

## PRODUCT DATASHEET - PRELIMINARY

# Lexan\* FR700NV Film

### DESCRIPTION

Lexan FR700NV is a black, one side fine matt, one side velvet flame-retardant polycarbonate film with a UL94 V-0 listing at 0.430 mm. As a non-aesthetic version of FR700, this film provides good value for internal insulation components while maintaining temperature and flame performance. This film has excellent mechanical properties, good dimensional stability at high temperatures and a high flammability rating, making it good for applications such as power supply flat insulation, disc drive insulation, key board insulation, business equipment insulation and has insulation and EMI/RFI shielding when laminated with metal foil.

### TYPICAL PROPERTY VALUES

Property	ASTM Test Method	Units (USCS)	Value	ISO Test Method	Units (SI)	Value
<b>Mechanical</b>						
Tensile Strength @ Yield (0.43mm)	ASTM D882	psi	9427	ISO 527	MPa	61
Ultimate(0.43mm)	ASTM D882	psi	12118	ISO 527	MPa	66
Tensile Modulus (0.43mm)	ASTM D882	psi	377143	ISO 527	MPa	2617
Tensile Elongation at Break (0.43MM)	ASTM D882	%	41	ISO 527	%	41
Puncture Resistance (Dynatup)	ASTM D3763	ft-lb	9		J	12
<b>Thermal</b>						
Coefficient of Thermal Conductivity	ASTM D5470	Btu/hr/ft <sup>2</sup> /°F/in	1.35		W/m°K	0.2
Specific Heat @40°F (4°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
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), 10 mils (0.25mm)	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
@1,000,000 Hz	ASTM D150	-	2.8	IEC 60250	-	2.8
Dissipation Factor						
@ 60 Hz	ASTM D150	-	0.0026	IEC 60250	-	0.0026
@1,000,000 Hz	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 Innovative Plastics, Specialty Film & Sheet representative or the Quality Services Department. Reported values are based on 0.430 mm (0.017") thickness film unless otherwise noted.

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### MANUFACTURING SPECIFICATIONS

Nominal Gauge Ranges	Min./Max Limit of Nominal
0.017 - 0.030" (0.43 - 0.750mm)	-/+ 5%

Color Code:  
Black Color – 701 (BK)

UL FILE NUMBERS: [E121562](#), [E207780](#), [E45329](#)

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