



reflex™ LT Hardcoated Polyester OVERVIEW ANTI-SCRATCH FILMS

PRODUCT DESCRIPTION

reflex™ is a range of high grade overlay films developed to meet the exacting requirements of Screen Printers, Membrane Touch Switch and Fascia-panel manufacturers and their end users. Based on optical grade heat-stabilised polyester it has a typical residual shrinkage of less than 0.3%. It is coated in 1000 Class Clean Rooms, on one side with a well proven print receptive layer for UV and solvent base inks and on the other side with an advanced UV cured resin.

Coveris Advanced Coatings has achieved the optimum performance in hardness, embossability, chemical resistance, extensive switch life and the ability to be die cut. **reflex™** products are designed for interior use only. If you are interested in our **reflex™** range then please contact one of our team.

BENEFITS

Excellent Print Receptive Coatings, Chemical Resistant, UL Listed Base Film, Embossable, Abrasion Resistant, UV & Solvent Inks

APPLICATIONS

Membrane Touch Switch and Fascia-panel manufacture

PROPERTIES	TEST METHOD	TYPICAL VALUES		UNITS
TOTAL THICKNESS	Caliper	LT 175	LT 125	
		195	145	microns
<u>OPTICAL</u>				
Light Transmission	ASTM D1003	>88		%
Gardner Haze	QCTM 137**	66-76 (72 Nominal)		%
Gloss Level	ASTM D2457	15		%
Yellowness Index	ASTM E313-05	1.7	1.5	
		Nominal	Nominal	
<u>MECHANICAL</u>				
Switch Test	See notes (a)	>3million		flexes
Mar Resistance: Pencil	See notes (b)	3H		
Taber Abrader	QCTM 149** See notes (c)	0		Delta
Cross Hatch Adhesion	ASTM D3359	>4B		
<u>ELECTRICAL</u>				
Volume Resistivity	ASTM D257*	10 ¹⁵		ohm/m
Surface Resistivity	ASTM D257*	10 ¹³		ohm/sq
Dielectric Strength	ASTM D149*	125		kV/mm
<u>THERMAL</u>				
Usage Temperatures	Suggested minimum	-40		°C
	Suggested maximum	150 (80°C if embossed)		°C
Dimensional Stability				
MD	30mins @ 120°C	0 to -0.30		%
TD	30mins @ 120°C	-0.1 to + 0.1		%
Flammability	UL Flame Class*	VTM-2		
<u>CHEMICAL</u>				
Chemical Resistance	ASTM 1598-95 (2007)	See technical manual		

*Figures from PET base film **Figures derived from Internal Test Methods

NOTES:

(a) Switch Life: A standard rubber finger (45° Shore hardness) is used to flex an embossed dome switch continuously at a rate of 2 flexes/second. Pressure applied must be sufficient to force the apex of the dome to make contact with the support table. The switch should be examined at regular intervals to check for flaking off or cracking in the hardcoat and graphic ink layer.

(b) Pencil Test: Increasingly hard grades of pencil lead are scored across the surface of the coated PET. The point of the pencil is moved along the surface of the film with increasing force until the pencil breaks or until the surface of the coated film is scratched. The tests are continued until the pencil scratches the surface. The value given is the highest hardness value which does not scratch the coated film.

(c) Taber Test: A Taber abrader (CF10F Type 4 wheel; 250g load; 10 cycles) is used to abrade the test sample. Measurement of the haze value, before and after abrasion are taken and the change recorded. The average of three test samples is given.

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