Product Information

DuPont Teijin Films™

Melinex®

polyester film

Melinex® 226/227

Melinex® 226 is a white film both surfaces of which are semi-matt. It has been specially developed for use as an electrical insulation material in rotating electrical machines. It is available in a range of thicknesses between 125 to 350 microns.

A low extractables grade (Melinex® 238) is also available for hermetic motor applications where oligomer extraction needs to be limited.

Melinex® product code 227 identifies film which is supplied as spooled directly from the production line.

TYPICAL VALUES OF PROPERTIES

Property	Test Method	Unit	Value			
General						
Thickness	---	micron	125	190	250	350
Area Yield	---	m^2/kg	5.7	3.8	2.9	2
Relative Density (at 23°C)	ASTM D 1505-79 (Modified to Melinex test method)	--	1.4			
Water absorption	ASTM D 570-81 (1 week at 23°C)	%	0.55			
Oligomer extraction	24 hours boiling xylene (soxhlet)	%	1.5			
Thermal			MD		TD	
Shrinkage	190°C for 5 minutes	%	2		2	
Coefficient of thermal expansion (between 20°C and 50°C)		1/K (cm/cm deg C)	$36x10^{-6}$		$23x10^{-6}$	
Specific Heat (at 25°C)		kJ/kg deg K	1.3			
		cal/g dec C	0.32			
Mechanical			MD		TD	
Tensile strength at break	ASTM D 882-83 (23°C at 50% rh Strain rate 50%/min)	kgf/mm^2	18		20	
Elongation at break	as above	%	150		130	
Slip (coefficient of static friction)	ASTM D 1894-78 (Modified to Melinex test method)	--	0.3			

Electrical		micron	125	190	210	250	350
Breakdown Voltage	IEC 243 (50 Hz continuously increasing at 500 V/sec 6.3mm electrodes)	kV	16	19	20	23	26
Surface resistivity	IEC 93 (500 V dc at 20°C and 54% RH)	ohm/	$>10^{13}$				
Volume resistivity	IEC 93 (100 V dc at 25°C and 1000s)	ohm m	10^{15}				
Permittivity	**IEC 250**						
23°C, 50Hz		--	3.26				
23°C, 1kHz		--	3.24				
23°C, 10kHz		--	3.21				
0°C, 50Hz		--	3.26				
50°C, 50Hz		--	3.27				
100°C, 50Hz		--	3.35				
150°C, 50Hz		--	3.65				
Dissipation Factor	**IEC 250**						
23°C, 50Hz		--	0.002				
23°C, 1kHz		--	0.0055				
23°C, 10kHz		--	0.011				
0°C, 50Hz		--	0.004				
50°C, 50Hz		--	0.0015				
100°C, 50Hz		--	0.007				
150°C, 50Hz		--	0.006				
Chemical Resistance							
Dilute acids and alkalis		Good					
Concentrated alkalis		Poor					
Concentrated hydrochloric acid		Fair					
Concentrated sulphuric acid		Poor					
Greases, oils and fats		Good					
Organic solvents, alcohols and hydrocarbons		Good					
Ketones, esters and chlorinated compounds		Fairly good					
Phenols, cresols and chlorinated phenols		Poor					

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
BP 1681
L-1016 Luxembourg
Telephone: +352 2616 4004
Fax No: +352 2616 5000

other medical applications, see "DuPont Teijin Films Medical Caution Statement", H-50102-DTF.

DuPont Teijin Films™

Melinex®

Only by DuPont Teijin Films