

## Description

Lexan HPDFD film is a patent pending one-side coated polycarbonate film and with an adhesive backing it is an excellent candidate for use in display case refrigeration units such as those found in grocery and convenience stores. It offers long-term anti-fog performance, abrasion resistance, impact resistance, and good optical clarity. Lexan HPDFD film also provides chemical resistance, printability, and anti-static properties. Typical applications include: Refrigerated cases, Instrument lenses & display panels, Mirrors, Windows and Auto-Glass.

## Typical property Values ♦

Property	ASTM Test Method	Units (USCS)	Value	ISO Test Method	Units (SI)	Value
<b>Mechanical</b>						
Gardner Impact Strength at 0.03 in. (0.75 mm)	ASTM D3029	ft-lb	23	ISO 6603-1	J	31
Tear Strength						
Initiation	ASTM D1004	lb/mil	1.59		kN/m	278
Propogation	ASTM D1922	g/mil	43.4		g/mil	43.4
Puncture Resistance (Dynatup)	ASTM D3763	ft-lb	9		J	12
Fold Endurance (MIT)						
0.010 inch (0.25 mm)	ASTM D2176-69	double folds	130			
0.020 inch (0.50 mm)	ASTM D2176-69	double folds	35			
<b>Thermal</b>						
Coefficient of Thermal Conductivity	ASTM D5470	Btu/hr/ft <sup>2</sup> /°F/in	1.35		W/m <sup>2</sup> K	0.2
Coefficient of Thermal Expansion	ASTM E831	(x10 <sup>-5</sup> /°F )	3.4	ISO 11359	(x10 <sup>-5</sup> /°C)	6.2
Specific Heat @ 40° F (4°C)	ASTM E1269	Btu/lb/°F	0.3		KJ/Kg-°C	1.14
Heat Deflection Temp. by TMA at 1.8 Mpa		°F	295	ISO 75 Modified	°C	145
Brittleness Temperature	ASTM D746	°F	-211		°C	-135
<b>Physical</b>						
Density	ASTM D792	slug/ft <sup>3</sup>	74.5	ISO 1183	kg/m <sup>3</sup>	1194
Water Absorption, 24 hrs.	ASTM D570	% change	0.51	ISO 62	% change	0.51
Surface Energy	ASTM D5946-01	-	34			
Surface Tension	Dyne Pens	Dyne	38-40			
Pencil Hardness	ASTM D3363	-	HB			
Taber Abrasion	ASTM D1044	delta Haze	5			
Bayer Abrasion	Colts Labs test	Ratio	12.13			
Steel wool abrasion Haze gain	Colts Labs test	Haze Gain	10.83			
Steel wool abrasion Ratio	Colts Labs test	Ratio	0.12			
<b>Optical</b>						
Refractive Index @77 °F (25°C)	ASTM D542A	-	1.5			
Light Transmission	ASTM D1003	%	92			
Yellowness Index	ASTM D1925	%	0.6			
Haze	ASTM D1003	%	0.9			
Gloss over Flat Black min/max @ 60°	ASTM D523-60	%	172	ISO 2813	%	172
<b>Adhesive properties</b>						
180 degree peel on glass		oz	50 - 100		kg	1.4 -2.8

### Manufacturing Specifications

Nominal Gauge Ranges	Min./Max Limit of Nominal
0.010" (0.25 mm)	-/+ 5%

♦ These are typical properties and are not intended for specification purposes. If minimum certifiable properties are required, please contact your local SABIC Innovative Plastics representative or the SABIC Innovative Plastics' Quality Services Department.  
Reported Values are Based on 0.010" (0.250 mm) Thickness unless otherwise noted.

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Lexan \*

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**Suggested cleaners for cleaning antifog coated side of film**

Bissell – Glass & Multi-surface Cleaner  
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Glass Plus  
Mr. Clean Multi Surface  
Fantastik

Simple Green  
Formula 409  
Lysol Antibacterial kitchen cleaner  
Windex Multi Task Citrus Orange  
Dow Scrubbing Bubbles



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Americas:  
SABIC Innovative Plastics  
Specialty Film & Sheet  
One Plastics Avenue  
Pittsfield, MA 01201  
USA  
Tel. (1) (413) 448 5400  
Fax. (1) (413) 448 7506  
Toll free: 1-800 451 3147

Europe:  
SABIC Innovative Plastics  
Specialty Film & Sheet  
Plasticslaan 1  
NL - 4612 PX Bergen op Zoom  
The Netherlands  
Tel. (31) (164) 292911  
Fax. (31) (164) 293272

Pacific:  
SABIC Innovative Plastics  
Specialty Film & Sheet  
1266 Nanjin Road (W)  
Plaza 66, 17<sup>th</sup> Floor  
200040 Shanghai, China  
Tel. (86) 21 62881088  
Fax. (86) 21 62880818

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