



Melinex®

polyester film

MX TD 215 ISSUE NO 2

Melinex® 401 CW

Melinex® 401 CW is a sparkling clear film with good handling qualities. The film, specially treated to give a slippery surface on one side, is suitable for carton window applications and complies with the compositional requirements of the European Union and individual member state's regulations and recommendations for contact with food. It complies compositionally with comparable USA requirements. Melinex® 401 CW is supplied in knurled reel form and is currently available at 50, 75, 100, micron.

Melinex® is the trade mark of DuPont's range of polyester films based on polyethylene terephthalate.

TYPICAL VALUES OF PROPERTIES (Based on 75µm Melinex® 401 CW)

Property	Test Method	Unit	Value
General			
Area Yield		m ² /kg	9.5
Relative Density	ASTM D 1505-79 (modified to Melinex test method)		1.4
Mechanical			MD* TD**
Tensile strength at break	ASTM D 882-83 (23°C at 50% rh strain rate 50%min)	kgf/mm ²	20 26
Elongation at break	As above	%	125 80
Slip (coefficient of static friction)	ASTM D 1894-78 (modified to Melinex test method)	treated to untreated untreated to untreated	0.5 >1.0
Optical			
Haze	ASTM D 1003-78 (measured on Gardner Hazemeter)		0.3
Total Luminous Transmissions (TLT)	ASTM D 1003-77 (measured on Gardner Hazemeter)	%	88.3
Thermal			
Upper melt temperature	ASTM E794-85	°C	255 - 260
Coefficient of thermal expansion (between 20 and 50°C)		1/K (cm/cm deg C)	19 x 10 ⁻⁶ (MD) 19 x 10 ⁻⁶ (TD)
Shrinkage (after 5mins at 190°C)		%	1.1(MD) 0.7(TD)

Electrical			
Dielectric strength	IEC 243 (0.25 inch electrodes in dry air at 25°C)	Kv/mm	160
Surface resistivity	IEC 93 (500V dc at 20°C an 54% rh)	ohm/	>10 ¹³
Volume resistivity	IEC 93	ohm m	10 ¹⁵
Chemical resistance		Untreated side	Treated side
Dilute acids and alkalis		Good	Good
Concentrated alkalis		Poor	Poor
Concentrated hydrochloric acid		Fair	Fair
Concentrated sulphuric acid		Poor	Poor
Greases, oils and fats		Good	Good
Organic solvents, alcohols and hydrocarbons		Good	Good
Ketones, esters and chlorinated compounds		Fairly good	Poor
Phenols, cresols and chlorinated compounds		Poor	Poor

1µm = 1 micron = 0.001 mm approx. 4 gauge, *MD = Machine Direction, **TD = Transverse Direction

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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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