

SABIC Innovative Plastics Lexan® FL920 PC

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Various weight reductions at .250" (6.35 mm) wall, 20% GR. Excellent flex mod, high tensile strength/heat resistance. V-0/5V at .250" (6.35mm).

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-FL920-PC.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.19 g/cc	1.19 g/cc	foam molded; ASTM D792
	1.32 g/cc	1.32 g/cc	ASTM D792
Water Absorption	0.14 %	0.14 %	ASTM D570
	@Time 86400 sec	@Time 24.0 hour	
Moisture Absorption at Equilibrium	0.30 %	0.30 %	ASTM D570
Linear Mold Shrinkage, Flow	0.0030 - 0.0050 cm/cm	0.0030 - 0.0050 in/in	SABIC Method
	@Thickness 6.40 mm	@Thickness 0.252 in	

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	58.0 MPa	8410 psi	ASTM D638
	@Thickness 6.35 mm	@Thickness 0.250 in	
Elongation at Break	3.6 %	3.6 %	ASTM D638
	@Thickness 6.35 mm	@Thickness 0.250 in	
Tensile Modulus	4.27 GPa	619 ksi	ASTM D638
	@Thickness 6.40 mm	@Thickness 0.252 in	
Flexural Yield Strength	106 MPa	15400 psi	6.4 mm; ASTM D790
Flexural Modulus	5.13 GPa	744 ksi	6.4 mm; ASTM D790
Izod Impact, Unnotched	4.27 J/cm	8.00 ft-lb/in	ASTM D4812
Dart Drop, Total Energy	43.0 J	31.7 ft-lb	SABIC Method

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	27.0 $\mu\text{m}/\text{m}\cdot\text{°C}$	15.0 $\mu\text{in}/\text{in}\cdot\text{°F}$	ASTM E 831
	@Temperature -40.0 - 95.0 °C	@Temperature -40.0 - 203 °F	

Thermal Properties	Metric	English	Comments
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)	136 °C @Thickness 6.40 mm	277 °F @Thickness 0.252 in	unannealed; ASTM D648
UL RTI, Electrical	110 °C	230 °F	UL 746B
UL RTI, Mechanical with Impact	110 °C	230 °F	UL 746B
UL RTI, Mechanical without Impact	110 °C	230 °F	UL 746B
Flammability, UL94	V-0 @Thickness 5.99 mm	V-0 @Thickness 0.236 in	UL 94
	5VA @Thickness 5.99 mm	5VA @Thickness 0.236 in	UL 94

Electrical Properties	Metric	English	Comments
Volume Resistivity	2.50e+17 ohm-cm	2.50e+17 ohm-cm	ASTM D257
Surface Resistance	>= 1.10e+17 ohm	>= 1.10e+17 ohm	ASTM D257
Dielectric Constant	2.5 @Frequency 1.00e+6 Hz	2.5 @Frequency 1.00e+6 Hz	ASTM D150
	2.52 @Frequency 100 Hz	2.52 @Frequency 100 Hz	ASTM D150
Dissipation Factor	0.00080 @Frequency 100 Hz	0.00080 @Frequency 100 Hz	ASTM D150
	0.0052 @Frequency 1.00e+6 Hz	0.0052 @Frequency 1.00e+6 Hz	ASTM D150
Comparative Tracking Index	175 - 250 V	175 - 250 V	UL 746A
Hot Wire Ignition, HWI	60 - 120 sec	60 - 120 sec	UL 746A
High Amp Arc Ignition, HAI	30 - 60 arcs	30 - 60 arcs	UL 746A
High Voltage Arc-Tracking Rate, HVTR	80.0 - 150 mm/min	3.15 - 5.91 in/min	UL 746A

Descriptive Properties	Value	Comments
FOAM - ELECTRICAL 6.4 mm Wt Reduction	20%	
FOAM - Flame Class Minimum Density	0.85g/cm ³	
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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