U
-30°C [11]	No Break		ISO 180/1U
Instrumented Dart Impact (23°C, Energy at Peak Load)	65.0	J	ASTM D3763
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			
0.45 MPa, unannealed, 3.20mm	138	°C	ASTM D648
0.45 MPa, unannealed, 64.0mm span [12]	138	°C	ISO 75-2/Bf
1.8 MPa, unannealed, 3.20mm	127	°C	ASTM D648
1.8 MPa, unannealed, 64.0mm span [13]	127	°C	ISO 75-2/Af
Vicat Softening Temperature	144	°C	ISO 306/B50, ASTM D1525 [14]
Ball Pressure Test (125°C)	Pass		IEC 60695-10-2
CLTE - Flow			
-40 to 95°C	7.0E-5	cm/cm/°C	ASTM E831
23 to 80°C	7.0E-5	cm/cm/°C	ISO 11359-2
Thermal Conductivity	0.20	W/m/K	ASTM C177, ISO 8302
Electrical	**Nominal Value**	**Unit**	**Test Method**
Volume Resistivity	> 1.0E+15	ohms·cm	ASTM D257, IEC 60093
Dielectric Strength (1.60 mm)	27	kV/mm	ASTM D149, IEC 60243-1
Dielectric Constant			ASTM D150, IEC 60250
60 Hz	3.00		ASTM D150, IEC 60250
1 MHz	3.00		ASTM D150, IEC 60250
Dissipation Factor			ASTM D150, IEC 60250
60 Hz	1.0E-3		ASTM D150, IEC 60250
1 MHz	0.010		ASTM D150, IEC 60250
Flammability	**Nominal Value**	**Unit**	**Test Method**

Flame Rating (1.60 mm)	V-2		UL 94
Optical	**Nominal Value**	**Unit**	**Test Method**
Refractive Index	1.586		ASTM D542, ISO 489
Transmittance (2540 µm)	88.0 - 90.0	%	ASTM D1003
Haze (2540 µm)	< 0.80	%	ASTM D1003
Injection	**Nominal Value**	**Unit**	
Drying Temperature	120	°C	
Drying Time	2.0 - 4.0	hr	
Suggested Max Moisture	0.020	%	
Hopper Temperature	60.0 - 80.0	°C	
Rear Temperature	270 - 300	°C	
Middle Temperature	280 - 310	°C	
Front Temperature	290 - 320	°C	
Nozzle Temperature	280 - 310	°C	
Processing (Melt) Temp	290 - 320	°C	
Mold Temperature	80.0 - 120	°C	
Extrusion	**Nominal Value**	**Unit**	
Drying Temperature	120	°C	
Drying Time	2.0 - 4.0	hr	
Suggested Max Moisture	0.020	%	
Hopper Temperature	40.0 - 60.0	°C	
Cylinder Zone 1 Temp.	260 - 280	°C	
Cylinder Zone 2 Temp.	260 - 280	°C	
Cylinder Zone 3 Temp.	260 - 280	°C	
Cylinder Zone 4 Temp.	260 - 280	°C	
Adapter Temperature	260 - 280	°C	
Melt Temperature	270 - 280	°C	
Die Temperature	250 - 260	°C	
Calibration Temp, First	70.0 - 90.0	°C	
NOTE			
1.	Tensile Bar		
2.	50 mm/min		
3.	Type 1, 50mm/min		
4.	Type 1, 50mm/min		
5.	Type 1, 50mm/min		
6.	1.3 mm/min		
7.	2.0 mm/min		
8.	1.3 mm/min		
9.	80*10*3		
10.	80*10*3		
11.	80*10*3		
12.	80*10*4 mm		

13.	80*10*4 mm
14.	标准 B (120°C/h), 载荷2 (50N)

Recommended distributors for this material

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