



DuPont Teijin Films™

TEONEX® Q51

Product Description

Teonex® Q51 is biaxially oriented polyethylene naphthalate (PEN) film. It is slightly hazy with excellent handling properties for general purpose. It is commercially available in nominal 48 - 1000 gauge.

Approvals

UL 94 VTM-2 - 100 - 1000 gauge (0.025 - 0.25 mm)

UL Component Registration (RTI = 180/160°C) - Relative Thermal Index (RTI) = 180°C (Elect), 160°C (Mech)

Typical Properties

Available Thickness [Gauge]
48; 1000

Property	Thickness	Value	Units	Test
BARRIER				
WVTR	48	6.7	g/m ² /day	JIS Z0208
ELECTRICAL				
Breakdown Voltage	48	300	KV/mm	JIS C-2318
Dissipation Factor	48	0.003		JIS C-2318 (60Hz @ 25°C)
Dissipation Factor	48	0.005		JIS C-2318 (1KHz @ 25°C)
Dissipation Factor	48	0.005		JIS C-2318 (1GHz @ 25°C)
Permittivity	48	3.0		JIS C-2318 (60Hz @ 25°C)
Permittivity	48	2.9		JIS C-2318 (1KHz @ 25°C)
Permittivity	48	2.9		JIS C-2318 (1GHz @ 25°C)
Surface Resistivity	48	2	10 ¹⁷ Ohm	JIS C-2151 @ 25°C
Volume Resistivity	48	10	10 ¹⁷ Ohm	JIS C-2318 @ 25°C
OPTICAL				
Haze	48	14	%	JIS K6714
Total Light Transmission (TLT)	48	82	%	JIS K6714
UV Light Permeability @ 360 nm	48	8	%	TDF Method
PHYSICAL				
C.O.F. (dynamic)	48	0.3		JIS C2151
C.O.F. (static)	48	0.3		JIS C2151
Density	48	1.36	g/cm ³	JIS C-2151
Elongation at Break MD	48	90	%	JIS C-2318 (Modified to TDF)
Elongation at Break TD	48	85	%	JIS C-2318 (Modified to TDF)
F5-MD	48	19	kpsi	TDF Method
F5-TD	48	19	kpsi	TDF Method
Moisture Absorption	48	0.3	%	TDF Method
Surface Roughness	48	13/11	nm	TDF Method (Inside/Outside)
Tear Propagation MD	48	1.3	lb	JIS-P8116
Tear Propagation TD	48	1.3	lb	JIS-P8116
Tensile Modulus MD	48	40	kpsi	JIS C-2318 (Modified to TDF)
Tensile Strength TD	48	38	kpsi	JIS C-2318 (Modified to TDF)
Wettability (water angle)	48	70	degree	TDF Method
THERMAL				
Coefficient of Hydrolytic Expansion	48	11	10 ⁻⁶ /RH%	TDF Method
Glass Transition (Tg)	48	250	°F	DSC
Melting Point	48	516	°F	DSC
Shrinkage MD (150°C)	48	0.4	%	JIS C-2318 (Modified to TDF)
Shrinkage MD (200°C)	48	2	%	Unrestrained @ 200°C/10 min
Shrinkage TD (150°C)	48	0.0	%	JIS C-2318 (Modified to TDF)

Shrinkage TD (200°C)	48	1	%	Unrestrained @ 200°C/10 min
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Contact Info

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Disclaimer

Note: These values are typical performance data for DuPont Teijin Films' polyester film; they are not intended to be used as design data. We believe this information is the best currently available on the subject. It is offered as a possible helpful suggestion in experimentation you may care to undertake along these lines. It is subject to revision as additional knowledge and experience is gained. DuPont Teijin Films makes no guarantee of results and assumes no obligation or liability whatsoever in connection with this information. This publication is not a license to operate under, or intended to suggest infringement of, any existing patents.

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