

SABIC Innovative Plastics Lexan® 153R PC (Asia Pacific)

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Nonhalogenated. 2.5 MFR. Blowmolding/extrusion. UV-stabilized. Internal mold release.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-153R-PC-Asia-Pacific.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.20 g/cc	1.20 g/cc	ASTM D792
Density	1.19 g/cc	0.0430 lb/in ³	ASTM D792
Water Absorption	0.15 %	0.15 %	ASTM D570
	@Time 86400 sec	@Time 24.0 hour	
Moisture Absorption at Equilibrium	0.35 %	0.35 %	ASTM D570
	0.58 %	0.58 %	ASTM D570
	@Temperature 100 °C	@Temperature 212 °F	
Linear Mold Shrinkage, Flow	0.0050 - 0.0070 cm/cm	0.0050 - 0.0070 in/in	SABIC Method
	@Thickness 3.20 mm	@Thickness 0.126 in	
Melt Flow	2.5 g/10 min	2.5 g/10 min	ASTM D1238
	@Load 1.20 kg, Temperature 300 °C	@Load 2.65 lb, Temperature 572 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	70	70	ASTM D785
Hardness, Rockwell R	118	118	ASTM D785
Tensile Strength at Break	65.0 MPa	9430 psi	Type I, 50 mm/min; ASTM D638
Tensile Strength, Yield	62.0 MPa	8990 psi	Type I, 50 mm/min; ASTM D638
Elongation at Break	110 %	110 %	Type I, 50 mm/min; ASTM D638
Elongation at Yield	7.0 %	7.0 %	Type I, 50 mm/min; ASTM D638
Flexural Yield Strength	93.0 MPa	13500 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	2.34 GPa	339 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	7.47 J/cm	14.0 ft-lb/in	ASTM D256

Mechanical Properties	Metric	English	Comments
Tensile Impact Strength	630 kJ/m ²	300 ft-lb/in ²	Type S; ASTM D1822
Dart Drop, Total Energy	169 J	125 ft-lb	ASTM D3029
Taber Abrasion, mg/1000 Cycles	10	10	CS-17, 1 kg; ASTM D1044

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	68.4 µm/m-°C @Temperature -40.0 - 95.0 °C	38.0 µin/in-°F @Temperature -40.0 - 203 °F	ASTM E 831
Specific Heat Capacity	1.25 J/g-°C	0.299 BTU/lb-°F	ASTM C351
Thermal Conductivity	0.190 W/m-K	1.32 BTU-in/hr-ft ² -°F	ASTM C177
Deflection Temperature at 0.46 MPa (66 psi)	137 °C @Thickness 6.40 mm	279 °F @Thickness 0.252 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	132 °C @Thickness 6.40 mm	270 °F @Thickness 0.252 in	unannealed; ASTM D648
Vicat Softening Point	157 °C	315 °F	Rate B/50; ASTM D1525

Optical Properties	Metric	English	Comments
Refractive Index	1.586	1.586	ASTM D542
Haze	1.0 % @Thickness 2.54 mm	1.0 % @Thickness 0.100 in	ASTM D1003
Transmission, Visible	88 %	88 %	2.54 mm; ASTM D1003

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+16 ohm-cm	>= 1.00e+16 ohm-cm	ASTM D257
Dielectric Constant	2.96 @Frequency 1.00e+6 Hz	2.96 @Frequency 1.00e+6 Hz	ASTM D150
	3.17 @Frequency 50.0 - 60.0 Hz	3.17 @Frequency 50.0 - 60.0 Hz	ASTM D150
Dielectric Strength	14.9 kV/mm @Thickness 3.20 mm	378 kV/in @Thickness 0.126 in	in air; ASTM D149

Electrical Properties	Metric	English	Comments
Dissipation Factor	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	ASTM D150
	0.010	0.010	
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	ASTM D150

Descriptive Properties	Value	Comments
Specific Volume	0.83cm^3/g	ASTM D792

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