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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

Available Thickness [Gauge]
500; 700

Property	**Thickness**	**Value**	**Units**	**Test**
ELECTRICAL				
Dielectric Constant		2.9		ASTM D150
Dielectric Strength		3000	volts/mil	ASTM D149
Surface Resistivity		10^13	Ohms/sq	ASTM D257
Volume Resistivity		10^15	Ohms-m	ASTM D257
OPTICAL				
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
PHYSICAL				
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
THERMAL				
Coefficient of Hygroscopic Expansion		8 x 10-8	in/in %RH	40% - 80% RH
Coefficient of Thermal Expansion		10 x 10-6	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