

## SABIC Innovative Plastics Lexan® FL903 PC

Category : Polymer , Thermoplastic , Polycarbonate (PC)

### Material Notes:

Various weight reductions at 0.250" (6.35 mm). High heat/creep resistance, excellent impact, flexural strength/rigidity. UV-stabilized.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-Lexan-FL903-PC.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-FL903-PC.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.13 g/cc	1.13 g/cc	foam molded; ASTM D792
	1.25 g/cc	1.25 g/cc	ASTM D792
Water Absorption	0.16 %	0.16 %	ASTM D570
	@Time 86400 sec	@Time 24.0 hour	
Moisture Absorption at Equilibrium	0.35 %	0.35 %	ASTM D570
Linear Mold Shrinkage, Flow	0.0050 - 0.0070 cm/cm	0.0050 - 0.0070 in/in	SABIC Method
	@Thickness 6.40 mm	@Thickness 0.252 in	

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	50.0 MPa	7250 psi	ASTM D638
	@Thickness 6.35 mm	@Thickness 0.250 in	
Elongation at Break	6.2 %	6.2 %	ASTM D638
	@Thickness 6.35 mm	@Thickness 0.250 in	
Tensile Modulus	2.44 GPa	354 ksi	ASTM D638
	@Thickness 6.40 mm	@Thickness 0.252 in	
Flexural Yield Strength	89.0 MPa	12900 psi	6.4 mm; ASTM D790
Flexural Modulus	2.79 GPa	405 ksi	6.4 mm; ASTM D790
Izod Impact, Unnotched	7.47 J/cm	14.0 ft-lb/in	ASTM D4812
Dart Drop, Total Energy	51.0 J	37.6 ft-lb	SABIC Method

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	50.4 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	28.0 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	ASTM E 831
	@Temperature -40.0 - 95.0 $^\circ\text{C}$	@Temperature -40.0 - 203 $^\circ\text{F}$	
Specific Heat Capacity	1.17 J/g- $^\circ\text{C}$	0.280 BTU/lb- $^\circ\text{F}$	ASTM C351

Thermal Properties	Metric	English	Comments
<b>Thermal Conductivity</b>	0.700 W/m-K	12.57 U-in/hr-ft <sup>2</sup> -°F	ASTM D177
Deflection Temperature at 0.46 MPa (66 psi)	137 °C @Thickness 6.40 mm	279 °F @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 @Thickness 5.99 mm	V-0 @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	2.12 @Frequency 1.00e+6 Hz	2.12 @Frequency 1.00e+6 Hz	ASTM D150
	2.22 @Frequency 100 Hz	2.22 @Frequency 100 Hz	ASTM D150
Dissipation Factor	0.0012 @Frequency 100 Hz	0.0012 @Frequency 100 Hz	ASTM D150
	0.0061 @Frequency 1.00e+6 Hz	0.0061 @Frequency 1.00e+6 Hz	ASTM D150
Arc Resistance	0.00 - 60 sec	0.00 - 60 sec	Tungsten; ASTM D495
Comparative Tracking Index	100 - 175 V	100 - 175 V	UL 746A
Hot Wire Ignition, HWI	60 - 120 sec	60 - 120 sec	UL 746A
High Amp Arc Ignition, HAI	0.00 - 15 arcs	0.00 - 15 arcs	UL 746A
High Voltage Arc-Tracking Rate, HVTR	>= 150 mm/min	>= 5.91 in/min	UL 746A

Descriptive Properties	Value	Comments
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FOAM - ELECTRICAL 6.4 mm Wt Reduction Descriptive Properties	20% Value	Comments
FOAM - Flame Class Minimum Density	0.71g/cm <sup>3</sup>	
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	F2	UL 746C

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