

# LEXAN™ FR500 FILM

## PRODUCT DATASHEET

### DESCRIPTION

LEXAN™ FR500 is an opaque black color flame-retardant polycarbonate film with a UL94 V-0 listing at 0.254 mm. This film has good mechanical properties, thermal properties, dimensional stability at high temperatures and a high flammability rating, making it good for various FLAT insulation applications; such as TV/monitor insulation, PC board insulation, and business equipment insulation, consumer electronics devices insulation etc.

### TYPICAL PROPERTY VALUES

PROPERTY	ASTM TEST METHOD	UNITS (USCS)	VALUE	ISO TEST METHOD	UNITS (SI)	VALUE
<b>MECHANICAL</b>						
Tensile Strength (0.43mm)						
@ Yield	ASTM D882	psi	9920	ISO 527	MPa	64
Ultimate	ASTM D882	psi	12283	ISO 527	MPa	67
Tensile Modulus (0.43mm)	ASTM D882	psi	372187	ISO 527	MPa	2583
Puncture Resistance (Dynatup)	ASTM D3763	ft-lb	9		J	12
<b>THERMAL</b>						
Coefficient of Thermal Conductivity	ASTM D5470	Btu-in/(hr-ft <sup>2</sup> -°F)	1.35		W/m-°K	0.2
Specific Heat @ 25°C	ASTM E1269	Btu/lb/°F	0.3		KJ/Kg-°C	1.25
Glass Transition Temperature	ASTM D3417/D3418	°F	307	ISO 11357	°C	153
At 50N, 120 °C						
Heat Deflection Temp. by TMA at 1.8 MPa		°F	290	ISO 75 modified	°C	145
<b>PHYSICAL</b>						
Density	ASTM D792	slug/ft <sup>3</sup>	2.6	ISO 1183	kg/m <sup>3</sup>	1344
<b>ELECTRICAL</b>						
Dielectric Strength in oil, short time						
@ 72°F (23°C), 17mils (0.43mm)	ASTM D149-97a Method A	kv/mil	1.5	IEC 60243	kv/mm	59
Dielectric Constant						
@ 60 Hz	ASTM D150	-	2.9	IEC 60250	-	2.9
@ 1 MHz	ASTM D150	-	2.8	IEC 60250	-	2.8
Dissipation Factor						
@ 60 Hz	ASTM D150	-	0.0026	IEC 60250	-	0.0026
@ 1 MHz	ASTM D150	-	0.0117	IEC 60250	-	0.0117
Volume Resistivity	ASTM D257	Ω-cm	1.00E+17	IEC 60093	Ω-cm	1.00E+17
Surface Resistivity	ASTM D257	Ω/square	1.00E+16	IEC 60093	Ω/square	1.00E+16
Arc Resistance, Tungsten Electrodes	ASTM D495	s	64			

◆ These are typical properties and are not intended for specification purposes. If minimum certifiable properties are required, please contact your local SABIC representative or the SABIC Quality Services Department. Reported Values are based on 0.432 mm (0.017") thickness natural film. Custom colored film may show different properties than those listed above.

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## MANUFACTURING SPECIFICATIONS

NOMINAL GAUGE RANGES	MIN./MAX LIMIT OF NOMINAL
0.010-0.030" (0.254mm-0.762 mm)	-/+5%

Color Code:

Black Color – 701 (BK)

UL FILE NUMBERS: E207780

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