



# DuPont Teijin Films™

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## MELINEX® ST506

### Product Description

MELINEX® ST506 is a crystal clear, high gloss, heat stabilized polyester film. It is pretreated on both sides for improved adhesion. It can be overprinted with a wide range of solvent-based graphic inks and varnishes, silver conductive and dielectric inks. It is ideally suited for graphic and certain circuitry layers in membrane touch switches.

Our process of continual improvement in quality and specification now enables us to provide the following properties and benefits:

- \* Heat stabilized to give excellent dimensional stability at temperatures up to 302°F.
- \* Excellent adhesion to a wide range of solvent based inks, graphics inks and varnishes, silver conductive inks and dielectrics.
- \* Excellent durability and toughness giving long lasting switches, particularly when compared with polycarbonate.
- \* Greatly superior solvent resistance to polycarbonate, making MELINEX® ST506 particularly suitable for use in many industrial applications.

### Approvals

**UL 94 VTM-2** - for 300 - 700 gauge (0.073 - 0.18mm)

### Typical Properties

Available Thickness [Gauge]
500; 700

Property	Thickness	Value	Units	Test
<b>ELECTRICAL</b>				
Dielectric Constant		2.9		ASTM D150
Dielectric Strength		3000	volts/mil	ASTM D149
Surface Resistivity		10 <sup>13</sup>	Ohms/sq	ASTM D257
Volume Resistivity		10 <sup>15</sup>	Ohms-m	ASTM D257
<b>OPTICAL</b>				
Gloss 60 Degrees		150		ASTM D1003
Haze	500	0.7	%	ASTM D1003
Haze	700	0.9	%	ASTM D1003
Total Light Transmission (TLT)	500	91.0		ASTM D1003
Total Light Transmission (TLT)	700	90.0		ASTM D1003
<b>PHYSICAL</b>				
C.O.F. (static)		<0.70		ASTM D1894
Elongation at Break MD	500 - 700	170	%	ASTM D882
Elongation at Break TD	500 - 700	110	%	ASTM D882
Flexural Strength	500	>20,000	cycles	ASTM D2176
Flexural Strength	700	>15,000	cycles	ASTM D2176
Tensile Strength MD (break)	500 - 700	27,000	psi	ASTM D882
Tensile Strength MD 5%	500 - 700	14,000	psi	ASTM D882
Tensile Strength TD (break)	500 - 700	30,000	psi	ASTM D882
Tensile Strength TD 5%	500 - 700	14,000	psi	ASTM D882
<b>THERMAL</b>				
Coefficient of Hygroscopic Expansion		6X10 <sup>-6</sup>	in/in %RH	40% - 80% RH
Coefficient of Thermal Expansion		10x10 <sup>-6</sup>	in/in/°F	(68 - 122°F)

Melting Point (PEAK)		265	°C	
Shrinkage MD (150°C)	500 - 700	0.05	%	Unrestrained @ 150°C/30 min
Shrinkage TD (150°C)	500 - 700	0.0	%	Unrestrained @ 150°C/30 min

### 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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