

SABIC Innovative Plastics Lexan® FL933 PC

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Various weight reductions at 0.250" wall. 30% GR. Superior flexural strength and modulus; good tensile strength. UV-stabilized.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-FL933-PC.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.29 g/cc	1.29 g/cc	foam molded; ASTM D792
	1.43 g/cc	1.43 g/cc	ASTM D792
Water Absorption	0.12 %	0.12 %	ASTM D570
	@Time 86400 sec	@Time 24.0 hour	
Moisture Absorption at Equilibrium	0.26 %	0.26 %	ASTM D570
Linear Mold Shrinkage, Flow	0.0020 - 0.0040 cm/cm	0.0020 - 0.0040 in/in	SABIC Method
	@Thickness 6.40 mm	@Thickness 0.252 in	

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	72.0 MPa	10400 psi	ASTM D638
	@Thickness 6.35 mm	@Thickness 0.250 in	
Elongation at Break	3.0 %	3.0 %	ASTM D638
	@Thickness 6.35 mm	@Thickness 0.250 in	
Tensile Modulus	6.92 GPa	1000 ksi	ASTM D638
	@Thickness 6.40 mm	@Thickness 0.252 in	
Flexural Yield Strength	127 MPa	18400 psi	6.4 mm; ASTM D790
Flexural Modulus	6.89 GPa	999 ksi	6.4 mm; ASTM D790
Izod Impact, Unnotched	4.80 J/cm	8.99 ft-lb/in	ASTM D4812
Dart Drop, Total Energy	40.0 J	29.5 ft-lb	SABIC Method

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	21.6 $\mu\text{m}/\text{m}\cdot\text{°C}$	12.0 $\mu\text{in}/\text{in}\cdot\text{°F}$	ASTM E 831
	@Temperature -40.0 - 95.0 °C	@Temperature -40.0 - 203 °F	
Specific Heat Capacity	1.04 J/g- °C	0.249 BTU/lb- °F	ASTM C351

Thermal Properties	Metric	English	Comments
Thermal Conductivity	0.700 W/m-K	7.00 BTU-in/hr-ft ² -F	ASTM D177
Deflection Temperature at 0.46 MPa (66 psi)	143 °C @Thickness 6.40 mm	289 °F @Thickness 0.252 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	138 °C @Thickness 6.40 mm	280 °F @Thickness 0.252 in	unannealed; ASTM D648
Oxygen Index	40.4 %	40.4 %	ASTM D2863

Electrical Properties	Metric	English	Comments
Volume Resistivity	2.40e+17 ohm-cm	2.40e+17 ohm-cm	ASTM D257
Surface Resistance	>= 1.10e+17 ohm	>= 1.10e+17 ohm	ASTM D257
Dielectric Constant	2.61 @Frequency 1.00e+6 Hz	2.61 @Frequency 1.00e+6 Hz	ASTM D150
	2.7 @Frequency 100 Hz	2.7 @Frequency 100 Hz	ASTM D150
Dissipation Factor	0.0034 @Frequency 100 Hz	0.0034 @Frequency 100 Hz	ASTM D150
	0.0075 @Frequency 1.00e+6 Hz	0.0075 @Frequency 1.00e+6 Hz	ASTM D150

Descriptive Properties	Value	Comments
FOAM - ELECTRICAL 6.4 mm Wt Reduction	20%	
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%	

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