



# Certificate of Analysis

## Screen Protective Film - MXO

Company	Photodon, LLC	Michigan	USA	Phone 847-377-1185	Fax 877-255-2570	
Product Name	MXO - Clear Oleophobic			Product Type	D/S HC-PET	
Film Roll Size	104 cm x 200 meters (41 inches x 656 feet)					
Test Condition	Temp ( °C) 23 ± 3			Humidity 25%		
	<b>Test Items</b>	<b>Unit</b>	<b>Spec</b>	<b>Result</b>	<b>Test Method</b>	
<b>Material</b>	Top Liner	50µm	PET			
	AG Resin	5 µm ± 1	UV 17% Cut			
	Substrate PET Film	100um	PET			
	Silicone Resin	25µm	Silicone			
	Release Liner	50µm	PET			
	Thickness without liners	130µm ± 1	.005"			
<b>Optical Properties</b>	Total Luminous Transmittance	%	>93	94	ASTM-D1003-77	
	Gardner Haze	%	<0.2	0.15	ASTM-D1003-77	
	Gloss Level @ 60°			170.7 Gloss Units	ASTM-D2457-70	
	Rainbow Moire	-	Ver 2	Pass	-	
<b>Thermal Properties</b>	Curling	%	>90	91.3		
	Thermal Shrinkage	%	MD/TD <10	0.13/0.15		
	Retentivity	mm/hr	500g/100°C	<3.0	KSA1107	
	Heat Cycle		-20°C↔80°C 20 Cycles	OK		
<b>Mechanical Properties</b>	Burst Strength	MPA		1.75 MPA	ASTM D774-67	
	Dimensional Stability	%		0.2% Max Shrinkage	MD @ 120° C	
	Tabor Abrasion	%		Δ 9% Max	ASTM D1044-82 100 cycles	
	Pencil Hardness	Film only	H	≥ 3	3H @ 45°, 750g load	ASTM D3363
		w/adhesive	H	≥ 2	2H @ 45°, 1kg load	ASTM D3363
	Peeling Strength	gf/25mm	180° Peel Off	30 ± 2	ASTM D6001 (12 > Competitor's Average)	
	RCA	-	No Scratch	Pass	-	
	Adhesion	-	100/100	Pass	Cross Hatch Test	
	Yellowness Index	-	<0.8	OK	ASTM D1925-70 (3 > Competitor's Average)	
	Anti-fouling Property	-		OK	Visual inspection for repellence of oil-based marker	
<b>Chemical Resistance</b>	<b>Resistant to:</b>				DIN 42 115	
	Alcohols	Hydrocarbons				
	Dilute acids	Ketones				
	Dilute alkalis	Household cleaning agents				
	Esters					