Safety Window Film: Data Sheet

Solar Gard® Graffitigard® 4 Mil

Physical Characteristics

PERFORMANCE	VALUE	METHOD
Caliper, film only	100µm	Mitutoyo® Series
Caliper, film & adhesive	115µm	Micrometer 293
Tensile Strength (without liner)		
Transverse direction (TD)	175 N/mm²	ASTM D 882
Machine direction (MD)	150 N/mm²	
Adhesion, Ultimate (applied to glass)	45 N/m (20 minutes) 92 N/m (24 hours) 164 N/m (30 Days)	ASTM D903-98
Scratch Resistance	7.50%	ASTM D 1044 (Taber Abrasion)
Shrinkage without liner	1mm maximum	30 minutes, 120°C
Removability from glass	No residual left on glass	

Adhesion

Adhesion is measured by peeling specimens at a 180° angle from the substrate. Peel adhesion is the average result for the strips tested in Newtons per meter. Specimens are applied to substrate using standard application practices. Initial adhesion is measured 20 minutes after application followed by 24 hours.

Scratch Resistance

Scratch resistance is measured testing using the Taber Haze 5130 Abraser. Specimens are subjected to 100 cycles with two 500g weights. Abrasive damage is visually judged and numerically quantified by calculating the difference in haze percentage in accordance with Test Method ASTM D1003 between an abraded and unabraded specimens.

Storage

Window film should be stored in a dry, controlled environment. The temperature should not exceed 95° F (35° C) nor go below 50° F (10° C). The film should always be stored in the original packaging with the end plugs securely placed on the core.

Disclaimer

These test data contain only results arrived at after employing specific test procedures and standards. The included data do not constitute a recommendation for, endorsement of, or certification of the product or material tested. These data are provided for informational purposes only and are not to be considered part of the basic representation or warranty, expressed or implied, including the implied warranties of merchantability or fitness for a particular purpose, that its products will conform to these test data. Solar Gard's limited warranty should be carefully reviewed prior to purchasing any Solar Gard product. Extrapolation of data from the sample or samples relation to the batch or lot from which data were obtained may not correlate and should be interpreted accordingly with caution. Solar Gard shall not be responsible for variations in quality, composition, appearance, performance, or other feature of similar subject matter produced by persons or under conditions over which Solar Gard has no control.

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Safety Window Film: Data Sheet

Solar Gard® Graffitigard® 6 Mil

Physical Characteristics

PERFORMANCE	VALUE	METHOD
Caliper, film only	150µm	Mitutoyo® Series
Caliper, film & adhesive	168µm	Micrometer 293
Tensile Strength (without liner)		
Transverse direction (TD)	175 N/mm²	ASTM D 882
Machine direction (MD)	146 N/mm²	
Adhesion, Ultimate (applied to glass)	52 N/m (20 minutes) 71 N/m (24 hours) 176 N/m (30 Days)	ASTM D903-98
Scratch Resistance	10.50%	ASTM D 1044 (Taber Abrasion)
Shrinkage without liner	1mm maximum	30 minutes, 120°C
Removability from glass	No residual left on glass	

Adhesion

Adhesion is measured by peeling specimens at a 180° angle from the substrate. Peel adhesion is the average result for the strips tested in Newtons per meter. Specimens are applied to substrate using standard application practices. Initial adhesion is measured 20 minutes after application followed by 24 hours.

Scratch Resistance

Scratch resistance is measured testing using the Taber Haze 5130 Abraser. Specimens are subjected to 100 cycles with two 500g weights. Abrasive damage is visually judged and numerically quantified by calculating the difference in haze percentage in accordance with Test Method ASTM D1003 between an abraded and unabraded specimens.

Storage

Window film should be stored in a dry, controlled environment. The temperature should not exceed 95° F (35° C) nor go below 50° F (10° C). The film should always be stored in the original packaging with the end plugs securely placed on the core.

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Safety Window Film: Data Sheet

Solar Gard® Graffitigard® 7 Mil

Physical Characteristics

PERFORMANCE	VALUE	METHOD
Caliper, film only Caliper, film & adhesive	175µm 191µm	Mitutoyo® Series Micrometer 293
Tensile Strength (without liner) Transverse direction (TD) Machine direction (MD)	 175 N/mm² 133 N/mm²	 ASTM D 882
Adhesion, Ultimate (applied to glass)	50 N/m (20 minutes) 70 N/m (24 hours) 102 N/m (30 Days)	ASTM D903-98
Scratch Resistance	10.0%	ASTM D 1044 (Taber Abrasion)
Shrinkage without liner	1mm maximum	30 minutes, 120°C
Removability from glass	No residual left on glass	

Adhesion

Adhesion is measured by peeling specimens at a 180° angle from the substrate. Peel adhesion is the average result for the strips tested in Newtons per meter. Specimens are applied to substrate using standard application practices. Initial adhesion is measured 20 minutes after application followed by 24 hours.

Scratch Resistance

Scratch resistance is measured testing using the Taber Haze 5130 Abraser. Specimens are subjected to 100 cycles with two 500g weights. Abrasive damage is visually judged and numerically quantified by calculating the difference in haze percentage in accordance with Test Method ASTM D1003 between an abraded and unabraded specimens.

Storage

Window film should be stored in a dry, controlled environment. The temperature should not exceed 95° F (35° C) nor go below 50° F (10° C). The film should always be stored in the original packaging with the end plugs securely placed on the core.

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