

SABIC Innovative Plastics Lexan® 193 PC

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Nonhalogenated. 8.5 MFR. High impact. Thick wall sections. UV-stabilized. Opaques only. 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-Lexan-193-PC.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.19 g/cc	1.19 g/cc	ASTM D 792
Water Absorption	0.19 % @Time 86400 sec	0.19 % @Time 24.0 hour	ASTM D 570
Moisture Absorption at Equilibrium	0.37 % @Temperature 23.0 °C	0.37 % @Temperature 73.4 °F	ASTM D 570
	0.54 % @Temperature 100 °C	0.54 % @Temperature 212 °F	ASTM D 570
Linear Mold Shrinkage, Flow	0.0050 - 0.0070 cm/cm @Thickness 3.20 mm	0.0050 - 0.0070 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	8.5 g/10 min @Load 1.20 kg, Temperature 300 °C	8.5 g/10 min @Load 2.65 lb, Temperature 572 °F	ASTM D 1238

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	68	68	ASTM D 785
Hardness, Rockwell R	118	118	ASTM D 785
Tensile Strength at Break	63.0 MPa	9140 psi	Type I, 50 mm/min; ASTM D 638
Tensile Strength, Yield	58.0 MPa	8410 psi	Type I, 50 mm/min; ASTM D 638
Elongation at Break	115 %	115 %	Type I, 50 mm/min; ASTM D 638
Elongation at Yield	7.0 %	7.0 %	Type I, 50 mm/min; ASTM D 638
Flexural Yield Strength	81.0 MPa	11700 psi	1.3 mm/min, 50 mm span; ASTM D 790
Flexural Modulus	2.13 GPa	309 ksi	1.3 mm/min, 50 mm span; ASTM D 790
	7.47 J/cm	14.0 ft-lb/in	

Izod Impact Notched Mechanical Properties	Metric @ Temperature 23.0 °C	English @ Temperature 73.4 °F	ASTM D 256 Comments
Izod Impact, Unnotched	32.04 J/cm @ Temperature 23.0 °C	60.02 ft-lb/in @ Temperature 73.4 °F	ASTM D 4812
Tensile Impact Strength	420 kJ/m²	200 ft-lb/in²	Type S; ASTM D 1822
Dart Drop, Total Energy	169 J @ Temperature 23.0 °C	125 ft-lb @ Temperature 73.4 °F	ASTM D 3029
Taber Abrasion, mg/1000 Cycles	20 @ Load 1.00 kg	20 @ Load 2.20 lb	CS-17; ASTM D 1044

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	64.8 µm/m-°C @ Temperature -40.0 - 95.0 °C	36.0 µin/in-°F @ Temperature -40.0 - 203 °F	ASTM E 831
Deflection Temperature at 0.46 MPa (66 psi)	137 °C @ Thickness 6.40 mm	279 °F @ Thickness 0.252 in	unannealed; ASTM D 648
Deflection Temperature at 1.8 MPa (264 psi)	126 °C @ Thickness 6.40 mm	259 °F @ Thickness 0.252 in	unannealed; ASTM D 648

Electrical Properties	Metric	English	Comments
Volume Resistivity	2.50e+17 ohm-cm	2.50e+17 ohm-cm	ASTM D 257
Dielectric Constant	3.0 @ Frequency 1.00e+6 Hz	3.0 @ Frequency 1.00e+6 Hz	ASTM D 150
Dielectric Strength	16.3 kV/mm @ Thickness 3.20 mm	414 kV/in @ Thickness 0.126 in	in air; ASTM D 149
Dissipation Factor	0.00090 @ Frequency 50.0 - 60.0 Hz	0.00090 @ Frequency 50.0 - 60.0 Hz	ASTM D 150
	0.010 @ Frequency 1.00e+6 Hz	0.010 @ Frequency 1.00e+6 Hz	ASTM D 150

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