POLYVANTIS

PRODUCT DATASHEET

LEXAN™ SD8A12 FILM

DESCRIPTION

LEXAN™ SD8A12 Film is a one side polished, high gloss (P), one side fine matt (FM) clear transparent polycarbonate film that is typically used in government security documents, such as passport data pages, ID cards, driving licenses, it offers great printability and ease of processing (laminating, die-cutting, hot stamping). LEXAN™ SD8A12 Film is available in gauges ranging from 50 - 100µm.

TYPICAL PROPERTY VALUES♦

PROPERTY	ASTM TEST METHOD	UNITS (USCS)	VALUE	ISO TEST METHOD	UNITS (SI)	VALUE
MECHANICAL						
Tensile Strength @ Yield	ASTM D882	psi	8122	ISO 527	MPa	56
Ultimate	ASTM D882	psi	8122	ISO 527	MPa	56
Tensile Modulus	ASTM D882	psi	311 x10^3	ISO 527	MPa	2150
Tensile Elongation at Break	ASTM D882	%	85	ISO 527	%	85
Tear Strength						
Initiation	ASTM D1004	lbf	12		N	52
Propagation	ASTM D1938	lbf	0.6		N	2.8
THERMAL						
Coefficient of Thermal Expansion, flow	ASTM E831	(x 10-5 / °F)	4.2	ISO 11359	(x 10-5 / °C)	7.5
Glass Transition Temperature	ASTM D3418	°F	298	ISO 11357	°C	148
Vicat Softening Temperature, B50	ASTM 1525	°F	295	ISO 306	°C	146
Heat Deflection Temp. Af 120°C/h	ASTM D648	°F	262	ISO 75 Modified	°C	128
Shrinkage at 130°C, 30min	Internal method	%	0.17	Internal method	%	0.17
PHYSICAL						
Density	ASTM D792	slug/ft^3	2.33	ISO 1183	g/cm^3	1.20
Water Absorption, 24 hrs.	ASTM D570	% change	0.09	ISO 62	% change	0.09
Surface Roughness Ra		µin	23[FM]	ISO 4288	µm	0.6 [FM]
			7[P]			0.18[P]
Surface Tension	Dyne solutions	Dyne/cm	38 [FM]	Dyne solutions	Dyne/cm	38 [FM]
			40 [P]			40 [P]

PROPERTY	ASTM TEST METHOD	UNITS (USCS)	VALUE	ISO TEST METHOD	UNITS (SI)	VALUE
OPTICAL						
Light Transmission	ASTM D1003	%	90		%	90
Color: b-value	CIELab, Reflection,		-0.87	CIELab, Reflection,		-0.87
	D65, 10°			D65, 10°		

♦ These are typical properties and are not intended for specification purposes. If minimum certifiable properties are required, please contact your local POLYVANTIS representative or the Quality Services Department. Reported Values are based on 0.05mm (0.002") gauge thickness unless otherwise noted. Coefficient of thermal expansion, Vicat softening temperature, Heat deflection temperature and water absorption, which are based on molded parts.

NOMINAL GAUGE RANGES	MIN./MAX LIMIT OF NOMINAL
0.050 – 0.100 mm	± 5%

POLYVANTIS

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www.polyvantis.com

LEXAN™ POLYCARBONATE FILM & SHEET Tough, Virtually Unbreakable

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