

Description and Applications

Evergreen Plastics Tenopex® GS42 is an extruded velvet / matte polycarbonate film, comprising excellent mechanical and optical properties. It offers high temperature resistance, good dimensional stability with ease of processing for various printing, thermoforming, die cutting, embossing, bonding, bending applications. Typical uses include panel nameplates, membrane touch switches, labels, automotive interior control panels, audio/visual remote-control panels, security cards and other applications. 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

Property	Test Method	Units	Value
Physical			
Density	ASTM D792	g/cm ³	1.2
Water Absorption, 24hrs	ASTM D570	%	0.35
Optical			
Light Transmission	ASTM D1003	%	≥80
Gloss (@60°, Velvet)	ASTM D523-60	%	4 – 8
Gloss (@60°, Matte)	ASTM D523-60	%	5 – 15
Mechanical			
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
Electrical			
Dielectric Strength	ASTM D149	V	17000
Surface Resistivity	ASTM D257	Ω/square	10 ¹⁵
Volume Resistivity	ASTM D257	Ω.cm	10 ¹⁶
Thermal			
Heat Deflection Temperature at 1.82Mpa	ASTM D648	°C	135
Coefficient of Thermal Expansion	ASTM D696	10 ⁻⁵ /°C	7
Coefficient of Thermal Exchange	ASTM C177	W/m.°C	0.19
Shrinkage at 150°C	ASTM D1204	%	1.4
UL Flammability			
Film thickness ≤ 0.25mm	UL94		VTM-2
Film thickness ≥ 0.375mm	UL94		V-2
Nominal Gauge Ranges		Min/Max Tolerances of Nominal	
0.125mm - 0.175mm (.005" - .007")		+/- 10%	
0.25mm - 0.375mm (.010" - .015")		+/- 7%	
0.5mm - 0.76mm (.020" - .030")		+/- 5%	

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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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