



*The Plastic Films Specialist*

## FR42B/FR42B(S) Technical Data Sheet

### **Description and Applications**

Tenopex®PC FR42B/FR42B(S) which has velvet/matte finish construction, is an opaque black polycarbonate film with excellent flame retardant performance rating at UL94 V-0 at 0.25mm. The product meets critical requirements in terms of physical, mechanical, electrical and thermal properties. Besides, it has good formability and dimensional stability even at high temperature. Its superior product features make it ideal for various insulation applications such as EMI/RFI shielding foil, TV/monitor insulation, computer insulation parts and so on.

### **Typical Property Values**

Property	Test Method	Units	Value
<b>Physical</b>			
Density	ASTM D792	g/cm <sup>3</sup>	1.33
Water Absorption , 24hrs	ASTM D570	%	0.29
<b>Mechanical</b>			
Tensile Strength	ASTM D882	MPa	63
Tensile Elongation at Break	ASTM D882	%	25
Tensile Modulus	ASTM D882	MPa	≥2100
Impact Strength (0.76mm)	ISO 6603-1	J	31
<b>Thermal</b>			
Heat Deflection Temperature at 1.82Mpa	ASTM D648	°C	137
Coefficient of Thermal Expansion	ASTM D696	10 <sup>-5</sup> /°C	7
Coefficient of Thermal Exchange	ASTM C177	W/m.°C	0.19
Shrinkage at 150°C	ASTM D1204	%	1.4
<b>Electrical</b>			
Dielectric Strength	ASTM D149	V	17000



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Surface Resistivity	ASTM D257	$\Omega/\text{square}$	$10^{15}$
Volume Resistivity	ASTM D257	$\Omega.\text{cm}$	$10^{16}$

### UL Flammability

Film thickness < 0.25mm	UL94	VTM-0
Film thickness $\geq$ 0.25mm	UL94	V-0

### Manufacturing Gauge Specifications

Nominal Gauge Ranges	Min/Max Tolerances of Nominal
0.25mm - 0.43mm	+/- 7%
0.5mm - 0.76mm	+/- 5%

These are typical properties and are not intended for specification purposes. If minimum certifiable properties are required, please contact your local sales representative. Reported values are based on 0.250 mm thickness film unless otherwise noted.

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