

## GS42 Technical Data Sheet

### **Description and Applications**

Evergreen Plastics Tenopex® GS42 is an extruded velvet / fine matte polycarbonate film, comprising excellent mechanical and optical properties. It offers high temperature resistance, good dimensional stability with ease of processing for various printings, thermoforming, die cutting, embossing, bonding, bending and others. Typical applications include panel nameplates, membrane touch switches, labels, automotive interior control panels, audio/visual remote-control panels, security cards and so on. The film offers good printability without pre-treatment, making it also suitable for multi-layer printing applications like overlays, in-mold decorations and floor graphics. This surface combination provides glare free and scratch resistant properties.

### **Typical Property Values**

<b>Property</b>	<b>Test Method</b>	<b>Units</b>	<b>Value</b>
<b>Physical</b>			
Density	ASTM D792	g/cm <sup>3</sup>	1.2
Water Absorption, 24hrs	ASTM D570	%	0.35
<b>Optical</b>			
Light Transmission	ASTM D1003	%	≥80
Gloss (@60°, Velvet)	ASTM D523-60		4 – 8
Gloss (@60°, Matte)	ASTM D523-60		5 – 15
<b>Mechanical</b>			
Tensile Strength	ASTM D882	MPa	≥60
Tensile Elongation at Break	ASTM D882	%	100 - 150
Young 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	135
Coefficient of Thermal Expansion	ASTM D696	10 <sup>-5</sup> /°C	7

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Coefficient of Thermal Exchange	ASTM C177	W/m. C	0.19
Shrinkage at 150°C	ASTM D1204	%	1.4

### Electrical

Dielectric Strength	ASTM D149	V	17000
Surface Resistivity	ASTM D257	Ω/square	10 <sup>15</sup>
Volume Resistivity	ASTM D257	Ω.cm	10 <sup>16</sup>

### UL Flammability

Film thickness ≤ 0.25mm	UL94	VTM-2
Film thickness ≥ 0.375mm	UL94	V-2

### Manufacturing Gauge Specifications

Nominal Gauge Ranges	Min/Max Tolerances of Nominal
0.125mm - 0.175mm	+/- 10%
0.25mm - 0.375mm	+/- 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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