POLYVANTIS

PRODUCT DATASHEET

LEXAN™ HP05Wxx FILM

Preliminary PRODUCT DATASHEET

DESCRIPTION

LEXAN™ HP05Wxx graphic film is a virtually glare free film uses POLYVANTIS's unique coatings technology that offers 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 LEXAN film's ease of processing, make HP05Wxx film a good choice for outdoor graphic applications such as warning labels, outdoor menu boards, gasoline pumps, marine graphics, etc.

TYPICAL PROPERTY VALUES*

PROPERTY	ASTM (ISO) TEST METHOD	UNITS USCS (SI)	HP05Wxx
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	%	1.40%
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	ASTM D1044	delta Haze	<2
OPTICAL			
Light Transmission	ASTM D1003	%	92.5
Yellowness Index	ASTM D1925	%	0.5
Haze	ASTM D1003	%	70
Gloss over Flat Black @ 60◦	ASTM D523-60 (ISO 2813)	_	15.6
Gloss over Flat Black @ 85◦	ASTM D523-60 (ISO 2813)	_	5.8
Gloss over Flat Black @ 20◦	ASTM D523-60 (ISO 2813)	_	3.7
UV% Transmission at 350 nm	UV/Visual Spectroscopy	%	0.6
UV% Transmission at 360 nm	UV/Visual Spectroscopy	%	1.5
UV% Transmission at 380 nm	UV/Visual Spectroscopy	%	37.8

- 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" (0.250 mm)	- 5%/+20%
0.015" (0.375 mm)	- 5%/+9%
0.020" (0.500 mm)	-3%/+6%
0.025" (0.625 mm)	-3%/+10%
0.030" (0.750 mm)	-3%/+10%

UV RESISTANCE

LEXAN™ HP05Wxx film utilizes a proprietary coating technology developed by POLYVANTIS. This special coating resists yellowing and hazing – no matter how bright the sun. With a yellowness index of less than 3.0 at 1000 hours of QUV testing and less than 2.0 at 1000 hours of Xenon Arc testing. LEXAN HP05Wxx film is a natural choice for demanding outdoor applications.

CHEMICAL AND ABRASION RESISTANCE

Along with very good UV resistance, LEXAN HP05Wxx film also has good chemical and abrasion resistance.

TABER ABRASION RESISTANCE (ASTM D1044) LEXAN™ HP05Wxx GRAPHIC FILM

CONDITION CS10F WHEEL, 500 GRAMS	UNITS	HP05W
25	Change in % Haze	1.8
50	Change in % Haze	2.3
100	Change in % Haze	3.4
200	Change in % Haze	6.6

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

CHEMICAL	RESULTS†
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
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

Formula 409 and Clorox are registered trademarks of the Clorox Company

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

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LEXAN™ POLYCARBONATE FILM & SHEET | Tough, Virtually Unbreakable

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