Technical Data Sheet
9HO Material

Company	**Photodon, LLC**	Michigan	USA	Phone 847-377-1185		Email Sales@photodon.com
Product Name	**9HO - Oleophobic**			Product Type	Optical-PET	Date 2019/12/11
Film Roll Size	1020mm x 200 meters (40.25 inches x 656 feet)					
Test Condition						

Test Items			Unit	Notes	Result	Test Method
Material	Top Liner		60μm	PET		
	Oleophobic Coating					
	9H Shatterproof Glass-Like Coating					
	Rainbow Free-Optical PET		140um	PET		
	Si-PSA		30μm	Silicone		
	Release Liner		50μm	PET		
	Thickness without liners		165 ± 10μm	.0065"		
Optical Properties	Total Luminous Transmittance		%		92.23	ASTM-D1003-77 *2
	Gardner Haze		%		0.61	ASTM-D1003-77 *
	Gloss Level @ 60°				170.7 Gloss Units	ASTM-D2457-70 *
	Rainbow Moire		–		Pass	** –
Thermal Properties	Curling		%	>90	90.4	
	Thermal Shrinkage %		%		0.13/0.15	MD/TD <10
	Retentivity		mm/hr	500g/100°C	<3.0	KSA1107
	Temp/Humidity				No Problem	85°C / 85RH%
	Thermal Shrinkage				No Problem	Heat Cycle - 40°c ->80°c - 20 cycles
Mechanical Properties	Contact Angle (Average)				115°±5	CONTACT-ANGLE METR
	Oleophobic Coating Durability				110°±2	1500cycles / Rubbing test stick @ 45°, 500g load/cm^2
	Peeling Strength		gf/25mm	180° Peel Off	5.6 after 30 min.	GLASS with 2kg roller 180° peel, g/25 mm, 300mm/min
	Pencil Hardness	Film only	H	≧ 8	8H @ 45°, 500g load	ASTM D3363
		w/adhesive	H	≧ 7	7H @ 45°, 500g load	ASTM D3363
	Steel Wool Abrasion				No damage	ASTM D1044 Steel wool (#0000) *20 Laps @ 750g load/cm^2
	Adhesion			100/100	Pass	Cross Cut Adhesion Test
Chemical Resistance	**Resistant to:**					DIN 42 115
	Alcohols	Hydrocarbons			No Problem	
	Dilute acids	Ketones				
	Dilute alkalis					
	Esters					

* After pulling off liners
** Attaching to glass no liners
*2 Spectrophotometer (Konika CM-5)

The technical data sheets are not guaranteed values, but rather measurement values given as an example. Photodon does not guarantee that the film can be used for any example applications provided.