



The Plastic Films Specialist

Tenopex® GS42 Polycarbonate Technical Data Sheet

Description and Applications

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, forming, die-cutting, embossing, bonding, bending applications. Typical applications include fascia overlays, membrane touch switches and tactile keypads, graphics labels, AV remote control overlays, security cards and more. The film offers good printability without pre-treatment, making it also suitable for in-mold decorations and vibrant advertising 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, 24 hrs	ASTM D570	%	0.29
Optical			
Light Transmission	ASTM D1003	%	80 - 85
Haze	ASTM D1003	%	85 - 92
Mechanical			
Tensile Strength	ASTM D882	MPa	≥ 65
Tensile Elongation at Break	ASTM D882	%	120 - 150
Young Modulus	ASTM D882	MPa	≥ 2100
Impact Strength (0.76mm)	ISO 6603-1	J	30
Electrical			
Dielectric Constant (Test Frequency 60MHz)	ASTM D150	-	2.9
Dielectric Dissipation Factor (60MHz)	ASTM D150	-	0.009
Volume Resistivity (1000VDC @ 1min)	ASTM D257	Ω.cm	2.86 x 10 ¹⁷
Thermal			
Thermal Resistance	ASTM D5470	k.m ² /W	0.002262
Thermal Conductivity	ASTM D5470	W/(m.K)	0.313
Heat Deflection Temperature at 1.82Mpa	ASTM D648	°C	130 - 135
Coefficient of Linear Thermal Expansion	ASTM E831	Um/(m.°C)	68
Specific Heat	ASTM E1269	J/g.°C)	1.094
Vicat Softening Temperature (50N / 50°C/hr)	ASTM D1525	°C	144
UL Flammability			
Film thickness ≤ 0.25mm ; ≥ 0.375mm	UL94		VTM-2 ; V-2
Nominal Gauge Range 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 specifications purposes. If minimum certifiable properties are required, please contact your local sales representative. Reported values are based on 0.250mm thickness film unless otherwise noted.

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