

Product Description

3M™ Scotchshield™ Ultra Prestige S70 is a combined solar and safety window film consisting of a multi-layered, tear-resistant safety film combined with high-performance, multilayered optical film. 3M™ Scotchshield™ Ultra Prestige S70 is a metal-free product.

Applications

3M™ Scotchshield™ Ultra Solar Safety Window Films are intended for interior application on flat glass substrates.

Physical Properties

The values displayed are the results of illustrative lab test measurements made according to the indicated external norm and shall not be considered as a commitment from 3M.

Characteristics	Value
Film Thickness	203 µm (8 mils)
Total Film Thickness (Film + Adhesive)	250 µm (9.9 mils)
Film Construction	Multi-layered PET/PMMA
Tensile Strength MD/TD (ASTM D882)	180 MPa (26,600psi) 172 MPa (25,000 psi)
Break Strength MD/TD (ASTM D882)	37 N/mm (205 lb/in) MD 36 N/mm (200 lb/in) TD
Elongation at Break MD/TD (ASTM D882)	110% / 135%
Yield Strength (ASTM D882)	103 MPa (15,000 psi - MD)
Energy to Tear MD/TD (ASTM 1004 - Graves Tear)	1.26 J +/- 0.18 (1,150 lbs%) MD 1.25 J +/- 0.32 (1,150 lbs%) TD
Abrasion Resistance (ASTM D1044)	< 5% delta haze
Flammability	
Flammability EN 13501	B-s1, d0
Flammability EN 45545	HL1, HL2, HL3
Flammability (ASTM E84)	Class A

Typical Performance Properties according to EN 410										
Glass Type	Film Type	Visible Light			Total Solar Energy Rejected	G Value (SHGC)	LSG (Light to solar gain)*	UV Block	Heat Gain Reduction	Glare Reduction
		Reflected (interior)	Reflected (exterior)	Transmission						
Single Pane		%	%	%	%			%	%	%
Clear	No Film	9	8	89	19	0.81	1.1	40	NA	NA
	Ultra PR S70	8	9	69	49	0.51	1.4	99.9	37	23
Tinted	No Film	6	5	53	39	0.61	0.9	82	NA	NA
	Ultra PR S70	7	6	41	59	0.41	1.0	99.9	33	23
Double Pane										
Clear	No Film	15	15	79	30	0.70	1.1	55	NA	NA
	Ultra PR S70	12	16	62	43	0.57	1.1	99.9	19	22
Tinted	No Film	13	8	47	51	0.49	1.0	85	NA	NA
	Ultra PR S70	11	8	37	59	0.41	0.9	99.9	16	21

*Transmission/G

Performance Testing

Method	Glass Substrate	Film Attachment**	Blast Load	GSA Performance Condition and/or ASTM Hazard rating
Blast Mitigation				
GSA TS01-2003 ASTM F1642	6 mm (1/4") annealed	IPA	6 psi, 42 psi msec	GSA Rating of "2" ASTM F1642 "No Hazard"
GSA TS01-2003 ASTM F1642	25 mm (1") double pane annealed	IPA	9 psi, 60 psi msec	GSA Rating of "2" ASTM F1642 "No Hazard"

Method	Glass Substrate	Film Attachment**	Rating
Safety Glazing			
16 CFR 1201	6 mm (1/4") and 3 mm (1/8") annealed	N/A	Category 2, 400 ft-lbs
ANSI Z97.1			Class A (Unlimited), 400 ft-lbs
EN 12600	6 mm	N/A	1B1, applicable for both surfaces, glass and film side
EN 12600	4 mm	N/A	1B1, applicable for both surfaces, glass and film side
Impact Resistance			
ASTMs E1886/E1996	6 mm (1/4") tempered	IPA	Missile Level A
EN 356	5 mm tempered	N/A	P1A

** IPA = 3M™ Impact Protection Attachment Sealant, all 4 sides unless noted. N/A = Not Applicable.

Shelf Life and Storage

The shelf life as defined below remains indicative and maximum data, subject to many external and non-controllable factors. It may never be interpreted as a warranty.

Shelf life is 5 years from the manufacturing date. The material should be stored in its original packaging, laying in a horizontal orientation, away from direct sunlight. Heavy objects should not be placed on top of it to avoid damaging the product.

Recommended storage conditions are +21°C and 40 – 50% relative humidity. Avoid extreme temperature ranges in storage.

Application

These are indicative values for 3M™ Window Film products.

Recommended substrate	Glass (as described in EN 15755-1)
Recommended surface	Flat to simple curved
Application method	Suitable for wet application or dry semi-automatic lamination
Application temperature	From +8°C to +45°C
Application guidelines	Use a firm, narrow squeegee. Use both hands to apply consistent, firm pressure across the squeegee blade. Overlap 50% from the previous stroke. Remove as much water as possible in one pass.
Service temperature	From -40°C to +80°C
Edge sealing	N/A
Edge retention	IPA or similar is recommended for glass mitigation applications
Drying Time	Final adhesion is dependent on film thickness and prevailing drying conditions. Typical cure times for films > 200 µm < 300 µm = 100 days.

Maintenance and Cleaning

Use a cleaning agent designed for high-quality glass surfaces. The cleaning agent must be wet and non-abrasive with a pH value between 6 and 8 (neither strongly acidic nor strongly alkaline).

Health and Safety

WARNING

To help reduce the risk of personal injury and/or property damage associated with glass breakage, when working on or near glass surfaces, always use appropriate personal protective equipment.

Tools and Equipment Usage

When using any equipment, always follow the manufacturer's instructions for safe operation.

Chemicals

When handling any chemical products, read the manufacturers' container labels and the Safety Data Sheets (SDS) for important health, safety, and environmental information.

[Follow this link to obtain SDS sheets for 3M products.](#)

[Follow this link to obtain information about substances of very high concern \(SVHC\) for EU products.](#)

Warranty Information

Technical Information

Technical information, guidance, and other statements provided by 3M are based upon records, tests, or experience that 3M believes to be reliable, but the accuracy, completeness, and representative nature of such information is not guaranteed. Such information is intended for people with knowledge and technical skills sufficient to assess and apply their own informed judgment to the information. No license to any intellectual property rights is granted or implied with respect to this technical information.

Product Selection and Use

Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. Customer is solely responsible for evaluating the product and determining whether it is appropriate and suitable for customer's application, including conducting a workplace hazard assessment, reviewing all applicable regulations and standards, and reviewing the product label and use instructions. Failure to properly evaluate, select, and use a 3M product in accordance with instructions or to meet all applicable safety regulations may result in injury, sickness, death, and/or harm to property.

Warranty, Limited Remedy, and Disclaimer

Unless a different warranty is specifically stated on the applicable 3M product packaging or product literature (in which case such warranty governs), 3M warrants that each 3M product meets the applicable 3M product specification at the time 3M ships the product. Please refer to the Warranty Bulletin for 3M™ Window Films (Flat Glass Applications) and 3M™ Impact Protection Attachment (IPA) Sealant for complete details on warranty coverage, which can be obtained by contacting your 3M Authorized Window Film Dealer or your local 3M sales representative. 3M MAKES NO OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTY OR CONDITION OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ARISING OUT OF A COURSE OF DEALING, CUSTOM, OR USAGE OF TRADE. If a 3M product does not conform to this warranty, the sole and exclusive remedy is, at 3M's option, replacement of the 3M product or refund of the purchase price.

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