

# Film & Smart Surface Solutions



Film Solutions for Membrane  
Switches, Keyboards, Fascia Panels,  
Touch Screens, Optical Displays  
and Printed Electronics



**MacDermid Alpha**  
ELECTRONICS SOLUTIONS



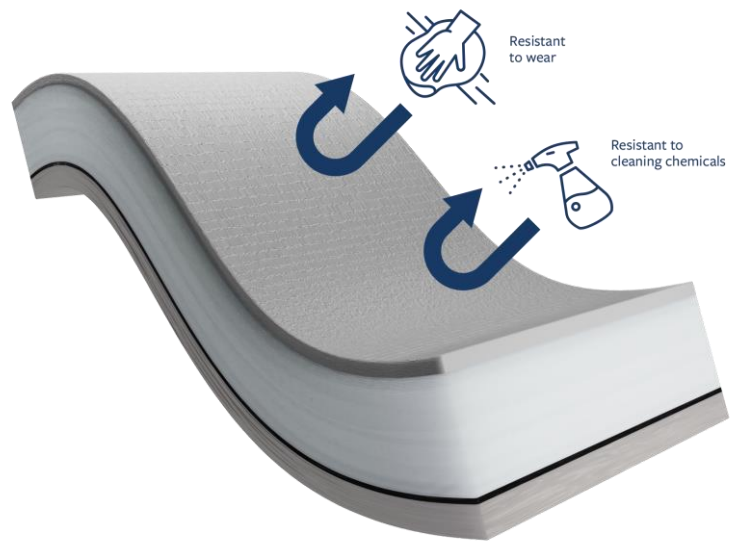


## FILM & SMART SURFACES TECHNOLOGY

MacDermid Alpha is at the forefront of film hardcoating technology and continues to embrace leading edge chemical and manufacturing technology to support its customers with innovative, high-quality film products.

The unique and proprietary hardcoating technology of MacDermid Alpha films offer an exceptional combination of durability and flexibility along with a range of stunning touch and optical properties. These properties present customers with the ideal solution to a problem found in many industries; that of presenting rich and true graphics and digital displays yet protecting them from everyday touch and cleaning.

The films are renowned for their graphics, high abrasion and chemical resistance, clear windows and switch life in excess of 5 million actuations.



The product range comprises specialty films with antimicrobial protection, resistance to UV light and humidity, antiglare, textured and gloss finishes. Most films can easily integrate windows and embossed switches and are available with a variety of primers for screen and digital printing, including UV cured inks and the HP Indigo process.

### KEY APPLICATIONS

- Membrane touch switches
- Fascia panels
- Electronic displays
- Surface Protection
- Flexible Circuits
- Automotive instrument panels
- Diagnostic test strips
- Smart cards
- Mobile phone cases
- Nameplates and decals



## AUTOTEX FILM RANGE

**Autotex** is a range of printable textured polyester (PET) and polycarbonate (PC) films designed to offer a tough and durable but tactile surface for use on MTS overlays, fascia panels and product nameplates. **Autotex** films offer the MTS designer complete flexibility. They are extremely durable offering resistance to scratching, scuffing, chemicals and solvents and can be embossed providing extensive switch life performance. To give total design flexibility Autotex can be selectively printed with Windotex lacquer to provide transparent gloss or antiglare windows.

### Autotex

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**Autotex (PET)** is available in Fine, Velvet, Touch, Steel and Softouch finishes in a range of thicknesses and with solvent and UV ink primer options for screen and digital UV cured printing.

**Autotex PC** is designed specifically for touchpad applications. Coated on polycarbonate film, the hardcoat is finished with a consistently smooth texture (Fine or Touch) which is ideal for touchpads. The surface is abrasion and chemical resistant to give excellent longevity in use.

### Autotex AM

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**Autotex AM** offers the additional benefit of embedded Microban® antimicrobial technology, a proven and trusted system that inhibits the growth of potentially harmful bacteria, mold and mildew over the life of the film. Available with Fine and Touch surface textures.

### Autotex XE

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**Autotex XE** has been specifically developed for outdoor use. Available in Fine and Velvet textures, it is capable of withstanding high temperatures and high humidity conditions as well as UV light.

### Windotex

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Windotex is a screen printable UV curable window printing lacquer available in gloss and antiglare finishes. Windotex is designed for use with **Autotex** and produces clear, attractive display windows that are both scratch and chemical resistant.







## AUTOFLEX FILM RANGE

**Autoflex** is a range of hard coated polyester and polycarbonate films available in gloss and antiglare finishes. Both film types are screen and digital printable and receptive to Fototex texturing lacquer. **Autoflex** films are used in a wide range of products including flat panel display units, touch screens, mobile phone lens applications, smart cards, electro luminescent lamp displays and MTS. These applications require the film to be tough, durable but offer exceptional clarity and cosmetic quality. Autoflex films meet these requirements.

### Autoflex EB

**Autoflex EB** is a hard coated polyester film range developed to offer a combination of high abrasion, chemical and solvent resistance, together with excellent optical properties and flexibility. These films can be embossed whilst offering extended switch life. Available in gloss and antiglare finishes and with solvent and UV ink primer options for screen and digital printing including UV curable inks.

### Autoflex PC

**Autoflex PC** is a hard coated polycarbonate film range providing a high level of scratch resistance, outstanding clarity, low haze and low yellowness even in films with a thickness in excess of 500 micron. Autoflex PC is available with a gloss or antiglare finish.



## Fototex

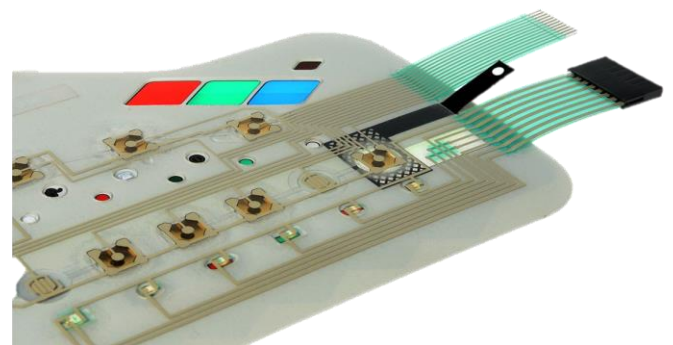
Fototex is a UV curable texturing lacquer designed for use with all Autoflex films or uncoated polycarbonate. Fototex offers a simple and cost-effective method for producing a range of surface textures. When printed on automotive dials Fototex can be used to produce flat matt, non-reflective finishes. Fototex is available in a range of finishes for conventional UV curing units or Linde type/Nitrogen curing units.

## PRINT & PEEL

Print & Peel is a water based, screen printable lacquer designed to be selectively printed onto a wide range of surface finishes to act as an easily removable protective mask. Print & Peel is the alternative solution to expensive and difficult to position over laminates. It protects surfaces from scratches and scuffs during production processes and shipment.

## AUTOSTAT

Autostat is a range of heat stabilized polyester film used for the circuitry layers of smart surfaces such as in-mold electronics (IME), membrane touch switches, keyboards and keypads.



Heat stabilization allows the circuit printer to cure conductive inks at high temperatures with minimal effect on the registration or the lay-flat characteristics of the film.

## FLEXIBLE & FORMABLE INKS

A range of Conductive Silver Inks, Carbon Inks, and Dielectric Inks that are screen printable, low temperature curable, for adhesively laminated Flexible Printed Circuits (FPCs).

# Industrial Film Range Summary

<b>Product</b>	<b>Surface Finish</b>	<b>Gauge (<math>\mu\text{m}</math>)</b>
<b>Autotex</b>	<i>Fine, Touch, Velvet, Softouch, Steel</i>	150, 200, 280
<b>Autotex PC</b>	<i>Fine, Touch</i>	280, 400, 500
<b>Autotex AM</b>	<i>Fine, Touch</i>	150, 200
<b>Autotex XE</b>	<i>Fine, Velvet</i>	150, 200
<b>Windotex</b>	<i>Gloss, Antiglare</i>	
<b>Autoflex EB</b>	<i>Gloss, Antiglare</i>	130, 180, 250
<b>Autoflex PC</b>	<i>Gloss, Antiglare</i>	180, 250, 380, 480
<b>Fototex</b>	<i>Matt, Supermatt</i>	
<b>Autotstat</b>	<i>Clear, Hazy, White</i>	75, 100, 125, 175, 250, 500
<b>Print &amp; Peel</b>	NA	NA







# Film & Smart Surface Solutions

## CONTACT US

**We would be delighted to hear from you!**

- Data sheets
- Processing guides
- Samples
- Prices and availability

Are all available.

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