

Polyester film is tougher and more durable than polycarbonate and PVC film. It offers enhanced chemical resistance and dramatically improved flex life. The Autotex DP range of textured polyester films extends the functionality of polyester film into areas demanding high abrasion resistance and flexibility together with excellent receptivity to HP Indigo digital inks and windowing lacquers.

#### PRODUCT DESCRIPTION

Autotex DP is a high quality textured film, consisting of a polyester base coated with a flexible chemically bonded, UV-cured textured coating. The primer surface on Autotex DP has been developed to be receptive to the Hewlett Packard Indigo digital printing presses.

#### Product range:

Autotex Fine	F150, F200
Fine texture	150 and 200 micron

#### Primer:

Autotex DP has an ink adhesion primer on the second surface. This primer confers excellent adhesion to Hewlett Packard Indigo Digital printing presses (S2000, WS2000, WS4050).

#### Windows:

Autotex DP can be screen printed with Windotex to obtain a clear window (see Windotex product data sheet).

#### PRODUCT APPLICATIONS

Autotex DP is used as a substrate in the following applications:

Membrane switch overlays  
Surface applications (doors, worktops, etc)  
Nameplates  
Labels/Product marking  
Fascia panels

#### Major Benefits

- Long flex life
- Chemical and household cleaner resistance even at the edges
- Clear window facility
- Embossable
- Excellent scratch resistance
- Consistent low gloss, textured surface
- Attractive appearance



**CHEMICAL PROPERTIES**

Property	Autotex DP	Test Method
Chemical Resistance	Resistant to: Alcohols Dilute Acids Dilute Alkalis Esters Hydrocarbons Ketones Household Cleaning Agents*	DIN 42 115
Coefficient of hygroscopic expansion <sup>1</sup>	MD $8 \times 10^{-6}$ (per 1% RH) TD $7 \times 10^{-6}$ (per 1% RH)	DuPont Teijin Films Method <sup>1</sup> Between 40-80% RH
Moisture vapour transmission rate (MVTR) <sup>1</sup>	3.57g/m <sup>2</sup> /24 hours	ASTM F372-73
Oxygen transmission rate <sup>1</sup>	8.2ml/m <sup>2</sup> /24 hours	ASTM D1434-82 @ 25 °C, 77% RH

<sup>1</sup> Typical data derived from DuPont Teijin Films literature for 125µ Melinex OD.

<sup>2</sup> The Autotex coating slightly enhances most properties. \* For more detailed information refer to Autotex Solvent Resistance Sheet.

**ELECTRICAL PROPERTIES**

Property	Autotex DP	Test Method
Dielectric strength <sup>1</sup>	13.5 kV	ASTM D149-81 6.35mm electrodes in dry air @ 25 °C
Dissipation factor <sup>1</sup>	0.005	ASTM D150-70
Surface resistivity	$>10^{13}$ Ω/sq 500Vd.c	ASTM D257-83 @ 20°C/54% RH
Volume resistivity <sup>1</sup>	$10^{15}$ Ωm 100Vd.c	ASTM D257-83 @ 25°C/1000s

<sup>1</sup> Data derived from DuPont Teijin Films literature for 125µ Melinex OD.

<sup>2</sup> The Autotex coating slightly enhances most properties.

**MECHANICAL PROPERTIES**

Property	Autotex DP	Test Method
Youngs modulus <sup>1</sup>	3700N/mm <sup>2</sup>	ASTM D882
Elongation at break <sup>1</sup>	70%	ASTM D1505
Switch life <sup>3</sup>	>1 million flexes	MacDermid Autotype Method <sup>2</sup>
Tensile strength at break <sup>1</sup> 125µ	150N/mm <sup>2</sup>	ASTM D882
Tensile strength at yield point <sup>1</sup>	100N/mm <sup>2</sup>	ASTM D882
Tear Strength <sup>1</sup>	350N/mm <sup>2</sup>	ASTM D882

<sup>1</sup> Data derived from DuPont Teijin Films literature for Melinex OD

<sup>2</sup> See Test Method Manual

<sup>3</sup> Sample film was printed with UV ink (block print), embossed and actuated to 1 million flexes.



**OPTICAL PROPERTIES**

Property	Autotex DP	Test Method
Gardner Haze Fine	58% ±5%	ASTM D1003-77 <sup>1</sup>
Gloss Level (60°) Fine	7% ±1.5%	ASTM D2457-03 <sup>1</sup>
Texture profile Ra Fine Rtm Fine	1.6μ ±0.2μm 8μ ± 2μm	MacDermid Autotype Method <sup>2</sup>
Total luminous transmission	92% ±2%	ASTM D1003-77 <sup>1</sup>
UV absorption	1.3 - 1.4	MacDermid Autotype Method <sup>2</sup> (365nm narrow pass filter)
Yellowness index <sup>2</sup>	<3	ASTM E313

<sup>1</sup> Adapted to MacDermid Autotype Method, see Test Method Manual

<sup>2</sup> See Test Method Manual

**PHYSICAL PROPERTIES**

Property	Autotex DP	Test Method
Relative Density <sup>1</sup>	1.39 g/cm <sup>3</sup>	ASTM D1505
Thicknesses F157 F207	150μ ±10% 200μ ±10%	MacDermid Autotype Method <sup>2</sup>

<sup>1</sup> Data derived from DuPont Teijin Films literature for Melinex OD

<sup>2</sup> See Test Method Manual

**THERMAL PROPERTIES**

Property	Autotex DP	Test Method
Coefficient of thermal expansion <sup>1</sup>	0.002%/degree	DuPont Teijin Films Method <sup>1</sup>
Coefficient of humidity expansion <sup>1</sup>	0.009%/RH	DuPont Teijin Films Method <sup>1</sup>
Dimensional stability	0.2% maximum shrinkage MD at 120 °C	MacDermid Autotype Method <sup>2</sup>
Maximum processing temperature	120 °C	
Maximum use temperature	Low humidity (<10%RH) 85 °C High humidity (10-95%RH) ≤60 °C	
Minimum use temperature	-40 °C (-40F)	MacDermid Autotype Method <sup>2</sup>

<sup>1</sup> Data derived from DuPont Teijin Films literature for Melinex OD

<sup>2</sup> See Test Method Manual



## OZONE DEPLETING SUBSTANCES

EC Regulation 594/91 classifies ozone depleting substances into a number of different groups, I-VI. Autotex DP does NOT contain any substance classified in groups I-VI nor have any of the substances been used by MacDermid Autotype during manufacture. For details of the content of each of the groups, please see separate ozone depleting substances document.

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