

Lexan[®] DM35/DM35A Film

Product Datasheet

DESCRIPTION

Lexan[®] DM35 and DM35A films are custom textured Lexan graphic grade films specifically designed for digital imaging applications. Both DM35 and DM35A films can be used as an over-lamination to help protect tradeshow graphics and provide rigidity for pop-up displays, or as a substrate for ink receptive coatings like Indigo and Ink-Jet. The DM product line is available in a wide range of custom widths out to 61.5" (1560 mm).

Typical Property Values¹

Property	ASTM Test Method	Units (USCS)	Value	ISO Test Method	Units (SI)	Value
Mechanical						
Tensile Strength						
@ Yield	ASTM D882	psi	8500	ISO 527	MPa	62
Ultimate	ASTM D882	psi	9000	ISO 527	MPa	65
Tensile Modulus	ASTM D882	psi	300000	ISO 527	MPa	2506
Tensile Elongation at Break	ASTM D882	%	100-160	ISO 527	%	100-154
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	1.4-1.8		kN/m	245
Propogation	ASTM D1922	g/mil	30-55		kN/m	10-20
Puncture Resistance (Dynatup)	ASTM D3763	ft-lb	9		J	12
Fold Endurance (MIT)						
0.010 inch (0.25 mm)	ASTM D2176-69	double folds	60			
0.020 inch (0.50 mm)	ASTM D2176-69	double folds	20			
Thermal						
Coefficient of Thermal Conductivity	ASTM D5470	Btu/hr/ft ² /°F/in	1.35		W/m ² K	0.2
Coefficient of Thermal Expansion	ASTM E831	(x 10 ⁻⁵ /°F)	3.2	ISO 11359	(x 10 ⁻⁵ /°C)	5.8
Specific Heat @ 40 °F (4 °C)	ASTM E1269	Btu/lb/°F	0.3		KJ/Kg-°C	1.25
Glass Transition Temperature	ASTM D3417/D3418	°F	307	ISO 11357	°C	153
Vicat Softening Temperature, B	ASTM 1525-00 Modified	°F	312		°C	156
Heat Deflection Temp. by TMA at 1.8 MPa		°F	290	ISO 75 Modified	°C	145
Shrinkage at 302 °F (150 °C)	ASTM D1204	%	1.40%		%	1.40%
Brittleness Temperature	ASTM D746	°F	-211		°C	-135

Textures

Velvet/Ultra Fine Matte	DM35-112
Velvet/Polished	DM35A-112

Manufacturing Specifications

Nominal Gauge	Min./Max Limit
<u>Ranges</u>	<u>of Nominal</u>
0.005-0.007" (0.075-0.175 mm)	± 10%
0.008-0.014" (0.200-0.350 mm)	± 5%
0.015" (0.375 mm)	± 3%

1 These are typical properties and are not intended for specification purposes. If minimum certifiable properties are required, please contact your local GE Advanced Materials, Specialty Film & Sheet representative or the GE Advanced Materials, Specialty Film & Sheet Quality Services Department. Reported values are based on 0.010" (0.250 mm) thickness unless otherwise noted.

* Lexan is a trademark of General Electric Company.



GE Advanced Materials Specialty Film & Sheet

Property	ASTM Test Method	Units	Value	ISO Test Method	Units	Value
Physical						
Density	ASTM D792	slug/ft ³	2.3	ISO 1183	kg/m ³	1200
Water Absorption, 24 hrs.	ASTM D570	% change	0.35	ISO 62	% change	0.35
Surface Roughness (RMS)	ASME B46-1	-	x			
Surface Energy (1st surface / 2nd surface)	ASTM D5946-01	-	36/36			
Surface Tension (1st surface / 2nd surface)	Dyne Pens	Dyne	40-42 / 40-42			
Optical						
Refractive Index @ 77 °F (25 °C)	ASTM D542A	-	1.6			
Light Transmission	ASTM D1003	%	89			
Yellowness Index	ASTM D1925	%	1.5			
Haze	ASTM D1003	%	70			
Gloss over Flat Black min/max @ 60°	ASTM D523-60	-	see chart	ISO 2813	-	see chart

Gloss: (ASTMD 523-60)

	Angle		Velvet	Matte
DM35	60°	Minimum	6	5
		Maximum	10	15
DM35A	60°	Minimum	8	
		Maximum	14	

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