

SABIC Innovative Plastics Lexan® FL405 PC

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Various weight reductions at 0.250" (6.38 mm) wall. Impact resistant, superior processing, excellent surface. UL94 V-0 at 0.120

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-FL405-PC.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.08 g/cc	1.08 g/cc	foam molded; ASTM D792
	1.20 g/cc	1.20 g/cc	ASTM D792
Water Absorption	0.14 %	0.14 %	ASTM D570
	@Time 86400 sec	@Time 24.0 hour	
Moisture Absorption at Equilibrium	0.31 %	0.31 %	ASTM D570
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	54.0 MPa	7830 psi	ASTM D638
	@Thickness 6.35 mm	@Thickness 0.250 in	
Elongation at Break	7.2 %	7.2 %	ASTM D638
	@Thickness 6.35 mm	@Thickness 0.250 in	
Tensile Modulus	2.10 GPa	305 ksi	ASTM D638
	@Thickness 6.40 mm	@Thickness 0.252 in	
Flexural Yield Strength	86.0 MPa	12500 psi	6.4 mm; ASTM D790
Flexural Modulus	2.48 GPa	360 ksi	6.4 mm; ASTM D790
Izod Impact, Unnotched	26.7 J/cm	50.0 ft-lb/in	ASTM D4812
Dart Drop, Total Energy	61.0 J	45.0 ft-lb	SABIC Method

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	66.6 $\mu\text{m}/\text{m}\cdot\text{°C}$	37.0 $\mu\text{in}/\text{in}\cdot\text{°F}$	ASTM E 831
	@Temperature -40.0 - 95.0 °C	@Temperature -40.0 - 203 °F	
Specific Heat Capacity	1.34 J/g- °C	0.320 BTU/lb- °F	ASTM C351

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.48 MPa (66 psi)	@Thickness 6.40 mm	@Thickness 0.252 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	126 °C @Thickness 6.40 mm	259 °F @Thickness 0.252 in	unannealed; ASTM D648
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	V-0	V-0	UL 94
	@Thickness 3.05 mm	@Thickness 0.120 in	
	5VA	5VA	UL 94
	@Thickness 6.10 mm	@Thickness 0.240 in	
Oxygen Index	39 %	39 %	ASTM D2863

Electrical Properties	Metric	English	Comments
Volume Resistivity	3.50e+17 ohm-cm	3.50e+17 ohm-cm	ASTM D257
Surface Resistance	>= 1.10e+17 ohm	>= 1.10e+17 ohm	ASTM D257
Dielectric Constant	2.42	2.42	ASTM D150
	@Frequency 100 Hz	@Frequency 100 Hz	
	2.43	2.43	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dissipation Factor	0.0011	0.0011	ASTM D150
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.0044	0.0044	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	

Descriptive Properties	Value	Comments
FOAM - ELECTRICAL 6.4 mm Wt Reduction	20%	
FOAM - Flame Class Minimum Density	1.06g/cm ³	
FOAM - IMPACT 6.4 mm Wt Reduction	10%	
FOAM - MECHANICAL 6.4 mm Wt Reduction	10%	

Descriptive Properties	Value	Comments
FOAM - PHYSICAL 6.4mm Wt Reduction	10%	
FOAM - THERMAL 6.4mm Wt Reduction	10%	
Radiant Panel Listing	YES	UL Tested

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