

LEXAN™ FL900 resin

Polycarbonate

SABIC Innovative Plastics

Message:

LEXAN resin FL900 is a Br- & Cl-free flame retardant grade that can be foamed for weight reductions. UL-94 V1 listed at 3.9mm together with good stiffness, heat, creep and impact performance make it suitable for various applications.

General Information			
UL YellowCard	E121562-220926		
Features	Chlorine Free		
	Rigid, good		
	Impact resistance, good		
	Foamable property		
	Good creep resistance		
	Heat resistance, high		
	Bromine-free		
	Flame retardancy		
Processing Method	Foam treatment		
Multi-Point Data	Flexural DMA (ASTM D4065)		
	Specific Heat vs. Temperature (ASTM D3417)		
	Viscosity vs. Shear Rate (ASTM D3835)		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			ASTM D792
-- ¹	1.13	g/cm ³	ASTM D792
--	1.25	g/cm ³	ASTM D792
Molding Shrinkage - Flow (6.40 mm)	0.50 - 0.70	%	Internal method
Water Absorption			ASTM D570
24 hr	0.16	%	ASTM D570
Equilibrium, 23°C	0.35	%	ASTM D570
Outdoor Suitability	f2		UL 746C
Foam - Physical ²	10	%	Internal method
Foam - Mechanical ³	10	%	Internal method
Foam - Impact ⁴	10	%	Internal method
Foam - Thermal ⁵	10	%	Internal method
Foam - Electrical ⁶	20	%	Internal method
Foam - Flame Class Minimum Density	750	kg/m ³	Internal method
Radiant Panel Listing (UL)	YES		
Mechanical	Nominal Value	Unit	Test Method

Tensile Modulus (6.40 mm)	2450	MPa	ASTM D638
Tensile Strength (Yield, 6.35 mm)	50.3	MPa	ASTM D638
Tensile Elongation (Break, 6.35 mm)	6.2	%	ASTM D638
Flexural Modulus (6.40 mm)	2790	MPa	ASTM D790
Flexural Strength (Yield, 6.40 mm)	89.6	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Unnotched Izod Impact (23°C)	750	J/m	ASTM D4812
Dart Drop Impact (23°C)	51.5	J	Internal method
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, unannealed, 6.40mm	138	°C	ASTM D648
1.8 MPa, unannealed, 6.40mm	127	°C	ASTM D648
CLTE - Flow (-40 to 95°C)	5.0E-5	cm/cm/°C	ASTM E831
Specific Heat	1170	J/kg/°C	ASTM C351
Thermal Conductivity	0.15	W/m/K	ASTM C177
RTI Elec	80.0	°C	UL 746
RTI Imp	80.0	°C	UL 746
RTI	80.0	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.1E+17	ohms	ASTM D257
Volume Resistivity	2.5E+17	ohms·cm	ASTM D257
Dielectric Constant			ASTM D150
100 Hz	2.22		ASTM D150
1 MHz	2.12		ASTM D150
Dissipation Factor			ASTM D150
100 Hz	1.2E-3		ASTM D150
1 MHz	6.1E-3		ASTM D150
Arc Resistance ⁷	PLC 7		ASTM D495
Comparative Tracking Index (CTI)	PLC 3		UL 746
High Voltage Arc Tracking Rate (HVTR)	PLC 4		UL 746
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
1.47 mm	V-2		UL 94
3.91 mm	V-1		UL 94
	V-0		
5.99 mm	5VA		UL 94
Oxygen Index	40	%	ASTM D2863
Additional Information			

Structural Foam Molding - Blowing Agent, Chemical System: FLC95Structural Foam Molding - Blowing Agent, Physical System: NitrogenStructural Foam Molding - Concentration Range (Blowing Agent): 3 - 5 %Structural Foam Molding - Drying Temperature (Blowing Agent): 104 °CStructural Foam Molding - Drying Temperature (Resin): 121 °CStructural Foam Molding - Drying Time (Blowing Agent): 4 hrsStructural Foam Molding - Drying Time (Resin): 3 - 4 hrsStructural Foam Molding - Drying Time (Resin, Cumulative): 48 hrsStructural Foam Molding - Front Temperature: 293 - 310 °CStructural Foam Molding - Melt Temperature: 288 - 316 °CStructural Foam Molding - Middle Temperature: 293 - 310 °CStructural Foam Molding - Mold Temperature: 71 - 93 °CStructural Foam Molding - Nozzle Temperature: 271 - 293 °CStructural Foam Molding - Rear Temperature: 254 - 266 °CStructural Foam Molding - Recommended Concentration (Blowing Agent): 1.5 %

NOTE	
1.	Foam molded
2.	6.4 mm wt reduction
3.	6.4 mm wt reduction
4.	6.4 mm wt reduction
5.	6.4 mm wt reduction
6.	6.4 mm wt reduction
7.	Tungsten electrode

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