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PRODUCT DATASHEET

LEXAN™ ULG1003A SHEET

DESCRIPTION

LEXAN™ ULG1003A sheet is a transparent lamination grade offering excellent optical properties for lamination with glass in mainly symmetrical security glazing panels. The product is unique in the market in terms of visual defects and low optical distortion. Can be specified to match specific levels of threat and has an excellent optical clarity.

TYPICAL PROPERTY VALUES*

PROPERTY	TEST METHOD	UNITS	VALUE
PHYSICAL			
Density	ASTM D792	-	1.2
Refractive Index @ 77°F	ASTM D542A	-	1.586
Light Transmission (Average), 1/8" disk	ASTM D1003		88
Refractive Index @ 77°F	ASTM D542A	-	1.586
Water Absorption, Equilibrium, 24 hrs	ASTM D570	%	0.15
@ 73°F			0.35
@ 212°F			0.58
MECHANICAL			
Tensile Strength @ Yield	ASTM D638	psi	9,000
@ Ultimate			9,500
Tensile Modulus	ASTM D638	psi	345,000
Flexural Strength	ASTM D790	psi	13,000
Flexural Modulus	ASTM D790	psi	2300
Flexural Endurance @ 1,800 cycles/min,			
73°F, 50% RH	ASTM D671	psi	1,000
Compressive Strength	ASTM D695	psi	12,500
Compressive Modulus	ASTM D695	psi	345,000
Elongation	ASTM D638	%	110
Poisson's Ratio			0.37
IMPACT			
Izod Impact Strength Notched @ 1/8"	ASTM D256A	ft-lbs/in	12-16
Unnotched @ 1/8“			60 (no failure)
Tensile Impact Strength, S-Type Specimen	ASTM 1822	ft-lbs/in^2	225-300
Shear Strength @ Yield	ASTM D732	psi	6,000
@ Ultimate			10,000
Shear Modulus	ASTM D732	psi	114,000
Deformation Under Load @ 4,000 psi @	ASTM D621	%	0.2
@ 158°F			0.3

PROPERTY	TEST METHOD	UNITS	VALUE
THERMAL			
Coefficient of Thermal Expansion	ASTM D696	in/in/°F	3.75×10^{-5}
Coefficient of Thermal Conductivity	ASTM C177	Btuoin/hroft^{2}o°F	1.35
Specific Heat @ 40°C		cal/gm/°C	0.3
Heat Deflection Temperature @ 264 psi	ASTM D648	°F	270
@ 66 psi			280
Brittle Temperature	ASTM D746	°F	211
ELECTRICAL			
Dielectric Constant @ 10 Hz	ASTM D150	Ohm.cm	2.96
@ 60 Hz			3.17
Volume Resistivity	ASTM D257	ohm-cm	8.2×10^{16}
Power Factor @ 60 Hz	ASTM D150		0.0009
@ 1,000,000 Hz			0.01
Arc Resistance	ASTM D495	sec	
Stainless Steel Strip Electrodes			10-11
Tungsten Electrodes			120
FLAMMABILITY			
Horizontal Burn (Flame Spread) AEB	ASTM D635	in	<1
OPTICAL			
Light transmission .118	ASTM D1003	%	88
Light transmission .236	ASTM D1003	%	85
Light transmission .375	ASTM D1003	%	83
Light transmission .500	ASTM D1003	%	80

◆ These property values have been derived from LEXAN™ resin data for the material used to produce this sheet product.

FIRE TEST PERFORMANCE

LEXAN™ ULG1003A sheet has HB rating. **UL File Number: E539157**

CHEMICAL RESISTANCE

Although LEXAN™ ULG1003A sheet is resistant to most mineral oils, greases, aliphatic hydrocarbons and acids under low or moderate stress levels, we strongly recommend testing of applications where the product will come into contact with these or other aggressive chemicals. For asymmetrical configurations where the LEXAN surface will not be bonded with glass, we advise to apply our 1-side hard coated product LEXAN MARGARD HLG10.

OPTICAL PROPERTIES

The optical qualities of LEXAN ULG1003A sheets are the result of constant research in order to provide the best values. This is ensured by in-house testing of LEXAN sheets in 3-6 mm thickness according ASTM C1652. During the optical control phase, LEXAN ULG1003A sheets are examined against a special background, called image magnification, for proper identification of optical imperfections. Our internal manufacturing specifications are under constant supervision of our ISO 9002 approved Quality Management department.

PRODUCT AVAILABILITY

Product Code	:	ULG1003A Sheet
Standard Size	:	4'X8, 8'X4', 8'X5', 8'X6'
Thicknesses	:	.118, .177, .220, .236, .375, .500
Standard Colors	:	Clear (112)

Different dimensions can be made available by prior arrangements. Such arrangement may affect prices and/or conditions of sale. Pls. check availability with your sales team.

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