

Reflex

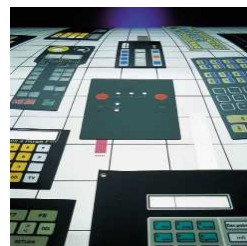
Product:

Hardcoated Polyester Film CE

Exopack™ Advanced Coating
Ash Road North
Wrexham Industrial Estate
Wrexham, LL13 9UF, UK

+44 (0)1978 660241 contact Gwen Simms
+44 (0) 1978 661452 fax

Web site: www.exopackadvancedcoating.com



Reflex CE **Hardcoated Polyester**

Application

Membrane Touch Switch and Fascia-panel manufacture

Features and Benefits

Excellent Print Receptive Coating
Chemical Resistant
UL Listed Base Film
Embossable

Abrasion Resistant
Optically Clear
UV & Solvent Inks

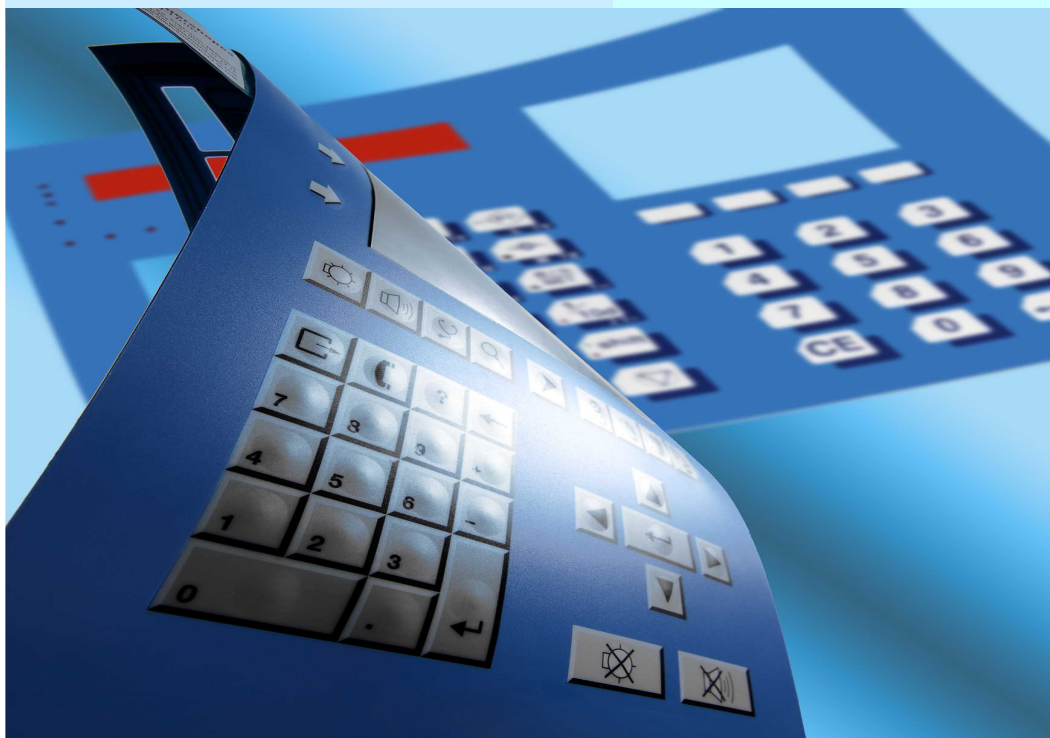
Reflex is a range of high grade overlay films developed to meet the exacting requirements of Screen Printers, Membrane Touch Switch and Fascia-panel manufacturers and their end users.

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.

Exopack Advanced Coating has achieved the optimum performance in hardness, embossability, chemical resistance, extensive switch and the ability to be die cut

These products are backed up by a programme of customer oriented development work to respond to customer needs.



UK
Tel +44 (0)1978 660241 Fax +44 (0) 1978 661452
Wrexham Industrial Estate, Wrexham LL13 9UF

www.exopackadvancedcoatings.com

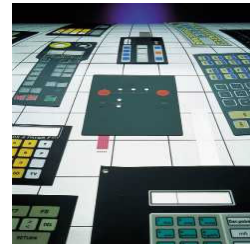
USA
Tel +1 800 688 9191 Fax +1 704 845 4307
700 Crestdale Street, Matthews NC 28106-7003



Exopack™
Advanced Coatings

(This Product Information Sheet is not intended by Exopack Advanced Coatings for use as a Product Specification or Warranty for the Product)

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Product:

Hardcoated Polyester Film CE

PROPERTIES	TEST METHOD	TYPICAL VALUES		UNITS
<u>General</u>		CE 175	CE125	
Total Thickness	Caliper	185	135	microns
The following properties are given for Reflex CE 175				
PROPERTIES	TEST METHOD	TYPICAL VALUES		UNITS
<u>Optical</u>				
Light Transmission	ASTM D1003	88		%
Gardner Haze	QCTM 137**	2.5		%
Yellowness Index	ASTM E313-05	2.0	1.5	
<u>Mechanical</u>				
Switch Test	See notes (a)	>3Million		flexes
Mar Resistance: Pencil	See notes (b)	2H		
	Taber Abrader	QCTM 149**	See notes (c))	6
	Rub Test	See notes (d)		> 1 Million
Cross Hatch Adhesion	ASTM D3359	4B		Rubs
<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
<u>Dimensional Stability</u>				
MD	30 mins @ 120°C	- 0.30		%
TD	30 mins @ 120°C	+/- 0.1		%
Flammability	UL Flame Class*	HB		
<u>Chemical</u>				
Spot Test	ASTM 1308	See Technical Manual		%
Immersion Test	MEK 24hrs	Satisfactory		
Chemical Resistance	DIN42 115	See Technical Manual		
* Figures derived from DuPont Teijin Films™ (Melinex® O) ** 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 weight loss due to particles flaking off or cracking.
- (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
- (d) Rub Test: A test sample of the coated film is embossed to give a rim profile. The sample is then tested with repeated rubs with a standard rubber finger (45° Shore hardness) which travels along the surface of the film and over the rim. The 'finger' is weighted on a cantilever with a 500g weight. There should be no signs of wear and no evidence of coating delamination.

