

LEXAN™ OQ6DA FILM

PRODUCT DATASHEET

DESCRIPTION

LEXAN™ OQ6DA is a high-performance dual coated film which offers very good pencil hardness and chemical/abrasion resistance, together with unique processing characteristics in a sheeted finished. This highly durable sheeted film may help create new opportunities in graphic design whose potential benefits may include: pencil hardness, anti-scratch and chemical resistance. LEXAN OQ6DA film is available in gauges from 0.5 to 1.2 mm. Masking is of the stick type on both sides.

TYPICAL PROPERTY VALUES

PROPERTY	ASTM TEST METHOD	UNITS USCS	VALUE	ISO TEST METHOD	UNITS (SI)	VALUE
MECHANICAL						
Tensile Strength @ Ultimate	ASTM D882	psi	9150	ISO 527	MPa	63
Tensile Modulus	ASTM D882	psi	411900	ISO 527	MPa	2840
Tensile Elongation at Break	ASTM D882	%	3.0	ISO 527	%	3.0
Puncture Resistance (Dynatup)	ASTM D3763	ft-lb/in	45		J/mm	2.4
THERMAL						
Coefficient of Thermal Expansion						
CTE -20~100 °C, cross-flow	ASTM E831	(x10 ⁻⁵ /°F)	5.0	ISO 11359	(x10 ⁻⁵ /°C)	9.0
CTE -20~100 °C, inflow	ASTM E831	(x10 ⁻⁵ /°F)	4.4	ISO 11359	(x10 ⁻⁵ /°C)	7.9
Resistance to Humidity 720Hrs @100°F, 100%R.H.	ASTM D3359		5B			5B
Heat Aging @168 Hrs, 180°F	ASTM D3359		5B			5B
PHYSICAL						
Density	ASTM D792	slug/ft ³	2.3	ISO 1183	kg/m ³	1200
Water Absorption, 24 hrs.	ASTM D570	% change	0.01	ISO 62	% change	0.01
Area Factor	Calculation	ft ² /lb/mil	160	Calculation	m ² /kg/mm	0.83
Surface Tension	Dyne Pens	Dyne	36			
Pencil Hardness						
PMMA	ASTM D3363	-	4-5H			
PC	ASTM D3363	-	HB-F			
Taber Abrasion @ 25 cycles	ASTM D1044	% haze change	2.1	ISO 5470	% haze change	2.1
50 cycles	ASTM D1044	% haze change	3.1	ISO 5470	% haze change	3.1
100 cycles	ASTM D1044	% haze change	4.9	ISO 5470	% haze change	4.9
200 cycles	ASTM D1044	% haze change	5.8	ISO 5470	% haze change	5.8
OPTICAL						
Light Transmission	ASTM D1003	%	92			
Yellowness Index	ASTM D1925	%	<1.0			
Haze	ASTM D1003	%	0.1			
Gloss over Flat Black @ 60°	ASTM D523-60	GU	94	ISO 2813	GU	94
20°	ASTM D523-60	GU	90	ISO 2813	GU	90
Gloss over White @ 60°	ASTM D523-60	GU	160	ISO 2813	GU	160
20°	ASTM D523-60	GU	167	ISO 2813	GU	167

PROPERTY	ASTM TEST METHOD	UNITS USCS	VALUE	ISO TEST METHOD	UNITS (SI)	VALUE
ELECTRICAL						
Dielectric Constant @ 1.1 GHz	ASTM D150	-	2.78	IEC 60250	-	2.78
Dissipation Factor @ 1.1 GHz	ASTM D150	-	0.007	IEC 60250	-	0.007
Volume Resistivity	ASTM D257	Ω-cm	1.5E+16	IEC 60093	Ω-cm	1.5E+16
Surface Resistivity	ASTM D257	Ω/square	2.1E+15	IEC 60093	Ω/square	2.1E+15

- ◆ These are typical properties and are not intended for specification purposes. If minimum certifiable properties are required, please contact your local SABIC representative or the SABIC Quality Services Department.
Reported Values are based on 0.500 mm (0.020") thickness film and are tested at machine direction unless otherwise noted.

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MANUFACTURING SPECIFICATIONS

NOMINAL GAUGE RANGES	MIN./MAX LIMIT OF NOMINAL
0.500 - 1.200 mm	± 3%

CHEMICAL RESISTANCE

PROPERTY CHEMICAL	RESULTS
One Hour Continuous Surface Contact at 73 °F †	
Acetone	Pass
MEK	Pass
Toluene	Pass
Methylene Chloride	Pass
Isopropyl Alcohol	Pass
Kerosene	Pass
Ethyl Acetate	Pass
5% NaCl	Pass
40% NaOH	Pass
30% H ₂ SO ₄	Pass

24 hour continuous Surface Contact at 73 °F †	
Olive oil	Pass
Nivea Sun Lotion SPF 30	Pass
Nivea SOS Hand Cream	Pass
Vaseline Intensive Care Hand Cream	Pass

† Failure constitutes any of the following: non-removable stain or cloudiness, blistering, delamination, or cracking of the coating or failure to pass crosshatch tape adhesion.

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