SABIC® PC Resin PC1003R - Asia

Polycarbonate

SABIC

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Technical Data

Product Description

PC1003R resin is a medium-low flow (MFR = 10 at 300?C/1.2kg), heat and UV stabilized, polycarbonate product with mold release designed for use in the general purpose molding market. It is available exclusively at www.sabicpc.com

General

Material Status	• Commercial: Active		
UL Yellow Card [1]	• E207780-101295400		
Search for UL Yellow Card	• SABIC • SABIC® PC Resin		
Availability	• Asia Pacific		
Uses	• Construction Applications • Electrical Parts	• Electrical/Electronic Applications • Electronic Displays	• Lighting Applications
Also Available In	• Europe	• Latin America	• North America

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.20	g/cm³	ASTM D792 ISO 1183
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	10	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	9.0	cm³/10min	ISO 1133
Molding Shrinkage - Flow			Internal Method
-- [3]	0.50 to 0.70	%	
3.20 mm	0.50 to 0.70	%	
Water Absorption (Saturation, 23°C)	0.35	%	ASTM D570 ISO 62

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- [4]	2350	MPa	ASTM D638
--	2350	MPa	ISO 527-1/1
Tensile Strength			
Yield [5]	63.0	MPa	ASTM D638
Yield	63.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield [5]	6.0	%	ASTM D638
Yield	6.0	%	ISO 527-2/50
Break [5]	> 70	%	ASTM D638
Break	> 70	%	ISO 527-2/50
Flexural Modulus			
50.0 mm Span [6]	2300	MPa	ASTM D790
-- [7]	2300	MPa	ISO 178
Flexural Stress			
-- [7, 8]	90.0	MPa	ISO 178
Yield, 50.0 mm Span [6]	90.0	MPa	ASTM D790

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Impact	Nominal Value Unit	Test Method
Notched Izod Impact		
23°C	800 J/m	ASTM D256
-30°C [9]	12 kJ/m²	ISO 180/1A
23°C [9]	70 kJ/m²	ISO 180/1A
Unnotched Izod Impact		
23°C	No Break	ASTM D4812 ISO 180/1U
-30°C [9]	No Break	ISO 180/1U
Instrumented Dart Impact		ASTM D3763
23°C, Energy at Peak	65.0 J	
Hardness	**Nominal Value Unit**	**Test Method**
Rockwell Hardness (R-Scale)	120	ASTM D785 ISO 2039-2
Thermal	**Nominal Value Unit**	**Test Method**
Deflection Temperature Under Load		
0.45 MPa, Unannealed, 3.20 mm	138 °C	ASTM D648
0.45 MPa, Unannealed, 4.00 mm, 64.0 mm Span [10]	138 °C	ISO 75-2/Bf
1.8 MPa, Unannealed, 3.20 mm	127 °C	ASTM D648
1.8 MPa, Unannealed, 4.00 mm, 64.0 mm Span [10]	127 °C	ISO 75-2/Af
Vicat Softening Temperature	143 °C	ISO 306/B50 ASTM D1525 [11]
Ball Pressure Test (123 to 127°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	
1 MHz	3.00	
Dissipation Factor		ASTM D150 IEC 60250
60 Hz	1.0E-3	
1 MHz	0.010	
Flammability	**Nominal Value Unit**	**Test Method**
Flame Rating (1.6 mm)	V-2	UL 94
Optical	**Nominal Value Unit**	**Test Method**
Refractive Index	1.586	ASTM D542 ISO 489
Light Transmittance (2540 µm)	88.0 to 90.0 %	ASTM D1003
Haze (2540 µm)	< 0.800 %	ASTM D1003

Injection	Nominal Value Unit
Drying Temperature	120 °C
Drying Time	2.0 to 4.0 hr
Suggested Max Moisture	0.020 %
Hopper Temperature	60 to 80 °C
Rear Temperature	260 to 280 °C
Middle Temperature	270 to 290 °C
Front Temperature	280 to 310 °C

Form No. TDS-128724-en

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Injection	Nominal Value	Unit
Nozzle Temperature	270 to 290	°C
Processing (Melt) Temp	280 to 310	°C
Mold Temperature	80 to 110	°C

Notes

[1] A UL Yellow Card contains UL-verified flammability and electrical characteristics. UL Prospector continually works to link Yellow Cards to individual plastic materials in Prospector, however this list may not include all of the appropriate links. It is important that you verify the association between these Yellow Cards and the plastic material found in Prospector. For a complete listing of Yellow Cards, visit the UL Yellow Card Search.

[2] Typical properties: these are not to be construed as specifications.

[3] Tensile Bar

[4] 50 mm/min

[5] Type I, 50 mm/min

[6] 1.3 mm/min

[7] 2.0 mm/min

[8] at Yield

[9] 80*10*3 mm

[10] 80*10*4 mm

[11] Rate A (50°C/h), Loading 2 (50 N)

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Where to Buy

Supplier

SABIC
Web: http://www.sabic.com/

Distributor

3Polymer (Guangzhou) Chemical Technology Co., Ltd.
Telephone: +86-20-3466-7988
Web: http://3polymer.com
Availability: China

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