

<b>Photodon LLC</b>	Michigan	USA	Ph: 847-377-1185	Email: sales@photodon.com		
<b>Product Name:</b>	<b>MXO</b>	<b>Finished Material Type:</b>	Oleophobic, clear finish	Date 8-23-24		
<b>Film Roll Size: 1040mm (nominally)</b>			Country of Origin: Korea - Customized and Processed in the USA			
Tested Items		Thickness (µm)	Thickness (in)	Test Method	Notes	
<b>Material</b>	Top Liner	60	0.0023	Micrometer		
	4H Oleophobic Coating	5	0.0001	Micrometer		
	Rainbow Free-Optical PET Film	105	0.0041	Micrometer		
	Silicone Backing	25	0.0009	Micrometer		
	Release Liner	50	0.0019	Micrometer		
	Total Thickness	245 ± 10	0.0096	Micrometer		
	Thickness without liners	135	0.0053	Micrometer		
Tested Items		Unit	Spec	Result	Test Method	
<b>Optical Properties</b>	Total Light Transmittance	%	-	91.95	ASTM D1003-77 / JIS K 7361* Spectrophotometer(Konika CM-5)	
	Haze	%	-	0.45	ASTM D1003-77 / JIS K 7136*	
	Gloss Level @ 60°	Gloss Units	-	170.7	ASTM D2457-7*	
	Rainbow Moire	-	-	Pass	Attached to glass, no liners	
<b>Thermal Properties</b>	Curling	%	> 90	91.2	-	
	Thermal Shrinkage %	%	MD/TD< 1.0	0.13/0.15	-	
	Retentivity	mm/hr	-	< 3.0	KSA1107 500g/100°C	
	Temp/Humidity	°C/RH%	-	No Problem	85°C / 85% RH	
	Heat Cycle	-	-	No Problem	-40°C ↔ 80°C, 20 cycles	
<b>Mechanical Properties</b>	Contact Angle	°	-	112 ± 5	Contact Angle Meter	
	Oleophobic Coating Durability	°	-	105 ± 2	1500cycles/Rubbing test stick@ 45°, 500g load/cm²*Rubber stick hardness:81 (Durometer A type)	
	Adhesion Stability	-	100/100	Pass	ASTM D3359 / JIS K 5600 Cross Cut Adhesion Test	
	Pencil Hardness	Film only	H	-	≥ 4	ASTM D3363 / JIS K5600-5-4 4H @ 45°, 500g load
		w/ adhesive	H	-	≥ 2	ASTM D3363 / JIS K5600-5-4 2H @ 45°, 350g load
	Scratch Resistance	-	-	No Damage	ASTM D1044 Steel wool (#0000)* 20 Laps @ 350g load/cm²	
	Peeling Strength	gf/inch	-	5.1 / 30min	LLOYD LS1 180° peel, g/25mm, 300mm/min	
<b>Chemical Resistance</b>	<b>Resistant to:</b>					
	Alcohols	Esters	No Problem	DIN 42 115		
	Dilute acids	Hydrocarbons				
	Dilute alkalis	Ketones				

\*After peeling off liners