



# Technical Data Sheet AMC Material

Company	Photodon, LLC	Michigan	USA	Phone 847-377-1185	Fax 877-255-2570	
Product Name	AMC- Anti-Microbial Clear			Product Type	HC-PET	
Film Roll Size	1040 mm x 200 meters (41 inches x 656 feet)					
Test Condition	Temp ( °C) 22 ± 2			Humidity 28%		
	<b>Test Items</b>	<b>Unit</b>	<b>Spec</b>	<b>Result</b>	<b>Test Method</b>	
<b>Material</b>	Top Liner	µm	PET	60	Micro Meter	
	4H Anti-microbial	µm		25	Micro Meter	
	Substrate PET Film	um	PET	100	Micro Meter	
	Silicone PSA	µm	Silicone	25	Micro Meter	
	Release Liner	µm	PET	50	Micro Meter	
	Thickness without liners	µm ± 1		130 ± 10	Micro Meter	
<b>Optical Properties</b>	Total Luminous Transmittance	%	<92	91.95	ASTM D1003 77 / JIS K 7361	
	Gardner Haze	%	>2	.45	ASTM D1003 77 / JIS K 7136	
	Rainbow Moire	-	Ver 2	Pass	EYE Test	
<b>Thermal Properties</b>	Curling	%	150°c / 60min	91.2	>90	
	Thermal Shrinkage	%	MD/TD <1	0.13/0.15		
	Retentivity	mm/hr	500g/100°C	<3.0	KSA110	
	Heat & Humidity Cycle		-40°C↔80°C 85°C /85 RH%	OK	20 Cycles	
<b>Mechanical Properties</b>	Pencil Hardness	Film only	H	≥ 4	4H @ 45°, 500g load	JISK5600
		w/adhesive	H	≥ 2	2H @ 45°, 350g load	JISK5600
	Silicone Peeling Strength	gf/inch	180° Peel Off	5.1 / after 30min	LLOYD LS1	
	Adhesion	-	100/100	Pass	Cross Hatch Test	
	Contact Angle (Average)			112° ± 5	Contact-Angle Meter	
	Oleophobic Coating Durability			Ok - 1500 Cycles	Durometer	
<b>Chemical Resistance</b>	Alcohol - Dilute acids - Dilute alkalis Esters - Hydrocarbons - Ketones			No Problem	DIN42115	

### Antimicrobial Activity (JIS Z 2801:2010E)

Test microorganisms	Result(s)					
	Initial bacteria number (CFU/film)	Bacteria number after 24 hr at 35 °C		Antimicrobial activity		
		Control (CFU/film)	Sample (CFU/film)		R	Percentage (%)
<i>Klebsiella pneumoniae</i> ATCC 4352	2.2 x 10 <sup>5</sup>	1.1 x 10 <sup>8</sup>	1st	<25	6.7	>99.9%
			2nd	<25	6.7	>99.9%
			3rd	<25	6.7	>99.9%
<i>Staphylococcus aureus</i> ATCC 6538P	1.6 x 10 <sup>5</sup>	3.8 x 10 <sup>7</sup>	1st	<25	6.2	>99.9%
			2nd	<25	6.2	>99.9%
			3rd	<25	6.2	>99.9%
<i>Salmonella typhimurium</i> NCTC12023	2.3 x 10 <sup>5</sup>	1.5 x 10 <sup>8</sup>	1st	<25	6.8	>99.9%
			2nd	<25	6.8	>99.9%
			3rd	<25	6.8	>99.9%