

# Quick-Mark® Lexan Over-Laminating Film Specifications

## Description

Quick-Mark® Lexan® polycarbonate over-laminating film is a textured film offering high mark resistance and anti-reflective properties with optimum light diffusion. A Quick-Mark® label over-laminated with Lexan offers the textured surface and appearance to many membrane touch control panels.

The adhesive added to the Lexan is the same as is used on the top surface of the Quick-Mark® Base Sheets albeit with a paper liner.

The Typical Film Properties presented here define the average quality level to which Lexan these films are produced. They are average values for a range of Lexan films although only one grade is used for the Quick-Mark® Over-Laminating film

## Typical Properties

Property	Test	Unit	Value †
<b>Physical</b>			
Specific Gravity	DIN 53479	g/ cm <sup>3</sup>	1.20
Area Factor		m <sup>2</sup> / kg. micron	833
Water Absorption, equilibrium	ASTM D570	%	0.35
<b>Optical</b>			
Refractive Index 25°C	ASTM D524A	-	1.586
Light Transmission, average	ASTM D1003	%	88-91
<b>Mechanical</b>			
Tensile Strength at yield	ASTM D882	N/ mm <sup>2</sup>	60
at break		N/ mm <sup>2</sup>	65
Elongation at break	ASTM D882	%	100
Tensile Modulus	ASTM D882	N / mm <sup>2</sup>	2100
Tear Strength initiation	ASTM D1004	kN/ m	245
propagation	ASTM D1922	kN /m	10-20
Burst Strength Mullen 25 microns	ASTM D774	N/ mm <sup>2</sup>	0.28
Fold Endurance, double 250 microns	MIT	folds	200
Pencil Hardness	ASTM D3363	-	B
<b>Thermal</b>			
Tensile Heat Distortion, 0.35 N /mm <sup>2</sup>	ASTM D1637	°C	150
DTUL, 1.8 N/ mm <sup>2</sup>	ASTM D648	°C	135
Vicat Softening Temperature, B	ASTM D1525	°C	150
Specific Heat	ASTM C351	kJ / kg. °C	1.25
Coefficient of Thermal Expansion	ASTM D696	m / m.°C	7.0x10 <sup>-5</sup>
Thermal Conductivity	ASTM C177	W / m.°C	0.20
Strain Relief, 135°C	ASTM D1204	%	<0.2
Brittleness Temperature	ASTM D746	°C	-135
<b>Electrical</b>			
Dielectric Strength at 23°C in Oil, Short Time 250 microns	ASTM D149	kV / mm	67
Dielectric Constant	ASTM D150		
50 Hz		-	2.99
1MHz		-	2.93
Power Factor	ASTM D150		
50 Hz		-	0.0009
1 MHz		-	0.010
Volume Resistivity	ASTM D257	Ohm.m	10 <sup>14</sup>
Surface Resistivity	ASTM D257	Ohm	10 <sup>15</sup>
Arc Resistance, Tungsten	ASTM D495	s	120

† typical values only.

## Type

Grade	Textures	Gauges (micron)
8B35	Velvet / Matt (adhesive)	125

Gardner Gloss Levels After Screenprinting Flat Black (Min. – Max.)			
Film	Angle	Velvet	
8B35	60°	3.0 – 4.5	

## Typical Film Properties

Property	Unit	Value
Scratches	mm	<6 Hairline, Buff Type
Web Edge Curl ▲		
Machine direction	mm	< 2.5
Transverse direction	mm	< 12.3
Defect Size		
> 0.6mm	Nr	2 / 10m <sup>2</sup>
>0.4mm	Nr	2/0. 1m <sup>2</sup>
>0.1mm	Nr	20/0. 1m <sup>2</sup>
Nominal Gauge Variation	%	+ / - 10

## Adhesive

Quick Tack (N/25mm) on stainless steel average value 16 (FTM 9) Peel 180° - 30 min (N/25mm) on stainless steel average value 13 (FTM 1) Shear 1KG 25 x 25mm > 500 hours (FTM 8)

## Application temperature

Clean dry surface, +2°C to +50°C

Lexan test data based on OEM film manufacturer data.

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