

PRODUCT DATASHEET

LEXAN™ OQ92S FILM

DESCRIPTION

LEXAN™ OQ92S optical film is a high-performance coated film, which may offer very good chemical/abrasion resistance, together with unique processing characteristics as well as improved surface quality over standard LEXAN HP92S Film. This highly durable, easily printed film may help create new opportunities in graphic design whose potential benefits may include Flexible UV processing, Multiple topside selective texturing, Durability of coating and texture adhesion when exposed to strong household chemicals such as Wisk® or Formula 409#. LEXAN OQ92S Film is available in 48" widths and gauges from .007" to .030". Masking is of the cling type on the uncoated side and of the stick type on the coated side.

TYPICAL PROPERTY VALUES*

PROPERTY	TEST METHOD	UNITS (USCS)	VALUE
PHYSICAL			
Specific Gravity	ASTM D792	--	1.20
Area Factor	Calculation	ft ² /lb/mil	160.0
		m ² /kg/mm	0.833
Pencil Hardness (coated surface)	ASTM D3363	-	HB-F
Taber Abrasion	ASTM D1044	delta Haze	4
OPTICAL			
Haze	ASTM D1003	%	< 0.5
Light Transmission	ASTM D1003	%	90.0
Yellowness Index	ASTM D192	--	10
Water Absorption, Equilibrium	ASTM D570	%	.40
GLOSS			
Backpainted, Flat Black	ASTM D523	Gardner	
60°			90.0
20°			84.0
MECHANICAL			
Tensile Strength	ASTM D882	V/mil	
Yield		psi	8500
Ultimate	ASTM D150	psi	8800
Tear Strength			
Initiation	ASTM D1004	lb/mi	1.4
Propagation	ASTM D1922	g/mil	30.0
THERMAL			
Heat Aging @ 168 Hrs., 180°F			»

◆ 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.

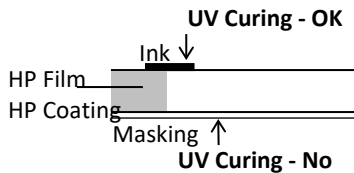
¶ Wisk is a registered trademark of Lever Brothers Company

Formula 409 is a registered trademark of Clorox Company

» No visible Change

MASKING

The standard masking on LEXAN™ QQ92 films is not designed to have UV radiation (for curing) passed through it. If this is required, alternate masking is available. Please contact your sales representative for more details.



CHEMICAL AND ABRASION RESISTANCE

A unique feature of LEXAN QQ92 films is receptivity to multiple-pass, first-surface decoration for selective textures and/or colour graphics. This feature requires that the coating be chemically sensitive to a variety of ink formulations. As a result, the coating is subject to attack by aggressive industrial chemicals and some strong household cleaners. Both the chemical resistance and the hardness of the coating can be enhanced by exposing the coated surface of the film to UV ink curing conditions.

TABER ABRASION RESISTANCE (ASTM D1044) LEXAN™ QQ92S GRAPHIC FILM

CONDITION CS10F WHEEL, 500 GRAMS	UNITS	AS MANUF.	POST CURED [‡]
25	Change in % Haze	1.7	1
50	Change in % Haze	3.2	2
100	Change in % Haze	6.5	4.1
200	Change in % Haze	12.9	9

[‡] Post cure conditions: One elliptical focused medium pressure mercury vapour lamp at 300 watts/inch and a conveyor speed of 20 feet/minute.

CHEMICAL RESISTANCE

CHEMICAL	RESULTS [†] AS MANUFACTURED	POST CURED ^{††}
One Hour Continuous Surface Contact at 73° F		
Acetone	Failed	Passed
MEK	Failed	Passed
Toluene	Failed	Passed
Methylene Chloride	Failed	Passed
Isopropyl Alcohol	Passed	Passed
Cyclohexanone	Failed	Passed
Ethyl Acetate	Failed	Passed
Xylene	Failed	Passed
40% NaOH	Failed	Passed
Concentrated HCl	Passed	Passed
Gasoline (Regular)	Passed	Passed
Gasoline (Unleaded)	Passed	Passed
Butyl Cellosolve	Failed	Passed

CHEMICAL	RESULTS [†] AS MANUFACTURED	POST CURED ^{††}
24 hour continuous Surface Contact at 120°F		
Coffee	Failed	Passed
Top Job [‡]	Failed	Passed
Fantastik ^{###}	Passed	Passed
Formula 409 [#]	Failed	Passed
Windex w/ Ammonia D ^{####}	Failed	Passed
Wisk [¶]	Failed	Passed
Downy [#]	Passed	Passed
Spray N Wash ^{###}	Passed	Passed
Clorox [*]	Failed	Passed
Mustard	Failed	Passed
Mr. Clean [#]	Passed	Passed
Ketchup	Passed	Passed
Tea	Passed	Passed
Tomato Juice	Passed	Passed
Lemon Juice	Passed	Passed
Grape Juice	Passed	Passed
Vinegar	Passed	Passed
Milk	Passed	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.

^{††} Post cure conditions: One elliptical focused medium pressure mercury vapour lamp at 300 watts/inch and a conveyor speed of 20 feet/minute

[¶] 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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