



**MELINEX® ST505**

**Product Description**

Melinex® ST505 is a crystal clear, high gloss, heat stabilized polyester film based on Melinex® 505. 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® ST505 particularly suitable for use in many industrial applications.

Melinex® ST505 is an unknurled film which is available in knurled form as Melinex® ST506. Both are available for membrane touch switches.

**Approvals**

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

**Typical Properties**

<b>Available Thickness [Gauge]</b>
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	0.03	%	ASTM D1003
Haze	700	0.03	%	ASTM D1003
TLT	500	88.0		ASTM D1003
TLT	700	87.0		ASTM D1003
<b>PHYSICAL</b>				
C.O.F. (static)		<0.70		ASTM D1894
Flexural Strength		>20,000	cycles	ASTM D2176
Flexural Strength		>15,000	cycles	ASTM D2176
Flexural Strength	500	>20,000	cycles	ASTM D2176
Flexural Strength	700	>15,000	cycles	ASTM D2176
<b>THERMAL</b>				
Coefficient of Hygroscopic Expansion		8 x 10 <sup>-8</sup>	in/in %RH	40% - 80% RH
Coefficient of Thermal Expansion		10 x 10 <sup>-6</sup>	in/in/°F	(68 - 122 °F)
Melting Point (PEAK)		265	°C	

Shrinkage MD (150°C)	500 - 700	0.15	%	Unrestrained @ 150°C/30 min
Shrinkage TD (150°C)	500 - 700	0.15	%	Unrestrained @ 150°C/30 min

## Contact Info

DuPont Teijin Films U.S. Limited Partnership  
1 Discovery Drive  
P.O. Box 411  
Hopewell, VA 23860 USA  
Tel: (800) 635-4639  
Fax: (804) 530-9867

## 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.

CAUTION: Do not use in medical applications involving permanent implantation in the human body ([DuPont Teijin Films Medical Policy](#)). For other medical applications, see the [Medical Caution Statement](#). DuPont Teijin Films accepts no liability for use of its products in medical applications not reviewed and approved by DuPont Teijin Films or for product misuse. DuPont Teijin Films supplies products to an agreed specification and does not manufacture products designed specifically for medical end use.

Melinex®, Mylar®, and Cronar® are registered trademarks of DuPont Teijin Films U.S. Limited Partnership. Teijin® and Teton® are registered trademarks of Teijin Limited and are licensed to DuPont Teijin Films U.S. Limited Partnership. Teonex® is a registered trademark of Teijin DuPont Films Japan Limited and is licensed to DuPont Teijin Films U.S. Limited Partnership.