

SABIC Innovative Plastics Lexan® FL913 PC

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Various weight reduction at 0.250" (6.35 mm) wall. 10% GR, high flexural strength/modulus. UL rated V-0/5VA (all except natural). UV-stabilized.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-FL913-PC.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.12 g/cc	1.12 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	0.32 %	0.32 %	ASTM D570
Linear Mold Shrinkage, Flow	0.0040 - 0.0060 cm/cm	0.0040 - 0.0060 in/in	SABIC Method
	@Thickness 6.40 mm	@Thickness 0.252 in	

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	52.0 MPa	7540 psi	ASTM D638
	@Thickness 6.35 mm	@Thickness 0.250 in	
Elongation at Break	4.8 %	4.8 %	ASTM D638
	@Thickness 6.35 mm	@Thickness 0.250 in	
Tensile Modulus	3.17 GPa	460 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	3.51 GPa	509 ksi	6.4 mm; ASTM D790
Izod Impact, Unnotched	8.54 J/cm	16.0 ft-lb/in	ASTM D4812

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	32.4 $\mu\text{m}/\text{m}\cdot\text{°C}$	18.0 $\mu\text{in}/\text{in}\cdot\text{°F}$	ASTM E 831
	@Temperature -40.0 - 95.0 °C	@Temperature -40.0 - 203 °F	
Specific Heat Capacity	1.19 J/g $\cdot\text{°C}$	0.284 BTU/lb $\cdot\text{°F}$	ASTM C351

Thermal Properties	Metric 0.178 W/m-K	English 0.002 BTU-in/hr-ft ² -°F	Comments ASTM D177
Deflection Temperature at 0.46 MPa (66 psi)	140 °C @Thickness 6.40 mm	284 °F @Thickness 0.252 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	133 °C @Thickness 6.40 mm	271 °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 3.86 mm	V-0 @Thickness 0.152 in	UL 94
	5VA @Thickness 3.86 mm	5VA @Thickness 0.152 in	UL 94

Descriptive Properties	Value	Comments
FOAM - Flame Class Minimum Density	0.97g/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%	
UV-light, water exposure/immersion	F1	UL 746C

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