



# Melinex®

polyester film

MXTD100 Issue 2

## Melinex® O and Melinex® OD

Melinex O is a sparkling clear film suitable for applications where very high transparency (or reflectivity when metallised) is more important than the best handling qualities. It is available in thicknesses of 125, 175 and 250 microns.

When supplied as a knurled reel the film is referred to as OD

### TYPICAL VALUES OF PROPERTIES

Property	Test Method	Unit	Value		
<b>General</b>			<b>125µm</b>	<b>175µm</b>	<b>250µm</b>
Area Yield	--	m <sup>2</sup> /kg	5.7	4.0	2.9
Relative Density (at 23°C)	ASTM D 1505-79 (modified to Melinex test method)	--		1.4	
<b>Thermal</b>					
Upper Melt temperature	ASTM E794-85	°C	255 - 260		
Coefficient of thermal expansion (between 20 and 50°C)		(cm/cm deg C)	19 x 10 <sup>-6</sup> (MD)		
		(cm/cm deg C)	16 x 10 <sup>-6</sup> (TD)		
Shrinkage (after 5mins at 190°C)		%	MD	TD	
			3	3	
<b>Mechanical</b>			MD*	TD**	
Tensile strength at break	ASTM D 882-83 (23°C at 50% RH Strain Rate 50% min)	kgf/mm <sup>2</sup>	20	20	
Elongation at break	As above	%	125	80	
<b>Optical</b>					
Haze	ASTM D1003-77 (Measured on Gardner Hazemeter)	%	<b>125µm</b>	<b>175µm</b>	<b>250µm</b>
			0.4	0.7	1.5
Total luminous transmission (TLT)	As Above	%	89.5	89.2	88.7

Electrical			125µm	175µm	250µm
Dielectric strength	ASTM D 149-81 (6.35 electrodes in dry air at 25°C)	Kv/mm	125	105	no data avail
Surface resistivity	ASTM D 257-83 (500V dc at 20°C an 54% rh)	ohm/		>10 <sup>13</sup>	
Volume resistivity	ASTM D 257-83 (100V dc at 25°C and 1000s)	ohm m		10 <sup>15</sup>	
Permittivity	ASTM D 150-81	--	3.26		
23°C, 50Hz		--	3.24		
23°C, 1kHz		--	3.21		
23°C, 10kHz		--	3.26		
0°C, 50Hz		--	3.27		
50°C, 50Hz		--	3.35		
100°C, 50Hz		--	3.65		
150°C, 50Hz					
Power factor	ASTM D 150-81	--	0.002		
23°C, 50Hz		--	0.0055		
23°C, 1kHz		--	0.011		
23°C, 10kHz		--	0.004		
0°C, 50Hz		--	0.0015		
50°C, 50Hz		--	0.01		
100°C, 50Hz		--	0.006		
150°C, 50Hz					

1µm = 1 micron = 0.001 mm approx. 4 gauge

\*MD = Machine Direction

\*\*TD = Transverse Direction

Enquiries should be addressed to:

DuPont Teijin Films (Luxembourg) SA  
L-2984 Luxembourg  
Telephone: +352 26164004  
Fax No: +352 2616 5000

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**Caution:** Do not use in medical applications involving permanent implantation in the human body. For other medical applications, see "DuPont Teijin Films Medical Caution Statement", H-50102-DTF.

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