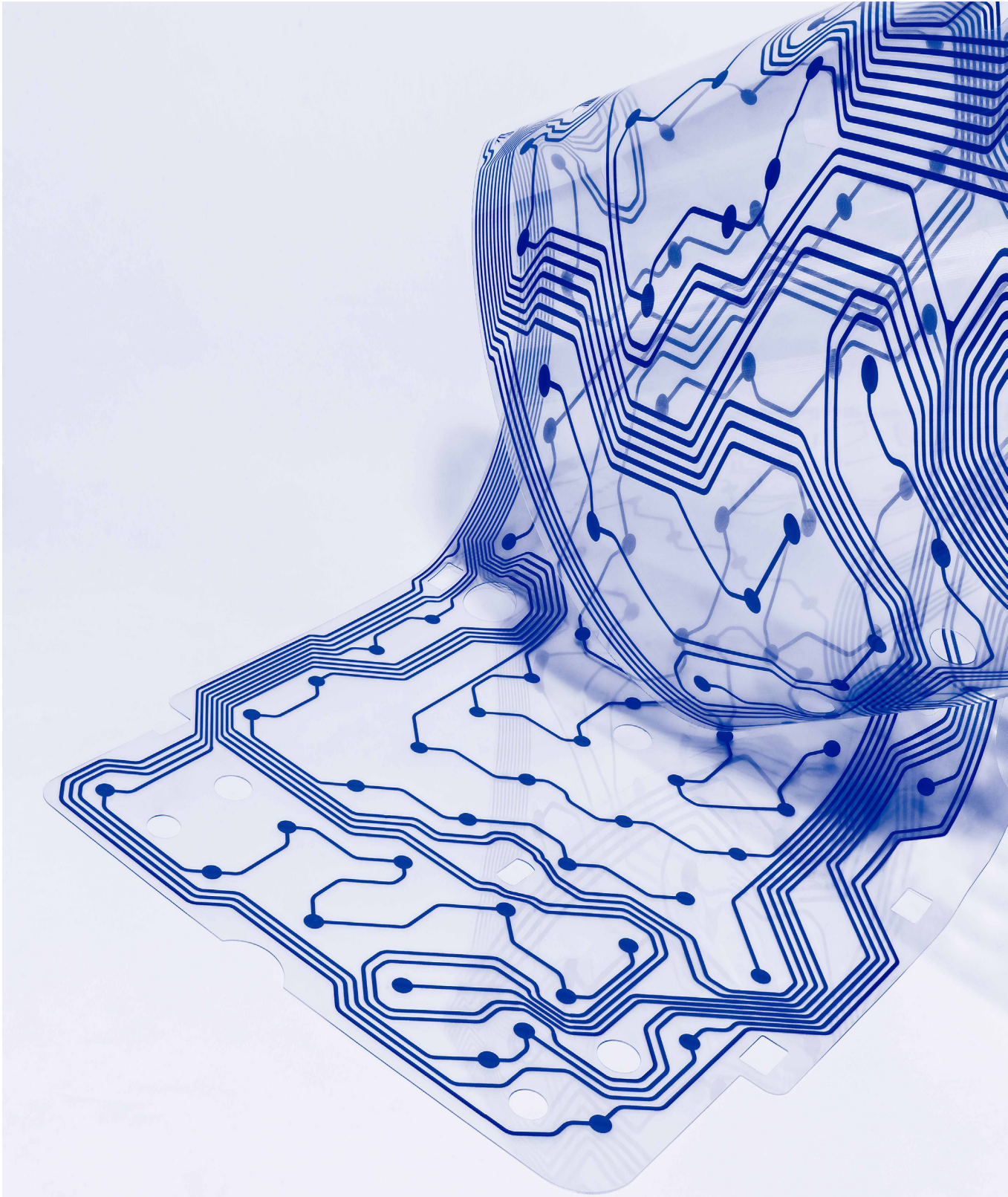




Mylar[®]
Specialty Films

Polyester Films for Printed and Flexible Electronics



PET and PEN Films for Flexible Electronics

Continued advances in Printed and Flexible Hybrid Electronics have required material suppliers to deliver improved functionality to the device developers in broad applications such as sensors, displays, barrier films, photovoltaics, medical diagnostics, consumer electronics, HMI (Human Machine Interface), and Flexible Printed Circuits (FPCs). We offer the widest variety and best performing range of films specifically designed for use in flexible and printed electronic applications.

Polyester Film is the optimal choice for Touch Screens, Light Collimated Films, Holographic Reflector Films, Polarizing Films, Diffusing Films, EMI Shielding Films, and Anti-Fingerprint, Anti-Scratch and Hard-coated Films. It is strong and flexible, resistant to heat, abrasion, chemicals and moisture. It has a smooth, clean surface, which is ideal for ITO sputtering or other optical coatings. It is available in thermally stabilized grades to offer superior registration and flatness. It is the material of choice for display applications requiring precise registration and dimensional control.

Flexible Printed Circuits (FPC) and Flat Flexible Cables (FFC)

- Films for copper laminates and adhesive overlays.
- Applications in automobile wiring, appliances, RFID tags, smart card leave frames and antennae.

Membrane Touch Switch (MTS)

- Films for circuit, graphics and spacer layers.
- Applications in automotive seat sensors, industrial and domestic equipment, keyboards, mobile phones.

Flexible Electronics

- Films for ITO sputtering and hard coating.
- Applications in touch screens, electroluminescent lamps, flexible displays.

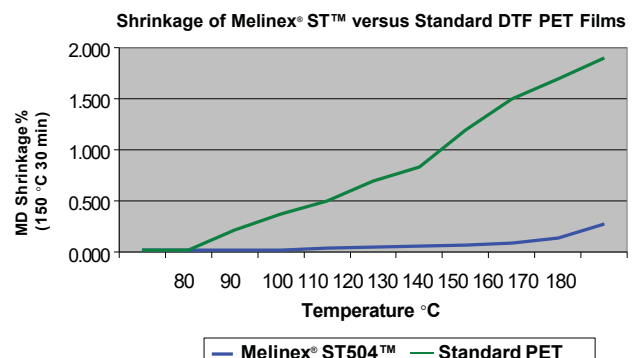
Batteries and Fuel Cells

- Films for busbar insulation, control circuits, heaters, pouches and electrical insulation.
- PolyEthylene Naphthalate (PEN) films for fuel cell gaskets.

Melinex[®] ST Films

- Predictable dimensional changes with variable heat and moisture
- Superior sheet flatness for better web handling and higher yields
- High tensile strength and stiffness to permit higher processing speeds
- Resistance to moisture and chemicals in demanding applications
- Engineered surfaces with primer systems to resolve difficult adhesion challenges

By applying a proprietary thermal stabilization technology which enables higher temperature film processing and versatility in a wide range of customer processes and applications, Melinex[®] ST[™] films widen the working temperature of PET films from approximately 185°F (85°C) to 302°F (150°C) or higher.



| Film Type | Thickness Micron (gauge) | Surface Pretreat | Typical Applications |
|---|--------------------------|------------------------------------|--|
| Standard films, for use when shrinkage is not critical or where film is stabilised in-house | | | |
| Mylar® A | 12-500 (48-2000) | None | Strong, durable, hazy film with excellent handleability for general electronics applications. |
| Mylar® ADS | 50-125 (200-500) | None | Lower shrinkage version of Mylar® A, suitable for FPC and MTS circuitry. |
| Mylar® 250 | 52 (205) | None | Black PET film, UV stable, improved resistance to hydrolysis |
| Melinex® 329 | 36-330 (142-1300) | None | White PET film with high opacity for sputtering and other deposition processes. |
| Melinex® 339 | 50-330 (200-1300) | 2-side adhesion | White PET film with high opacity and excellent printability and ink adhesion |
| Melinex® OD | 125-250 (500-1000) | None | Optically clear to MTS graphics. |
| Melinex® 453 Melinex® 454 | 36-175 (142-700) | 1-side adhesion 2-side adhesion | Optically clear film with excellent handling properties. Pretreated on one or two sides to promote adhesion to many printing inks and industrial coatings. |
| Melinex® 506 | 75-250 (300-1000) | 2-side adhesion | Optically clear with excellent printability and ink adhesion |
| Melinex® 715 Melinex® 725 | 125-250 (500-1000) | 1-side adhesion 2-side adhesion | Optically clear films, pretreated on one or two sides for excellent adhesion to UV inks and lacquers. |
| Melinex® 726 | 175 (700) | 2-side adhesion | Optically clear with superb adhesion to circuitry inks for MTS applications |
| Melinex® TCH24UV | 125 (500) | 2-side adhesion | Clear, low bloom, with UV inhibitor for touch and other display applications. |
| Melinex® FR240 Melinex® FR241 | 12-50 (48-200) | None 1-side adhesion | Halogen-free, Flame Retardant (VTM-0) clear handleable film. |
| Melinex® FR321 | 75-175 (300-700) | 1-side adhesion | Halogen-free, Flame Retardant (VTM-0) optically clear film |
| Novel Development Films | | | |
| Melinex® PCS Melinex® PCS UV | 125 (500) | None | Optically clear "Peelable Clean Surface" for high barrier films. Also available with UV stability. |
| Melinex® D784 | 200,250 (800,1000) | 1-side adhesion | Thermoformable PET, suitable for use in automotive, white goods, consumer electronics and In-Mould Electronics. |
| Kaladex® 2000 | 16-25 (63-500) | None | High performance PEN film for applications where greater temperature endurance is required. |
| Kaladex® 2000L | 25-125 (98-500) | None | High performance PEN film with optimised lower shrinkage at elevated temperatures, particularly suitable for applications in flexible circuitry and fuel cell gaskets. |
| Heat Stabilised optically clear films with very low shrinkage, where ultimate PET film performance is required | | | |
| Melinex® ST504 | 125-175 (500-700) | 1-side adhesion | Optically clear with adhesion pre-treat, developed for ITO sputtering and other deposition processes. |
| Melinex® ST506 | 125-250 (500-1000) | 2-side adhesion | Optically clear with excellent printability and ink adhesion suitable for MTS graphics and circuitry applications. |
| Melinex® ST507 | 50-125 (200-500) | None | Hazy film for FPC applications, ideal for use with low temperature solder reflow. |
| Melinex® ST725 | 125-250 (500-1000) | 2-side adhesion | Optically clear film with excellent adhesion to industrial coatings, especially multi-pass UV curing. |
| Melinex® ST726 | 175 (700) | 2-side adhesion | Optically clear with superb adhesion to circuitry inks for MTS applications. |
| Melinex® STCH21 Melinex® STCH22 | 50-100 (200-400) | 1-side adhesion 2-side adhesion | Optically clear films with excellent handling properties. Pretreated on one or two sides, developed for ITO sputtering and other deposition processes. Suitable for MTS graphics and circuitry applications. |
| Melinex® STCH22UV | 50-100 (200-400) | 2-side adhesion | Optically clear, with UV inhibitor for touch and other display applications. |



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