

## SABIC Innovative Plastics PC6300 PC

Category : Polymer , Thermoplastic , Polycarbonate (PC)

### Material Notes:

PC6300 resin is a very high flow (MFR = 9.5 at 250°C/1.2kg) polycarbonate product designed for use in the optical media market. This data was supplied by SABIC-IP for the Americas region.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-PC6300-PC.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-PC6300-PC.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.20 g/cc	1.20 g/cc	ASTM D 792
Density	1.20 g/cc	0.0434 lb/in <sup>3</sup>	ISO 1183
Moisture Absorption at Equilibrium	0.35 % @Temperature 23.0 °C	0.35 % @Temperature 73.4 °F	ASTM D 570
Water Absorption at Saturation	0.35 % @Temperature 23.0 °C	0.35 % @Temperature 73.4 °F	ISO 62
Linear Mold Shrinkage, Flow	0.0050 - 0.0070 cm/cm	0.0050 - 0.0070 in/in	on tensile bar; SABIC Method
Melt Flow	9.0 g/10 min @Load 1.20 kg, Temperature 250 °C	9.0 g/10 min @Load 2.65 lb, Temperature 482 °F	[cm <sup>3</sup> /10 min] Melt Volume Rate; ISO 1133
	9.5 g/10 min @Load 1.20 kg, Temperature 250 °C	9.5 g/10 min @Load 2.65 lb, Temperature 482 °F	ASTM D 1238

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	60.0 MPa	8700 psi	Type I, 50 mm/min; ASTM D 638
	60.0 MPa	8700 psi	50 mm/min; ISO 527
Elongation at Break	>= 40 %	>= 40 %	Type I, 50 mm/min; ASTM D 638
	>= 40 %	>= 40 %	50 mm/min; ISO 527
Elongation at Yield	6.0 %	6.0 %	Type I, 50 mm/min; ASTM D 638
	6.0 %	6.0 %	50 mm/min; ISO 527
Tensile Modulus	2.35 GPa	341 ksi	50 mm/min; ASTM D 638
	2.35 GPa	341 ksi	1 mm/min; ISO 527

Mechanical Properties	Metric	English	Comments
Flexural Yield Strength	90.0 MPa	13100 psi	2 mm/min, 50 mm span; ASTM D 790
	90.0 MPa	13100 psi	2 mm/min; ISO 178
Flexural Modulus	2.30 GPa	334 ksi	1.3 mm/min, 50 mm span; ASTM D 790
	2.30 GPa	334 ksi	2 mm/min; ISO 178
Izod Impact, Notched (ISO)	12.0 kJ/m <sup>2</sup>	5.71 ft-lb/in <sup>2</sup>	80*10*3; ISO 180/1A
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
	15.0 kJ/m <sup>2</sup>	7.14 ft-lb/in <sup>2</sup>	80*10*3; ISO 180/1A
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	
Izod Impact, Unnotched (ISO)	NB	NB	80*10*3; ISO 180/1U
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	
	NB	NB	80*10*3; ISO 180/1U
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	70.0 Âµm/m-Â°C	38.9 Âµin/in-Â°F	ASTM E 831
	@Temperature -40.0 - 95.0 Â°C	@Temperature -40.0 - 203 Â°F	
	70.0 Âµm/m-Â°C	38.9 Âµin/in-Â°F	ISO 11359-2
	@Temperature 23.0 - 80.0 Â°C	@Temperature 73.4 - 176 Â°F	
Thermal Conductivity	0.200 W/m-K	1.39 BTU-in/hr-ft <sup>2</sup> - Â°F	ASTM C 177
	0.200 W/m-K	1.39 BTU-in/hr-ft <sup>2</sup> - Â°F	ISO 8302
Deflection Temperature at 0.46 MPa (66 psi)	132 Â°C	270 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Bf
	132 Â°C	270 Â°F	ASTM D 648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Deflection Temperature at 1.8 MPa (264 psi)	122 Â°C	252 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	122 Â°C	252 Â°F	ASTM D 648

Thermal Properties	@Thickness 3.20 mm Metric	@Thickness 0.126 in English	Comments
Vicat Softening Point	138 Å°C	280 Å°F	Rate B/50; ASTM D 1525
	138 Å°C	280 Å°F	Rate B/50; ISO 306

Optical Properties	Metric	English	Comments
Refractive Index	1.586	1.586	ASTM D 542
	1.586	1.586	ISO 489
Haze	<= 0.70 % @Thickness 2.54 mm	<= 0.70 % @Thickness 0.100 in	ASTM D 1003
Transmission, Visible	>= 90 % @Thickness 2.54 mm	>= 90 % @Thickness 0.100 in	ASTM D 1003

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+15 ohm-cm	>= 1.00e+15 ohm-cm	IEC 60093
Dielectric Constant	3.0 @Frequency 1.00e+6 Hz	3.0 @Frequency 1.00e+6 Hz	IEC 60250
Dissipation Factor	0.010 @Frequency 1.00e+6 Hz	0.010 @Frequency 1.00e+6 Hz	IEC 60250

Descriptive Properties	Value	Comments
Ball Pressure Test, 125Å°C +/- 2Å°C	Passes	IEC 60695-10-2

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