

# LEXAN™ PC1000R resin

Polycarbonate

SABIC Innovative Plastics Asia Pacific

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## Technical Data

### Product Description

PC1000R resin is a medium-low flow (MFR = 10 at 300°C/1.2kg), heat stabilized, polycarbonate product with mold release designed for use in the general purpose molding market. It is available exclusively at [www.sabicpc.com](http://www.sabicpc.com)

### General

Material Status	• Commercial: Active
Literature <sup>1</sup>	• <a href="#">Technical Datasheet</a>
Search for UL Yellow Card	• <a href="#">SABIC Innovative Plastics Asia Pacific</a> • <a href="#">LEXAN™</a>
Availability	• Asia Pacific
Additive	• Heat Stabilizer • Mold Release
Features	• Heat Stabilized • Medium Flow
Uses	• General Purpose
Processing Method	• Injection Molding

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Specific Gravity			
--	1.20	1.20 g/cm <sup>3</sup>	ASTM D792
--	1.20 g/cm <sup>3</sup>	1.20 g/cm <sup>3</sup>	ISO 1183
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	10 g/10 min	10 g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	0.580 in <sup>3</sup> /10min	9.50 cm <sup>3</sup> /10min	ISO 1133
Molding Shrinkage - Flow			Internal Method
-- <sup>3</sup>	5.0E-3 to 7.0E-3 in/in	0.50 to 0.70 %	
0.126 in (3.20 mm)	5.0E-3 to 7.0E-3 in/in	0.50 to 0.70 %	
Water Absorption			
Saturation, 73°F (23°C)	0.35 %	0.35 %	ISO 62
Equilibrium, 73°F (23°C)	0.35 %	0.35 %	ASTM D570

Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus			
-- <sup>4</sup>	341000 psi	2350 MPa	ASTM D638
--	341000 psi	2350 MPa	ISO 527-2/1
Tensile Strength			
Yield <sup>5</sup>	9140 psi	63.0 MPa	ASTM D638
Yield	9140 psi	63.0 MPa	ISO 527-2/50
Tensile Elongation			
Yield <sup>5</sup>	6.0 %	6.0 %	ASTM D638
Yield	6.0 %	6.0 %	ISO 527-2/50
Break <sup>5</sup>	> 70 %	> 70 %	ASTM D638
Break	> 70 %	> 70 %	ISO 527-2/50
Flexural Modulus			
1.97 in (50.0 mm) Span <sup>6</sup>	334000 psi	2300 MPa	ASTM D790
-- <sup>7</sup>	334000 psi	2300 MPa	ISO 178
Flexural Stress			
-- <sup>7,8</sup>	13100 psi	90.0 MPa	ISO 178
Yield, 1.97 in (50.0 mm) Span <sup>6</sup>	13100 psi	90.0 MPa	ASTM D790

Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact			
73°F (23°C)	15 ft·lb/in	800 J/m	ASTM D256
-22°F (-30°C) <sup>9</sup>	5.7 ft·lb/in <sup>2</sup>	12 kJ/m <sup>2</sup>	ISO 180/1A
73°F (23°C) <sup>9</sup>	33 ft·lb/in <sup>2</sup>	70 kJ/m <sup>2</sup>	ISO 180/1A



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Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Unnotched Izod Impact			
73°F (23°C)	No Break	No Break	ASTM D4812 ISO 180/1U
-22°F (-30°C) <sup>9</sup>	No Break	No Break	ISO 180/1U
Instrumented Dart Impact			ASTM D3763
73°F (23°C), Energy at Peak Load	575 in·lb	65.0 J	
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Rockwell Hardness (R-Scale)	120	120	ASTM D785 ISO 2039-2
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			
66 psi (0.45 MPa), Unannealed, 0.126 in (3.20 mm)	280 °F	138 °C	ASTM D648
66 psi (0.45 MPa), Unannealed, 2.52 in (64.0 mm) Span <sup>10</sup>	280 °F	138 °C	ISO 75-2/Bf
264 psi (1.8 MPa), Unannealed, 0.126 in (3.20 mm)	261 °F	127 °C	ASTM D648
264 psi (1.8 MPa), Unannealed, 2.52 in (64.0 mm) Span <sup>10</sup>	261 °F	127 °C	ISO 75-2/Af
Vicat Softening Temperature	289 °F	143 °C	ISO 306/B50 ASTM D1525 <sup>11</sup>
Ball Pressure Test (257°F (125°C))	Pass	Pass	IEC 60695-10-2
CLTE - Flow			
-40 to 203°F (-40 to 95°C)	3.9E-5 in/in/°F	7.0E-5 cm/cm/°C	ASTM E831
73 to 176°F (23 to 80°C)	3.9E-5 in/in/°F	7.0E-5 cm/cm/°C	ISO 11359-2
Thermal Conductivity	1.4 Btu·in/hr/ft <sup>2</sup> /°F	0.20 W/m/K	ASTM C177 ISO 8302
Electrical	Nominal Value (English)	Nominal Value (SI)	Test Method
Volume Resistivity	> 1.0E+15 ohms·cm	> 1.0E+15 ohms·cm	ASTM D257 IEC 60093
Dielectric Strength (0.0630 in (1.60 mm))	690 V/mil	27 kV/mm	ASTM D149 IEC 60243-1
Dielectric Constant			ASTM D150 IEC 60250
60 Hz	3.00	3.00	
1 MHz	3.00	3.00	
Dissipation Factor			ASTM D150 IEC 60250
60 Hz	1.0E-3	1.0E-3	
1 MHz	0.010	0.010	
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating (0.0630 in (1.60 mm))	V-2	V-2	UL 94
Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Refractive Index	1.586	1.586	ASTM D542 ISO 489
Transmittance (100 mil (2540 μm))	88.0 to 90.0 %	88.0 to 90.0 %	ASTM D1003
Haze (100 mil (2540 μm))	< 0.80 %	< 0.80 %	ASTM D1003
Injection	Nominal Value (English)	Nominal Value (SI)	
Drying Temperature	248 °F	120 °C	
Drying Time	2.0 to 4.0 hr	2.0 to 4.0 hr	
Suggested Max Moisture	0.020 %	0.020 %	
Hopper Temperature	140 to 176 °F	60.0 to 80.0 °C	
Rear Temperature	500 to 536 °F	260 to 280 °C	
Middle Temperature	518 to 554 °F	270 to 290 °C	
Front Temperature	536 to 590 °F	280 to 310 °C	
Nozzle Temperature	518 to 554 °F	270 to 290 °C	
Processing (Melt) Temp	536 to 590 °F	280 to 310 °C	

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Injection	Nominal Value (English)	Nominal Value (SI)
Mold Temperature	176 to 230 °F	80.0 to 110 °C

## Notes

<sup>1</sup> These links provide you with access to supplier literature. We work hard to keep them up to date; however you may find the most current literature from the supplier.

<sup>2</sup> Typical properties: these are not to be construed as specifications.

<sup>3</sup> Tensile Bar

<sup>4</sup> 2.0 in/min (50 mm/min)

<sup>5</sup> Type I, 2.0 in/min (50 mm/min)

<sup>6</sup> 0.051 in/min (1.3 mm/min)

<sup>7</sup> 0.079 in/min (2.0 mm/min)

<sup>8</sup> Yield

<sup>9</sup> 80\*10\*3

<sup>10</sup> 80\*10\*4 mm

<sup>11</sup> Rate B (120°C/h), Loading 2 (50 N)



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### Where to Buy

#### Supplier

**SABIC Innovative Plastics Asia Pacific**

Shanghai, China

Telephone: +86-21-3222-4500

Web: <http://www.sabic-ip.com/>

#### Distributor

Please contact the supplier to find a distributor for LEXAN™ PC1000R resin

#### Reseller

A Reseller is not a distributor authorized by the Supplier.

**Guangzhou Huaxiu Plastics Co., Ltd.**

Telephone: +86-20-82582555

Web: <http://www.va-so.com>

Availability: China

