

SABIC Innovative Plastics Lexan® FL2003 PC

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Various weight reductions at 0.250" (6.35mm) wall. Low temperature impact and high heat resistant. Excellent surface. UV-stabilized. 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-FL2003-PC.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.09 g/cc	1.09 g/cc	foam molded; ASTM D 792
	1.21 g/cc	1.21 g/cc	ASTM D 792
Water Absorption	0.13 %	0.13 %	ASTM D 570
	@Time 86400 sec	@Time 24.0 hour	
Moisture Absorption at Equilibrium	0.34 %	0.34 %	ASTM D 570
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Linear Mold Shrinkage, Flow	0.0060 - 0.0080 cm/cm	0.0060 - 0.0080 in/in	SABIC Method
	@Thickness 6.40 mm	@Thickness 0.252 in	

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	53.0 MPa	7690 psi	ASTM D 638
	@Thickness 6.35 mm	@Thickness 0.250 in	
Elongation at Break	7.8 %	7.8 %	ASTM D 638
	@Thickness 6.35 mm	@Thickness 0.250 in	
Tensile Modulus	2.30 GPa	334 ksi	ASTM D 638
	@Thickness 6.40 mm	@Thickness 0.252 in	
Flexural Yield Strength	75.0 MPa	10900 psi	ASTM D 790
	@Thickness 6.40 mm	@Thickness 0.252 in	
Flexural Modulus	1.93 GPa	280 ksi	ASTM D 790
	@Thickness 6.40 mm	@Thickness 0.252 in	
Izod Impact, Unnotched	26.7 J/cm	50.0 ft-lb/in	ASTM D 4812
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Dart Drop, Total Energy	122 J	90.0 ft-lb	SABIC Method

Mechanical Properties	@Temperature 23.0 °C Metric	@Temperature 73.4 °F English	Comments
Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	55.8 µm/m-°C @Temperature -40.0 - 95.0 °C	31.0 µin/in-°F @Temperature -40.0 - 203 °F	ASTM E 831
Specific Heat Capacity	1.18 J/g-°C	0.282 BTU/lb-°F	ASTM C 351
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
UL RTI, Electrical	80.0 °C	176 °F	UL 746B
UL RTI, Mechanical with Impact	80.0 °C	176 °F	UL 746B
UL RTI, Mechanical without Impact	80.0 °C	176 °F	UL 746B
Flammability, UL94	HB @Thickness 5.99 mm	HB @Thickness 0.236 in	UL 94
Oxygen Index	28.2 %	28.2 %	LOI; ASTM D 2863

Electrical Properties	Metric	English	Comments
Volume Resistivity	3.60e+16 ohm-cm	3.60e+16 ohm-cm	ASTM D 257
Surface Resistance	>= 1.10e+17 ohm	>= 1.10e+17 ohm	ASTM D 257
Dielectric Constant	2.47 @Frequency 100 Hz	2.47 @Frequency 100 Hz	ASTM D 150
	2.68 @Frequency 1.00e+6 Hz	2.68 @Frequency 1.00e+6 Hz	ASTM D 150
Dissipation Factor	0.0037 @Frequency 100 Hz	0.0037 @Frequency 100 Hz	ASTM D 150
	0.0039 @Frequency 1.00e+6 Hz	0.0039 @Frequency 1.00e+6 Hz	ASTM D 150

Descriptive Properties	Value	Comments
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FOAM - ELECTRICAL 6.4 mm Wt Reduction, % Descriptive Properties	Value	Comments
FOAM - Flame Class Minimum Density, g/cm ³	1.12	-
FOAM - IMPACT 6.4 mm Wt Reduction, %	10	-
FOAM - MECHANICAL 6.4 mm Wt Reduction, %	10	-
FOAM - PHYSICAL 6.4mm Wt Reduction, %	10	-
FOAM - THERMAL 6.4mm Wt Reduction, %	10	-
UV-light, water exposure/immersion	F1	UL 746C

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