



reflex™ CE HIGH PERFORMANCE FILMS DATASHEET



PRODUCT DESCRIPTION

reflex™ high performance hard coated polyester films offer world class performance working on critical components including human machine interface (HMI), electronic displays, membrane touch switch (MTS) and printed electronics applications.

reflex™ CE gloss films are based on optical grade, highly stabilized polyester film. Transcontinental Advanced Coatings adds a proprietary hardcoat formulation that is water clear to one side of the base film coupled with a print receptive coating on the second side, applied in a cleanroom certified to ISO Class 7. The print receptive coating is tuned for use with both solvent and UV screen print inks.

Transcontinental Advanced Coatings offer performance characteristics that optimize hardness, emboss-ability, chemical resistance and flexibility providing long switch life for the MTS market giving excellent clarity, haptic and tactile feedback.

MARKETS and APPLICATIONS

- Membrane Touch Switch
- Functional Controls
- Electronic Display
- Capacitive Touch Interface
- Sensors
- Printed Electronics
- Durable Labels

Product	Thickness	Description
reflex™ CE	125µm, 175µm	High gloss, hardcoated polyester

PROPERTIES	TEST METHOD	TYPICAL VALUES		UNITS
		CE 175	CE 125	
TOTAL THICKNESS	QCTM 1106-T	185	135	microns
The following properties are given for reflex™ 175				
<u>OPTICAL</u>				
Light Transmission	QCTM 1569	92.23 ±0.37		%
Gardiner Haze	QCTM 1569	0.74 ±0.21		%
Yellowness Index	QCTM 1590	1.81 ±0.53		
Gloss	QCTM 1521 (60 degree)	165.6 ±1.5		GU
<u>MECHANICAL</u>				
Switch Test	QCTM 1	>3millions		actuations
Mar Resistance Pencil	QCTM 1515	3H		
Mar Resistance Taber Brader	QCTM 15138	2.04 ±0.96		Delta (%)
Cross Hatch Adhesion	QCTM 1515	5B		
<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 Temperature	Suggested minimum*	-40		°C
	Suggested maximum*	150 (80 if embossed)		°C
<u>DIMENSIONAL STABILITY</u>				
MD	30mins @ 120°C	-0.15 ±0.028		%
TD	30mins @ 120°C	0.00 ±0.051		%
Flammability	UL Flame Class*	VTM-2		
<u>CHEMICAL</u>				
Chemical Resistance	ASTM F1598-95 (2007)	See Technical Manual		

*Figures from PET base film. These are typical values only and should not be confused with specification values.

NOTES:

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.

ISO 7

reflex™ is coated in a class 10,000 clean room environment



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