

# LEXAN<sup>TM</sup> FR RESINS FL900

REGION AMERICAS

## DESCRIPTION

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.

## TYPICAL PROPERTY VALUES

Revision 20191031

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>MECHANICAL</b>			
FOAM - MECHANICAL 6.4 mm Wt Reduction	10	%	-
Tensile Stress, yield, 6.35 mm	50	MPa	ASTM D 638
Tensile Strain, break, 6.35 mm	6.2	%	ASTM D 638
Tensile Modulus, 6.4 mm	2440	MPa	ASTM D 638
Flexural Stress, yield, 6.4 mm	89	MPa	ASTM D 790
Flexural Modulus, 6.4 mm	2790	MPa	ASTM D 790
<b>IMPACT</b>			
FOAM - IMPACT 6.4 mm Wt Reduction	10	%	-
Izod Impact, unnotched, 23°C	747	J/m	ASTM D 4812
Falling Dart Impact, 23°C	51	J	SABIC method
<b>THERMAL</b>			
FOAM - THERMAL 6.4mm Wt Reduction	10	%	-
HDT, 0.45 MPa, 6.4 mm, unannealed	137	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	126	°C	ASTM D 648
CTE, -40°C to 95°C, flow	5.04E-05	1/°C	ASTM E 831
Specific Heat	1.17	J/g-°C	ASTM C 351
Thermal Conductivity	0.15	W/m-°C	ASTM C177
Relative Temp Index, Elec	80	°C	UL 746B
Relative Temp Index, Mech w/impact	80	°C	UL 746B
Relative Temp Index, Mech w/o impact	80	°C	UL 746B
<b>PHYSICAL</b>			
FOAM - PHYSICAL 6.4mm Wt Reduction	10	%	-
Specific Gravity	1.25	-	ASTM D 792
Specific Gravity, foam molded	1.13	-	ASTM D 792
Water Absorption, 24 hours	0.16	%	ASTM D 570
Water Absorption, equilibrium, 23C	0.35	%	ASTM D 570
Mold Shrinkage, flow, 6.4 mm	0.5 – 0.7	%	SABIC method
<b>ELECTRICAL</b>			
FOAM - ELECTRICAL 6.4 mm Wt Reduction	20	%	-
Volume Resistivity	2.5E+17	Ohm-cm	ASTM D 257
Surface Resistivity	>1.1E+17	Ohm	ASTM D 257
Relative Permittivity, 100 Hz	2.22	-	ASTM D 150
Relative Permittivity, 1 MHz	2.12	-	ASTM D 150
Dissipation Factor, 100 Hz	0.0012	-	ASTM D 150

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Dissipation Factor, 1 MHz	0.0061	-	ASTM D 150
Arc Resistance, Tungsten {PLC}	7	PLC Code	ASTM D 495
High Voltage Arc Track Rate {PLC}	4	PLC Code	UL 746A
Comparative Tracking Index (UL) {PLC}	3	PLC Code	UL 746A
<b>FLAME CHARACTERISTICS</b>			
FOAM - Flame Class Minimum Density	0.75	g/cm <sup>3</sup>	-
UL Recognized, 94V-2 Flame Class Rating	1.47	mm	UL 94
UL Recognized, 94V-1 Flame Class Rating	3.91	mm	UL 94
UL Recognized, 94V-0 Flame Class Rating	5.99	mm	UL 94
UL Recognized, 94-5VA Flame Class Rating	5.99	mm	UL 94
Oxygen Index (LOI)	40.4	%	ASTM D 2863
Radiant Panel Listing	☑	-	UL Tested
UV-light, water exposure/immersion	F2	-	UL 746C
<b>STRUCTURAL FOAM MOLDING</b>			
Blowing Agent, Physical System	Nitrogen	-	
Blowing Agent, Chemical System	FLC95	-	
Drying Time (Blowing Agent)	4	hrs	
Drying Temperature (Blowing Agent)	105	°C	
Concentration Range (Blowing Agent)	3 – 5	%	
Recommended Concentration (Blowing Agent)	1.5	%	
Drying Temperature (Resin)	120	°C	
Drying Time (Resin)	3 – 4	hrs	
Drying Time (Resin, Cumulative)	48	hrs	
Melt Temperature	290 – 315	°C	
Nozzle Temperature	270 – 295	°C	
Front Temperature	295 – 310	°C	
Middle Temperature	295 – 310	°C	
Rear Temperature	255 – 265	°C	
Mold Temperature	70 – 95	°C	

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