

RML-LEX175 Velvet Polycarbonate Film

Product Datasheet

Description

RML-LEX175 is a clear, polycarbonate film with a velvet finish on one side and a matt finish on the other, to meet the stringent requirements in a wide range of electrical, electronic and transportation applications. Lexan RML-LEX175 film is available in differing thicknesses and offers ease of thermoforming, hydroforming, embossing, die-cutting, folding and bending and is very suitable for applications such as printed circuit board insulation, backlit aircraft in-flight panels and displays, business equipment insulation, computer rack partitions, enclosures, face panels, facias, LED backlighting, TV and monitor insulations.

Typical Property Values

Property	ASTM Test Method	Units (USCS)	Value	ISO Test Method	Units (SI)	Value
Mechanical						
Tensile Strength @ Yield	ASTM D882	psi	10000	ISO 527	MPa	70
Ultimate	ASTM D882	psi	8700	ISO 527	MPa	60
Tensile Modulus	ASTM D882	psi	319000	ISO 527	MPa	2200
Tensile Elongation at Break	ASTM D882	%	100-160	ISO 527	%	100-155
Gardner Impact Strength at 0.03" (0.75 mm)	ASTM D3029	ft-lb	21	ISO 6603-1	J	28
Tear Strength						
Initiation	ASTM D1004	lb/mil	1.4-1.8		kN/m	298
Propagation	ASTM D1922	g/mil	30-55		kN/m	3 - 5
Puncture Resistance (Dynatup)	ASTM D3763	ft-lb	9		J	12
Fold Endurance (MIT)						
0.010" (0.25 mm)	ASTM D2176-69	double folds	60			
0.020" (0.50 mm)	ASTM D2176-69	double folds	20			
Thermal						
Coefficient of Thermal Conductivity	ASTM D5470	Btu/hr/ft ² /°F/in	1.35	ISO 11359	W/m ² K	0.2
Coefficient of Thermal Expansion	ASTM E831	(x10 ⁻⁵ /°F)	3.2	ISO 11359	(x10 ⁻⁵ /°C)	5.8
Specific Heat @40°F (4°C)	ASTM E1269	Btu/lb/°F	0.3	ISO 11357	KJ/Kg-°C	1.25
Glass Transition Temperature	ASTM D3417 / D3418	°F	307	ISO 11357	°C	153
Vicat Softening Temperature, B	ASTM 1525-00	°F	347		°C	175
Heat Deflection Temp. by TMA at 1.8 Mpa	modified			ISO 75 Modified	°C	145
Shrinkage at 302°F (150°C)	ASTM D1204	%	0.02		%	0.02
Brittleness Temperature	ASTM D746	°F	-211		°C	-135
Physical						
Density	ASTM D792	slug/ft ³	2.6	ISO 1183	kg/m ³	1344
Water Absorption, 24 hrs.	ASTM D570	% change	0.28 34/	ISO 62	% change	0.28
Surface Energy(1 st surface/ 2 nd surface)	ASTM D5946-01	-	36			
Surface Tension(1 st surface/ 2 nd surface)	Dyne Pens	Dyne	>44/>44			
Optical						
Refractive Index @77°F (25°C)	ASTM D542A	-	1.6			
Light Transmission	ASTM D1003	%	86.1			
Yellowness Index	ASTM D1925	%	1.3			
Haze	ASTM D1003	%	97			
Gloss over Flat Black min/max @ 60°	ASTM D523-60	-	3.0 - 4.5	ISO 2813		3.0 - 4.5

Disclaimer: Our recommendations are based on our most current knowledge and experience. As our products are used in conditions beyond our control, we cannot assume any liability for damage caused through their use. Users of our products are solely responsible for the product and its suitability for the application, and have determined such at their sole discretion. Users must comply with any applicable legislation and/or testing requirements for the finished article, and are responsible for bringing their products to market.