POLYVANTIS

PRODUCT DATASHEET

LEXAN™ 8A23 FILM

DESCRIPTION

LEXAN™ 8A23 Film is a one side matte, one side polished custom colored polycarbonate film. It offers high temperature
resistance, excellent dimensional stability, as well as good printability without pre- treatment making it an excellent candidate for
multi-layer printing for applications such as overlays, floor graphics, high-performance labels and in-mould decoration. It can be
screen printed using traditional solvent based or water based inks, as well as UV or infrared drying inks and offers ease of
processing for thermoforming, embossing, die-cutting, hydro-forming and bending. The matte texture offers mar resistance, and
can be used over light-emitting devices (LEDs). It's low gloss level reduces glare in automobile interiors and office environments.
Recent technology improvements now in effect reduce texture and color variation by 50% and allow improved gauge control (see
below).

TYPICAL PROPERTY VALUES*

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	%	100-154	ISO 527	%	100-154
Gardner Impact Strength at 0.03"	ASTM D3029	ft-lb	23	ISO 6603-1	J	31
Tear Strength						
Initiation	ASTM D1004	lb/mil	1.4-1.8		kN/m	245
Propagation	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" (0.25 mm)	ASTM D2176-	double folds	60			
0.020" (0.50 mm)	ASTM D2176-	double folds	20			
THERMAL						
Coefficient of Thermal Conductivity	ASTM D5470	Btu/hr/ft^2/°F/in	1.35		W/m°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		KJ/Kg-°C	1.25
Glass Transition Temperature	ASTM D3417 /	°F	307	ISO 11357	°C	153
Vicat Softening Temperature, B	ASTM 1525-00	°F	312		°C	155
Heat Deflection Temp. by TMA at1.8		°F	290	ISO 75	°C	145

Shrinkage at 302°F (150°C)	ASTM D1204	%	1.40%		%	1.40%
Brittleness Temperature	ASTM D746	°F	-211		°C	-135

PROPERTY	ASTM TEST METHOD	UNITS (USCS)	VALUE	ISO TEST METHOD	UNITS (SI)	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	microns	See chart			
Surface Energy (1st/2nd surface)	Dyne Pens	Dyne	37/31			
Surface Tension (1st/2nd surface)	ASTM D3363	-	>44/38-40			
FLAMMABILITY						
ULE539257	ULV2		pass			0.020" (0.5

MANUFACTURING SPECIFICATIONS

NOMINAL GAUGE RANGES	MIN./MAX LIMIT OF NOMINAL
0.008-0.025" (0.200-0.625 mm)	± 10%

POLYVANTIS

Polycarbonate products are sold globally under the trademark LEXAN™ Film & Sheet, owned by SABIC or its subsidiaries or affiliates.

polyvantis.com

LEXAN™ POLYCARBONATE FILM & SHEET Tough, Virtually Unbreakable

LEXAN is a trademark of SABIC

© POLYVANTIS PV_DS_8A23-FILM_ENG_06-24

Internal