POLYVANTIS

PRODUCT DATASHEET

LEXAN™ DPHP01Wxx FILM

DESCRIPTION

LEXAN™ DPHP01Wxx is a one side primed film designed for increased digital UV ink adhesion under laminating adhesive exposure where other polycarbonate film solutions may not perform as needed. Due to rapid development of ink adhesion, post drying of the printed artwork prior to adhesive lamination can be eliminated (with many digital ink sets) thus reducing production cycle time. LEXAN™ DPHP01Wxx graphic film is a virtually glare free film that uses POLYVANTIS's unique coatings technology allowing high light transmission for clear and sharp graphics. This high-performance coated film also offers very good chemical and abrasion resistance with excellent UV resistance. These performance capabilities, along with ease of processing, make DPHP01Wxx film a good choice for outdoor graphic applications such as warning labels, outdoor menu boards and gasoline pumps graphics.

TYPICAL PROPERTY VALUES*

PROPERTY	ASTM (ISO) TEST METHOD	UNITS USCS (SI)	DPHP01Wxx
MECHANICAL			
Tensile Strength @ Yield	ASTM D882 (ISO 527)	psi (MPa)	8800 (60)
Ultimate	ASTM D882 (ISO 527)	psi (MPa)	9000 (62)
THERMAL			
Vicat Softening Temperature, B	ASTM 1525	°F (°C)	320 (160)
Heat Deflection Temp. by TMA at 1.8 MPa	ISO 75 Modified	°F (°C)	290 (145)
Shrinkage at 302°F (150°C)	ASTM D1204	%	1.50%
PHYSICAL			
Density	ASTM D792 (ISO 1183)	slug/ft^3 (kg/m^3)	2.3 (1200)
Pencil Hardness (coated surface)	ASTM D3363	-	HB-F
Taber Abrasion (CS10F, 500g, 50cycles)	ASTM D1044	delta Haze	0.2
OPTICAL			
Light Transmission	ASTM D1003	%	90
Yellowness Index	ASTM D1925	%	1
Haze	ASTM D1003	%	91
Gloss over Flat Black @ 60◦	ASTM D523-60 (ISO 2813)	_	12
Gloss over Flat Black @ 85◦	ASTM D523-60 (ISO 2813)	_	1
UV% Transmission at 350 nm	UV/Visual Spectroscopy	%	0.5
UV% Transmission at 360 nm	UV/Visual Spectroscopy	%	1.5
UV% Transmission at 370 nm	UV/Visual Spectroscopy	%	8

- 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 POLYVANTIS Quality Services Department.
  Reported Values are based on 0.030" (0.750 mm) Thickness unless otherwise noted.

MANUFACTURING SPECIFICATIONS

NOMINAL GAUGE RANGES	MIN./MAX LIMIT OF NOMINAL
≤ 0.010" (0.250mm)	-10% +20%
> 0.010" (0.250mm)	-5% +10%

UV RESISTANCE

LEXAN™ DPHP01Wxx film utilizes a proprietary coating technology developed by POLYVANTIS. This special coating resists yellowing and hazing. Yellowness index change of less than 3.0 at 1000 hours of QUV testing and less than 2.0 at 1000 hours of Xenon Arc testing make LEXAN™ DPHP01Wxx film a candidate for demanding outdoor applications.

TABER ABRASION RESISTANCE (ASTM D1044) LEXAN™ DPHP01Wxx GRAPHIC FILM

CONDITION CS10F WHEEL, 500 GRAMS Cycles	DPHP01Wxx % Change in Haze by ASTM D1003
25	0.2%
50	0%
100	-0.3%
200	-0.4%

CHEMICAL RESISTANCE

CHEMICAL	RESULTS
One Hour Continuous Surface Contact at 73° F	
Acetone	Failed
MEK	Failed
Toluene	Failed
Methylene Chloride	Failed
Isopropyl Alcohol	Passed
Cyclohexanone	Passed
Ethyl Acetate	Failed
Xylene	Passed
40% NaOH	Passed
Concentrated HCl	Passed
Gasoline (Regular)	Passed
Gasoline (Unleaded)	Passed
Butyl Cellosolve	Passed
24 HOUR CONTINUOUS SURFACE CONTACT AT 120°F	
Coffee	Passed
Top Job[¥]	Passed
Fantastik [##]	Passed
Formula 409 [#]	Passed
Windex w/ Ammonia D [###]	Passed
Wisk [¶]	Passed

CHEMICAL	RESULTS
24 HOUR CONTINUOUS SURFACE CONTACT AT 120°F	
Downy #	Passed
Spray N Wash##	Passed
Clorox*	Passed
Mustard	Passed
Mr. Clean #	Passed
Ketchup	Passed
Tea	Passed
Tomato Juice	Passed
Lemon Juice	Passed
Grape Juice	Passed
Vinegar	Passed
Milk	Passed

+ 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.

¶ Wisk is a registered trademark of Lever Brothers Company

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Top Job, Downy, and Mr. Clean are registered trademarks of Procter & Gamble

Fantastik and Spray 'N Wash are registered trademarks of Texize, Division of Norton Norwich Products, Inc.

Windex w/Ammonia D is a registered trademark of Drackett Products Company

POLYVANTIS

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LEXAN™ POLYCARBONATE FILM & SHEET Tough, Virtually Unbreakable

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