



reflex™

reflex™ CE Hardcoated Polyester OVERVIEW HARDCOATED 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 and are backed up by a programme of customer orientated development work to respond to customer needs.

BENEFITS

Excellent Print Receptive Coating, Abrasion Resistant, Chemical Resistant, Optically clear, UL Listed Base Film, UV and Solvent Inks Embossable

APPLICATIONS

Membrane Touch Switch and Fascia-panel manufacture

COVERIS™
ADVANCED COATINGS

PROPERTIES	TEST METHOD	TYPICAL VALUES	UNITS
GENERAL		CE 175 CE 125	
TOTAL THICKNESS	Caliper	181 131	microns
The following properties are given for reflex™ CE 175			
OPTICAL			
Light Transmission	ASTM D1003	88	%
Gardner Haze	QCTM 137**	2.5	%
Yellowness Index	ASTM E313-05	2.5	
Gloss	ASTM D2457	>120	%
MECHANICAL			
Switch Test	See notes (a)	>3million	Flexes
Mar Resistance: Pencil	See notes (b)	2H	
Taber Abrader Rub Test	QCTM 149** See notes (c)	6	Delta
Cross Hatch Adhesion	See notes (d)	>1million	Rubs
	ASTM D3359	Minimum 4B	
ELECTRICAL			
Volume Resistivity	ASTM D257*	10 ¹⁵	ohm/m
Surface Resistivity	ASTM D257*	10 ¹³	ohm/sq
Dielectric Strength	ASTM D149*	125	kV/mm
THERMAL			
Usage Temperature	Suggested Minimum	-40	°C
	Suggested Maximum	150 (80°C if embossed)	°C
Dimensional Stability			
MD	30mins @ 120°C	-0.30	%
TD	30mins @ 120°C	+ / - 0.1	%
Flammability	UL Flame Class*	VTM-2	
CHEMICAL			
Chemical Resistance	ASTM F1598-95 (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.

(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.

(Revision date: 7.01.14)

CONTACT

UK Site: +44 1978 660241, Coveris Advanced Coatings, Ash Road North, Wrexham Industrial Estate, Wrexham, LL13 9UF

USA Site: +1 704 847 9171, Coveris Advanced Coatings, 700 Crestdale Street, Matthews, NC 28105

USA Digital Imaging Site: +1 413 539 5547, Coveris Advanced Coatings, 69 William Franks Drive, West Springfield MA 01089

CHINA Site: +86 20 3221 8338 Coveris Advanced Coatings, 7 Nanyun 5th Road, Huangpu District, Guangzhou 510660

EMAIL: enquiries@coveris.com

WEBSITE: www.coverisadvancedcoatings.com

COVERIS[™]
ADVANCED COATINGS