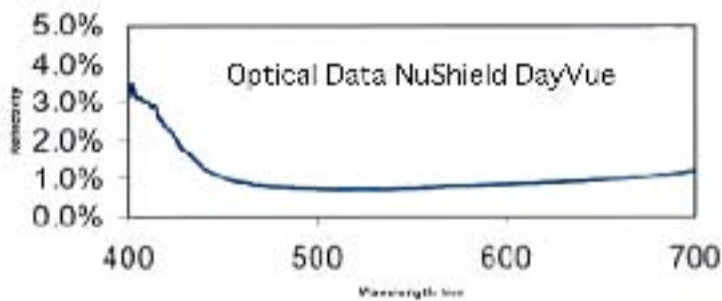


## Specifications for NuShield DayVue- Antireflective (AR) Film

Property	Value	Test Method
Minimum reflectance	0.7	
Mean reflectance 450-650 nm	0.8	
Gardner haze	≤2%	ASTM D1003-77
Total luminous transmission	>95.5%	ASTM D1003-77
Single surface reflectivity	<1% between 450-600 nm	UV/VIS Spectrophotometer
Yellowness index	≤2.0%	ASTM D1925-70
Tabor Abrasion*	<7% haze	ASTM D1044-82, 100 cycles, 500g load, CS10F wheels
Dimensional Stability	0.2% max shrinkage	MD @ 120° C
Pencil Hardness	>2H	ASTM D3363-00
Chemical Resistance	Resistant to: Acetone MEK Toluene IPA Cyclohexanone Ethyl Acetate Xylene 40% NaOH Concentrated HCl Gasoline (Regular) Gasoline (Unleaded) Butyl Cellosolve Ethanol	DIN 42 115

\*With some loss of AR performance.

### Reflectance



## Specifications for NuShield Triple A- Antiglare-Antimicrobial (AG-AM) Film

Property	Value	Test Method
Burst Strength	1.75 MPa	ASTM D774-67
Elastic Modulus	4-5.5 GPa	ASTM D882-83 23° C, 50% RH. Strain Rate-10% per minute
Gardner Haze	10%	JIS K7136
Total Luminous Transmission	90 ± 0.5	ASTM D1003-77
Dimensional Stability	0.2% max shrinkage	MD @ 120° C
Pencil Hardness	3H	ASTM D1044
Anti-microbial	<10 Survival after 24hr	Colon Bacillus - $2 \times 10^5$
	<10 Survival after 24hr	Staphylococcus aureus - $2.5 \times 10^5$ initial
Chemical resistance	Resistant to: Alcohols Dilute acids Dilute alkalis Esters Hydrocarbons Ketones Household cleaning agents	DIN 42 115

## Specifications for NuShield Antiglare (AG) film

Property	Value	Test Method
Burst Strength	1.75 MPa	ASTM D774-67
Elastic Modulus	4-5.5 GPa	ASTM D882-83 23° C, 50% RH. Strain Rate-10% per minute
Gardner Haze	5-7% - Antiglare	ASTM D1003-77
Gloss Level @ 60°	85±5% - Antiglare	ASTM D2457-70
Total Luminous Transmission	>90%	ASTM D1003-77
Clarity	>75%	BYK-Gardner
Dimensional Stability	0.2% max shrinkage	MD @ 120° C
Pencil Hardness	3-4H @ 45°	ASTM D3363
Chemical resistance	Resistant to: Alcohols Dilute acids Dilute alkalis Esters Hydrocarbons Ketones Household cleaning agents	DIN 42 115

### Specifications for NuShield Clear Film

<b>Property</b>	<b>Value</b>	<b>Test Method</b>
Burst Strength	1.75 MPa	ASTM D774-67
Elastic Modulus	4-5.5 GPa	ASTM D882-83 23° C, 50% RH. Strain Rate-10% per minute
Gardner Haze	0.73%	ASTM D1003-77
Total Luminous Transmission	91.3%	ASTM D1003-77
Dimensional Stability	0.2% max shrinkage	MD @ 120° C
Tabor Abrasion	Δ 9% max	ASTM D1044
Pencil Hardness	4H @ 45°, 1000g load	JIS K 5401
Gloss Level @ 60°	170.7 Gloss Units	ASTM D2457-70
Yellowness Index	<3	ASTM D1925-70
Chemical resistance	Resistant to: Alcohols Dilute acids Dilute alkalis Esters Hydrocarbons Ketones Household cleaning agents	DIN 42 115