







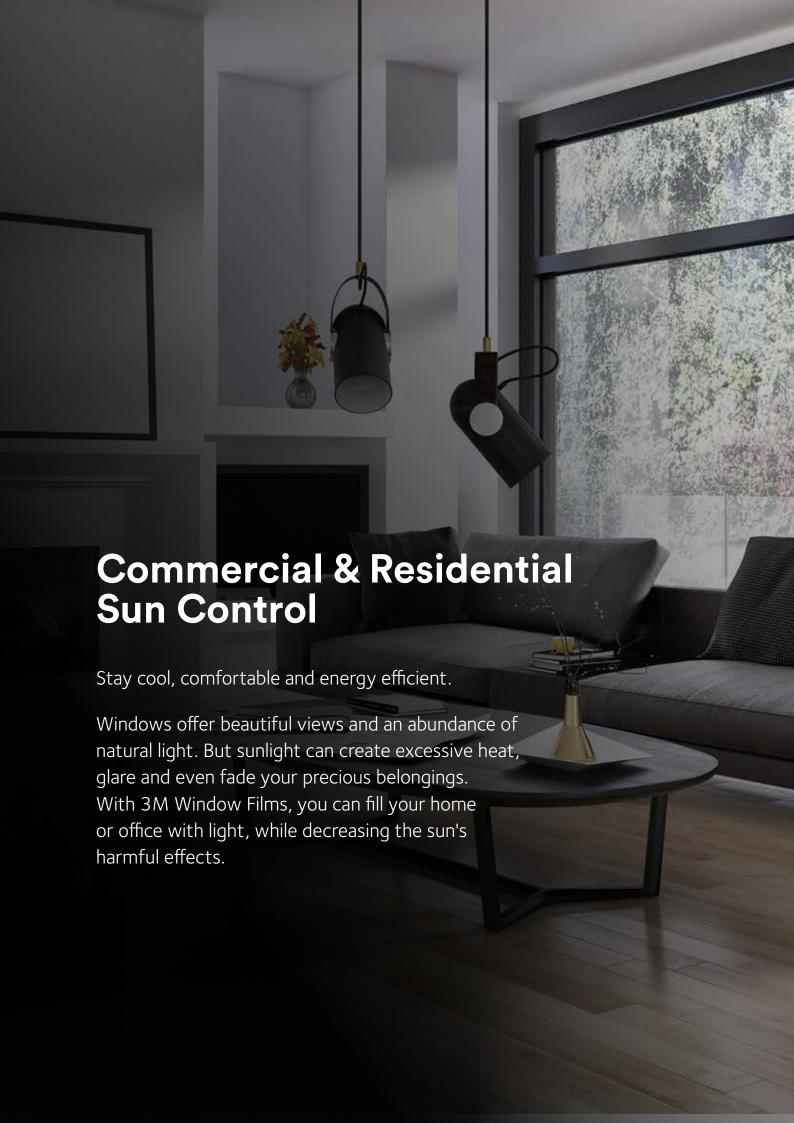






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### Save energy, enhance comfort and enjoy a fast payback with 3M<sup>™</sup> All Season Window Film Series.

- Improves comfort during the cold winter months as well as during the heat of summer
- Reduces glare which may help improve productivit work stations
- Helps extend the life of furnishings by significantly r harmful UV rays, the largest cause of fading
- Comprehensive 3M Warranty

Winter Insulation	***
Energy Savings	****
Glare Reduction	****

Best ★★★★
Better ★★★
Good ★★★
Fair ★★

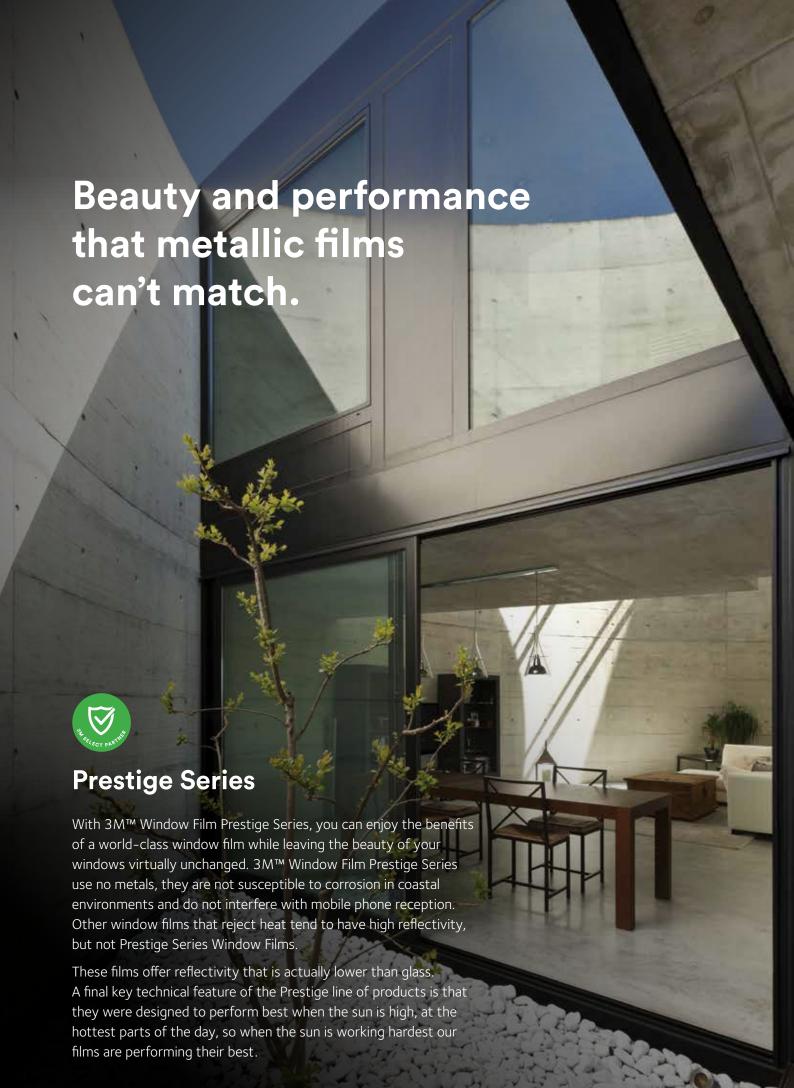
Not Recommended \*

In comparison to other  $3M^{\mbox{\tiny TM}}$  Window Films

### **Product Performance and Technical Data**

		Visible Light		Total Solar Solar Heat Gain		U Value					Visible Light to Solar	
Glass Type (6.35mm)	Film Type	Reflected (interior)	Reflected (exterior)	Transmit- ted	Energy Rejected	Coefficient (G Value)	W/ m²k	Heat Loss Reduction	Solar Heat Reduction	UV Light Rejected	Glare Reduction	to Solar Heat Gain Ratio
Clear	Low E 20	58%	52%	20%	76%	0.24	4.46	24%	71%	99.9%	77%	0.8
	Low E 35	62%	58%	26%	77%	0.23	4.76	17%	72%	99%	72%	1.1
	Low E 70	17%	16%	74%	46%	0.54	4.43	24%	32%	99.6%	17%	1.4
Tinted	Low E 20	58%	22%	12%	75%	0.26	4.46	24%	60%	99.9%	78%	0.5
	Low E 35	62%	24%	15%	74%	0.26	4.76	17%	59%	99%	72%	0.6
	Low E 70	16%	9%	44%	56%	0.44	4.43	24%	32%	99.8%	17%	1.0
	Low E 20	58%	52%	19%	67%	0.33	2.29	15%	53%	99.9%	76%	0.6
Double Clear	Low E 35	63%	57%	24%	69%	0.31	2.39	11%	56%	99%	70%	0.8
	Low E 70	22%	21%	66%	47%	0.53	2.28	15%	23%	99.6%	16%	1.2
	Low E 20	58%	21%	11%	73%	0.27	2.29	15%	47%	99.9%	77%	0.4
Tinted Clear	Low E 35	62%	23%	14%	74%	0.26	2.39	11%	50%	99%	70%	0.5
	Low E 70	21%	11%	40%	61%	0.39	2.28	15%	22%	99.8%	16%	1.0

Material	Material Description	Width (inch)	Width (mm)	Length (m)
400665	3M Low E 20 Silver 1016mm	40	1016	30.4
400666	3M Low E 20 Silver 1270mm	50	1270	30.4
400667	3M Low E 20 Silver 1524mm	60	1524	30.4
400668	3M Low E 35 Silver 914mm	36	914	30.4
400669	3M Low E 35 Silver 1524mm	60	1524	30.4
400670	3M Low E 35 Silver 1829mm	72	1829	30.4
452099	3M Low E 70 Silver 1270mm	50	1270	30
452100	3M Low E 70 Silver 1524mm	60	1524	30



### Superior comfort with the ultimate in clarity.

- · High visible light transmission providing excellent aesthetics
- Low interior and exterior reflectivity enhances views while maintaining exterior appearance
- Non-metalized film with no signal interference and no chance for corrosion
- The Prestige Series can become carbon negative in as short as 6 months from install\*
- · Comprehensive 3M Warranty



Best ★★★★
Better ★★★
Good ★★
Fair ★★

Not Recommended 🖈

In comparison to other 3M Sun Control Window Films

### **Product Performance and Technical Data**

		Visible Light			Total Solar Energy Rejected		U Value				Visible Lieba	
Glass Type (6.35mm)	Film Type	Reflected (interior)	Reflected (exterior)	Transmitted	Normal	60 Degree Angle	Heat Gain Coefficient (G Value)	W/ m²k	Solar Heat Reduction	UV Light Rejected	Glare Reduction	Visible Light to Solar Heat Gain Ratio
	PR20	5%	6%	21%	62%	65%	0.38	5.8	54%	99.9%	76%	0.6
	PR40	7%	7%	40%	60%	66%	0.41	5.6	50%	99.9%	55%	1.0
Clear	PR50	7%	8%	51%	56%	63%	0.44	5.6	46%	99.9%	44%	1.1
	PR60	8%	7%	61%	52%	61%	0.48	5.6	41%	99.9%	31%	1.3
	PR70	8%	8%	69%	49%	59%	0.51	5.6	38%	99.9%	22%	1.4
	PR20	5%	5%	13%	64%	67%	0.36	5.8	43%	99.9%	76%	0.4
	PR40	6%	5%	24%	62%	67%	0.38	5.6	40%	99.9%	55%	0.6
Tinted	PR50	6%	6%	30%	61%	66%	0.39	5.6	38%	99.9%	43%	0.8
	PR60	7%	6%	36%	58%	63%	0.42	5.6	33%	99.9%	32%	0.9
	PR70	7%	6%	42%	56%	63%	0.44	5.6	30%	99.9%	21%	1.0
	PR20	5%	13%	19%	50%	57%	0.51	2.7	28%	99.9%	77%	0.4
	PR40	8%	14%	35%	48%	54%	0.52	2.7	26%	99.9%	55%	0.7
Double Clear	PR50	9%	14%	45%	47%	53%	0.53	2.7	24%	99.9%	44%	0.8
	PR60	11%	14%	54%	45%	54%	0.55	2.7	21%	99.9%	32%	1.0
	PR70	12%	15%	62%	44%	50%	0.56	2.7	21%	99.9%	22%	1.1
	PR20	5%	8%	11%	61%	68%	0.39	2.7	24%	99.9%	76%	0.3
	PR40	8%	8%	21%	60%	64%	0.40	2.7	22%	99.9%	55%	0.5
Double Tinted	PR50	9%	8%	27%	58%	64%	0.42	2.7	18%	99.9%	44%	0.7
	PR60	10%	8%	32%	58%	64%	0.42	2.7	18%	99.9%	32%	0.8
	PR70	12%	8%	37%	59%	62%	0.42	2.7	18%	99.9%	22%	0.9

<sup>\*</sup> Based on emission calculations performed in compliance with the GHG Protocol Product Life Cycle Accounting and Reporting Standard (2011), third party assured by Quality Associates incorporated and energy savings calculation completed by CONSOL Energy. Contact 3M for details.



### 3M™ Sun Control Window Film Prestige 70

Private Residence — Sausalito, California

#### **Project Scope**

Blending gracefully into a hillside overlooking San Francisco Bay, a residence designed by award-winning architect Obie G. Bowman gave a Sausalito homeowner everything he had hoped for—an open, light-filled interior with an expansive view of the bay, Tiburon, Mount Diablo, Angel Island and the San Francisco skyline.

But the window views came with something the homeowner hadn't anticipated—excessive heat build-up.

#### Situation

The 390 square meter home resonates with the natural setting, stepping down the steep hill in three tiers with windows sloping in harmony. An earth-covered roof, an expansive wall of windows facing the bay and skylights further integrate the residence with its surroundings.

In the main living area, windows consisting of 30 glass panes provide the most stunning view of the bay. But the east-facing windows meant extreme sun exposure all morning through early afternoon. This raised room temperatures to what the homeowner described as "unbearable levels." Window shades would block the precious view and, as the homeowner learned, cost four times more than window films.

After a disappointing trial with a non-3M film and contractor, he turned to a  $3M^{\text{M}}$  Authorized Dealer for a solution.

### Solution

The homeowner requested a window film that appears "non-existent." The dealer suggested 3M™ Sun Control Window Film Prestige 70 for its high heat rejection and clarity. Nearly 60 square meters of Prestige 70 was installed on the interior of the windows. The advanced window film helps block UV rays and infrared heat while allowing natural light in. The view? Virtually unchanged.

#### Result

Magnificent views. Greater comfort. One cost-effective solution.

3M Sun Control Window Film Prestige 70 has helped reduce the temperature in the home by 9° to 12° C, making for one satisfied homeowner. Another example of 3M™ Window Films working discreetly behind the scenes to help keep people cool, comfortable and protected.

"The film isn't noticeable, and it's doing exactly what it is supposed to do. The house is more comfortable, and it isn't hindering our views. It's an excellent alternative to window coverings, and there's no maintenance."

Homeowner

# Unsurpassed sun control capabilities.

What sets 3M Prestige films apart is the precision with which light waves are controlled as they pass through or reflect off of hundreds of layers of film. Compared to other films, Prestige Series Window Films increase their performance at a faster rate as the sun's angle increases. That means greater protection and comfort when you need it the most.



### **3M**

3M™ Prestige Series Window Films are tested and perform best when the sun is high at the hottest parts of the day.



### Other brands

All window films are tested when the sun is perpendicular to the window.

Material	Material Description	Width (inch)	Width (mm)	Length (m)
400608	3M Prestige 20 914mm	36	914	30.4
400609	3M Prestige 20 1220mm	48	1220	30.4
400610	3M Prestige 20 1524mm	60	1524	30.4
400611	3M Prestige 20 1829mm	72	1829	30.4
400612	3M Prestige 40 914mm	36	914	30.4
400613	3M Prestige 40 1220mm	48	1220	30.4
400614	3M Prestige 40 1524mm	60	1524	30.4
400615	3M Prestige 40 1829mm	72	1829	30.4
400616	3M Prestige 50 914mm	36	914	30.4
400617	3M Prestige 50 1220mm	48	1220	30.4
400618	3M Prestige 50 1524mm	60	1524	30.4
400619	3M Prestige 50 1829mm	72	1829	30.4
400620	3M Prestige 60 914mm	36	914	30.4
400621	3M Prestige 60 1220mm	48	1220	30.4
400622	3M Prestige 60 1524mm	60	1524	30.4
400623	3M Prestige 60 1829mm	72	1829	30.4
400624	3M Prestige 70 914mm	36	914	30.4
400625	3M Prestige 70 1220mm	48	1220	30.4
400626	3M Prestige 70 1524mm	60	1524	30.4
400627	3M Prestige 70 1829mm	72	1829	30.4



### Reject the heat, not the light. 3M Sun Control Window Film Ceramic Architectural Series.



- · High visible light transmission providing excellent aesthetics
- Low interior and exterior reflectivity enhances views while maintaining exterior appearance.
- · Stay cooler by reducing ecessive heat in warmer months
- · Non-metalised film with natural tone for amazing clarity
- Helps extend the life of furnishings by significantly reducing harmful UV rays, the largest cause of fading
- · Comprehensive warranty from 3M.

Visible Light Transmission	****
Infrared Rejection	***
Energy Savings	***
Glare Rejection	***

Best ★★★★
Better ★★★
Good ★★
Fair ★★

Not Recommended \*

In comparison to other 3M™ Sun Control Window Films

### **Product Performance and Technical Data**

		Visible Light			Total Solar Solar Heat Ga	Solar Heat Gain	U Value				Visible Light
Glass Type (6.35mm)	Film Type	Reflected (interior)	Reflected (exterior)	Transmitted	Energy Rejected	Coefficient (G Value)	W/ m²k	Solar Heat Reduction	UV Light Rejected	Glare Reduction	to Solar Heat Gain Ratio
	Ceramic 35	6%	6%	37%	55%	0.45	5.8	45%	99.8%	58%	0.8
	Ceramic 45	6%	6%	45%	52%	0.48	5.9	41%	99.8%	49%	0.9
Clear	Ceramic 60	7%	7%	62%	48%	0.53	5.9	36%	99.7%	30%	1.2
	Ceramic 80	8%	8%	77%	43%	0.57	5.9	30%	99.6%	13%	1.4
	Ceramic 35	5%	6%	22%	60%	0.4	5.8	37%	99.8%	58%	0.6
	Ceramic 45	5%	5%	27%	58%	0.42	5.9	34%	99.9%	49%	0.6
Tinted	Ceramic 60	6%	6%	37%	55%	0.45	5.9	29%	99.8%	30%	0.8
	Ceramic 80	6%	6%	46%	52%	0.48	5.9	25%	99.8%	13%	1
	Ceramic 35	7%	13%	33%	58%	0.56	2.7	20%	99.7%	58%	0.6
Double	Ceramic 45	8%	13%	40%	49%	0.58	2.7	18%	99.8%	49%	0.7
Clear	Ceramic 60	10%	14%	55%	30%	0.6	2.7	15%	99.7%	30%	0.9
	Ceramic 80	13%	15%	69%	13%	0.62	2.7	13%	99.7%	13%	1.1
	Ceramic 35	6%	8%	20%	58%	0.42	2.7	18%	99.9%	58%	0.5
Double Tinted	Ceramic 45	7%	8%	24%	57%	0.43	2.7	16%	99.9%	49%	0.6
	Ceramic 60	9%	8%	33%	56%	0.44	2.7	13%	99.8%	30%	0.7
	Ceramic 80	12%	8%	41%	55%	0.45	2.7	11%	99.8%	13%	0.9

Material	Material Description	Width (inch)	Width (mm)	Length (m)
401017	3M Ceramic 35 1524mm	60	1524	30.4
401018	3M Ceramic 35 1829mm	72	1829	30.4
401019	3M Ceramic 45 1524mm	60	1524	30.4
401020	3M Ceramic 45 1829mm	72	1829	30.4
401021	3M Ceramic 60 1524mm	60	1524	30.4
401022	3M Ceramic 60 1829mm	72	1829	30.4
401023	3M Ceramic 80 1524mm	60	1524	30.4
401024	3M Ceramic 80 1829mm	72	1829	30.4





### **Night Vision Series**

With 3M™ Night Vision Window Films, you get the exceptional performance of a reflective film while still being able to look through the film at night.

Traditional metalized films reflect equally both inside and outside, becoming mirror-like at night. The Night Vision reflects more to the outside, where you need it, and less to the inside.

3M nano-technology impregnates a polyester layer with carbon nano-particles to provide outstanding heat rejection performance and gives the film a warm bronze appearance.

## Enjoy enhanced views, savings and comfort with 3M™ Sun Control Window Film Night Vision™ Series.

- Great heat rejection helps provide energy savings and improved comfort
- · Enhanced views with low interior reflectivity, especially at night
- · Helps reduce glare and eye discomfort
- Helps extend the life of furnishings by significantly reducing harmful UV rays, the largest cause of fading
- Excellent scratch-resistant coating
- · 3M nano-technology enhances color stability
- · Comprehensive 3M Warranty

Energy Savings	****
Heat Rejection	****
Glare Reduction	****
Interior Visible Reflection	****

Best \*\*\*\*

Better \*\*\*

Good \*\*

Fair \*\*

Not Recommended \*

In comparison to other  $3M^{\mbox{\tiny M}}$  Sun Control Window Films.

### **Product Performance and Technical Data**

		Visible Light		Total Solar Solar Heat Gair		U Value				Visible Light	
Glass Type (6.35mm)	Film Type	Reflected (interior)	Reflected (exterior)	Transmitted	Energy Rejected	Coefficient (G Value)	W/ m²k	Solar Heat Reduction	UV Light Rejected	Glare Reduction	to Solar Heat Gain Ratio
	Night Vision 15	11%	38%	15%	72%	0.29	5.6	65%	99%	83%	0.5
Clear	Night Vision 25	7%	19%	24%	60%	0.40	5.7	51%	99%	73%	0.6
	Night Vision 35	7%	13%	36%	51%	0.49	5.8	40%	99%	59%	0.7
	Night Vision 15	11%	17%	9%	69%	0.31	5.6	51%	99%	83%	0.3
Tinted	Night Vision 25	7%	10%	15%	63%	0.37	5.7	42%	99%	74%	0.4
	Night Vision 35	6%	8%	22%	57%	0.43	5.8	32%	99%	58%	0.5
	Night Vision 15	11%	39%	14%	60%	0.40	2.6	43%	99%	82%	0.4
Double Clear	Night Vision 25	8%	24%	22%	50%	0.50	2.7	28%	99%	72%	0.4
	Night Vision 35	8%	19%	32%	44%	0.56	2.7	20%	99%	60%	0.6
Tinted Clear	Night Vision 15	11%	17%	8%	68%	0.32	2.6	37%	99%	83%	0.3
	Night Vision 25	7%	12%	13%	62%	0.38	2.7	26%	99%	73%	0.4
	Night Vision 35	7%	10%	19%	58%	0.42	2.7	18%	99%	60%	0.5

Material	Material Description	Width (inch)	Width (mm)	Length (m)
400640	3M Night Vision 15 914mm	36	914	30.4
400641	3M Night Vision 15 1219mm	48	1220	30.4
400642	3M Night Vision 15 1524mm	60	1524	30.4
400643	3M Night Vision 15 1829mm	72	1829	30.4
400644	3M Night Vision 25 914mm	36	914	30.4
400645	3M Night Vision 25 1219mm	48	1220	30.4
400646	3M Night Vision 25 1524mm	60	1524	30.4
400647	3M Night Vision 25 1829mm	72	1829	30.4
400648	3M Night Vision 35 914mm	36	914	30.4
400649	3M Night Vision 35 1219mm	48	1220	30.4
400650	3M Night Vision 35 1524mm	60	1524	30.4
400651	3M Night Vision 35 1829mm	72	1829	30.4



## 3M™ Black Chrome Window Film Series offers the ultimate in privacy while providing excellent heat rejection.

- Give your House the cool factor. The Black Chrome Series offers the ultimate in privacy while providing excellent heat rejection
- Metallised technology keeps you cool and protects from the sun's heat by rejecting up to 72% of the total solar energy coming through your windows
- Blocks up to 99% of ultraviolet (UV) light to provide sun protection for you and your family
- · Comprehensive 3M Warranty

Energy Savings	***
Heat Rejection	***
Glare Reduction	***
Visible Reflection	***

Best ★★★★
Better ★★★
Good ★★
Fair ★★

Not Recommended 🖈

In comparison to other  $3M^{\text{\tiny TM}}$  Sun Control Window Films

### **Product Performance and Technical Data**

			Visible Light	:	Total Solar	Solar Heat Gain	U Value				
Glass Type (6.35mm)	Film Type	Reflected (interior)	Reflected (exterior)	Transmitted	Energy Rejected	Coefficient (G Value)	W/ m²k	Solar Heat Reduction	UV Light Rejected	Glare Reduction	
	BC10	18%	22%	10%	72%	0.28	0.97	66%	99%	88%	
Clear	BC20	25%	20%	17%	68%	0.32	0.97	60%	99%	81%	
Cleal	BC35	11%	13%	36%	53%	0.47	0.97	43%	99%	60%	
	BC40	8%	9%	42%	47%	0.53	0.97	35%	99%	53%	

Material	Material Description	Width (inch)	Width (mm)	Length (m)
400754	3M Black Chrome 10 1524mm	60	1524	30.4
400755	3M Black Chrome 20 1524mm	60	1524	30.4
400756	3M Black Chrome 35 1524mm	60	1524	30.4
400757	3M Black Chrome 40 1524mm	60	1524	30.4



## Improve your building's energy performance and comfort — on budget — with 3M™ Affinity Series or Silver P18.

- · Increased reflection helps enhance daytime privacy
- · Helps reduce glare and eye discomfort
- · Rejects up to 79% of all solar energy
- Helps extend the life of furnishings by significantly reducing harmful UV rays, the largest cause of fading
- Excellent scratch resistant coating
- Comprehensive 3M Warranty

Energy Savings	****
Glare Rejection	****
Visible Reflection	**
Visible Light Transmission	**
Best ★★★★ Better ★★★	

Best ★★★★

Better ★★★

Good ★★

Fair ★★

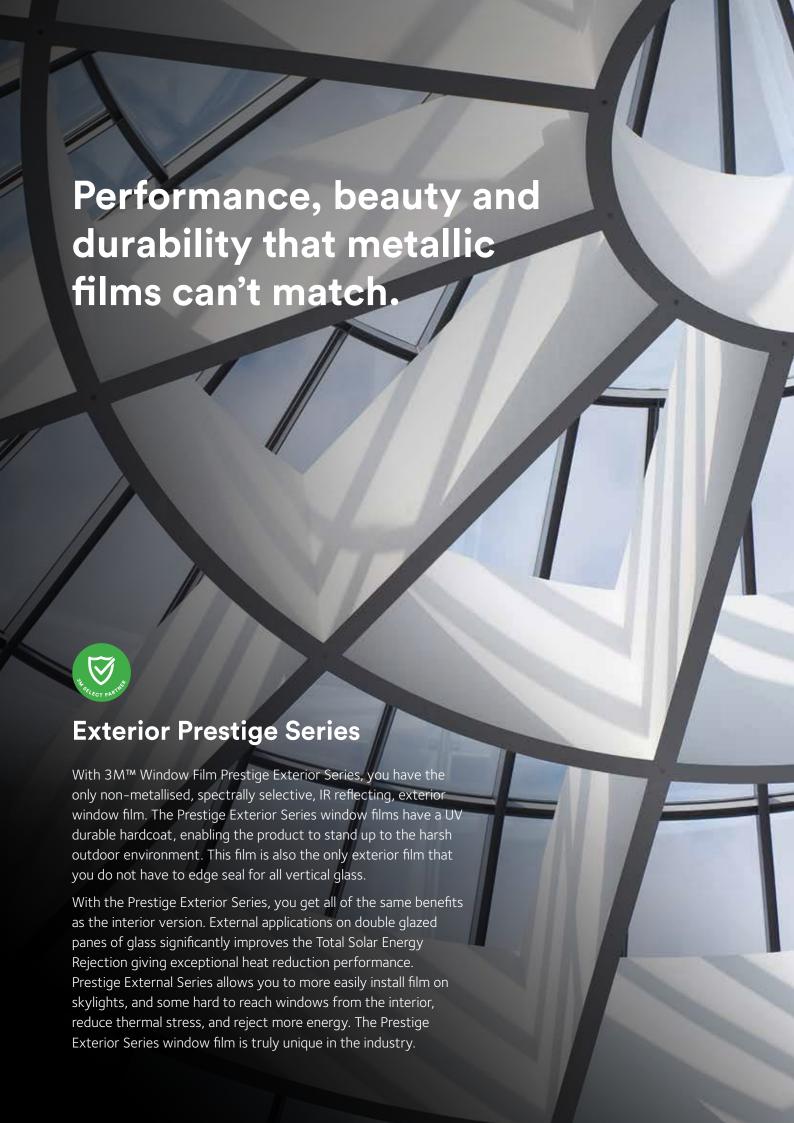
Not Recommended 🖈

In comparison to other 3M™ Sun Control Window Films

### **Product Performance and Technical Data**

			Visible Light		Total Solar	Solar Heat Gain	U Value				Visible Light
Glass Type (6.35mm)	Film Type	Reflected (interior)	Reflected (exterior)	Transmitted	Energy Rejected	Coefficient (G Value)	W/ m²k	Solar Heat Reduction	UV Light Rejected	Glare Reduction	to Solar Heat Gain Ratio
	Affinity 15	27%	56%	12%	77%	0.23	5.7	72%	99%	87%	0.4
Clear	Affinity 30	16%	28%	33%	61%	0.39	5.3	52%	99%	63%	0.8
	Silver P18	58%	56%	17%	77%	0.23	5.3	72%	99%	81%	0.7
	Affinity 15	27%	23%	7%	72%	0.28	5.7	56%	99%	87%	0.2
Tinted	Affinity 30	16%	13%	19%	63%	0.37	5.3	41%	99%	62%	0.5
	Silver P18	58%	23%	10%	74%	0.27	5.3	58%	99%	82%	0.4
	Affinity 15	28%	54%	11%	66%	0.34	2.7	51%	99%	86%	0.3
Double Clear	Affinity 30	17%	31%	30%	54%	0.46	2.6	34%	99%	62%	0.7
	Silver P18	58%	55%	15%	67%	0.33	2.6	53%	99%	80%	0.5
	Affinity 15	28%	22%	7%	72%	0.28	2.7	45%	99%	85%	0.2
Tinted Clear	Affinity 30	17%	14%	18%	64%	0.36	2.6	29%	99%	62%	0.5
	Silver P18	58%	23%	9%	73%	0.27	2.6	47%	99%	81%	0.3

Material	Material Description	Width (inch)	Width (mm)	Length (m)
400659	3M Affinity 15 1270mm	50	1270	30.4
400660	3M Affinity 15 1524mm	60	1524	30.4
400661	3M Affinity 15 1829mm	72	1829	30.4
400662	3M Affinity 30 1270mm	50	1270	30.4
400663	3M Affinity 30 1524mm	60	1524	30.4
400664	3M Affinity 30 1829mm	72	1829	30.4
400671	3M P18ARL Silver 914mm	36	914	30.4
400672	3M P18ARL Silver 1220mm	48	1220	30.4
400673	3M P18ARL Silver 1524mm	60	1524	30.4
400674	3M P18ARL Silver 1829mm	72	1829	30.4



### Long lasting comfort, savings and aesthetics at a whole new level with 3M™ Sun Control Window Film Prestige Exterior Series.

- Non-metalized technology applied to film eliminates corrosion, no need to edge seal\*, and no signal interference
- · High visual light transmission providing excellent aesthetics
- Low interior and exterior reflectivity enhances views while maintaining exterior appearance
- The Prestige Exterior Series can become carbon negative in as short as 6 months from install\*\*

Best \*\*\*\*

Better \*\*\*

Good \*\*\*

Fair \*\*

Not Recommended 🖈

### **Product Performance and Technical Data**

			Visible Light	:		olar Energy jected	Solar Heat Gain	U Value				Visible Light
Glass Type (6.35mm)	Film Type	Reflected (interior)	Reflected (exterior)	Transmitted	Normal	60 Degree Angle	Coefficient (G Value)	W/ m²k	Solar Heat Reduction	UV Light Rejected	Glare Reduction	to Solar Heat Gain Ratio
	PR20X	5%	5%	21%	66%	72%	0.34	5.82	59%	99.9%	77%	0.6
Clear	PR40X	5%	6%	42%	61%	68%	0.39	5.8	52%	99.9%	53%	1.1
Clear	PR70X	7%	7%	71%	52%	61%	0.48	5.8	41%	99.9%	19%	1.5
	PR90X	9%	9%	88%	36%	45%	0.64	5.8	21%	99.9%	0%	1.4
	PR20X	5%	5%	13%	69%	75%	0.31	5.82	52%	99.9%	77%	0.4
T	PR40X	5%	5%	25%	66%	71%	0.34	5.8	46%	99.9%	53%	0.8
Tinted	PR70X	5%	6%	43%	61%	67%	0.39	5.8	39%	99.9%	19%	1.1
	PR90X	6%	6%	53%	50%	56%	0.50	5.8	21%	99.9%	0%	1.1
	PR20X	12%	6%	18%	76%	82%	0.24	2.69	66%	99.9%	77%	0.7
Double	PR40X	13%	7%	37%	71%	78%	0.29	2.7	59%	99.9%	53%	1.3
Clear	PR70X	14%	12%	63%	61%	70%	0.39	2.7	45%	99.9%	20%	1.6
	PR90X	16%	16%	79%	45%	54%	0.56	2.7	21%	99.9%	0%	1.4
	PR20X	12%	5%	11%	80%	84%	0.20	2.69	61%	99.9%	77%	0.5
Double	PR40X	12%	6%	22%	77%	82%	0.23	2.7	55%	99.9%	53%	1.0
Tinted	PR70X	13%	7%	38%	71%	75%	0.29	2.7	43%	99.9%	21%	1.3
	PR90X	13%	9%	47%	59%	64%	0.41	2.7	20%	99.9%	0%	1.2

Material	Material Description	Width (inch)	Width (mm)	Length (m)
451721	3M Prestige 20 Exterior 914mm	36	914	30.4
451722	3M Prestige 20 Exterior 1524mm	60	1524	30.4
451723	3M Prestige 20 Exterior 1829mm	72	1829	30.4
400628	3M Prestige 40 Exterior 914mm	36	914	30.4
400629	3M Prestige 40 Exterior 1524mm	60	1524	30.4
400630	3M Prestige 40 Exterior 1829mm	72	1829	30.4
400631	3M Prestige 70 Exterior 914mm	36	914	30.4
400632	3M Prestige 70 Exterior 1524mm	60	1524	30.4
400633	3M Prestige 70 Exterior 1829mm	72	1829	30.4
400634	3M Prestige 90 Exterior 1524mm	60	1524	30.4

Exterior Durability

\*\*\*\*\*

Visible Light Transmission

\*\*\*\*

Low Reflection

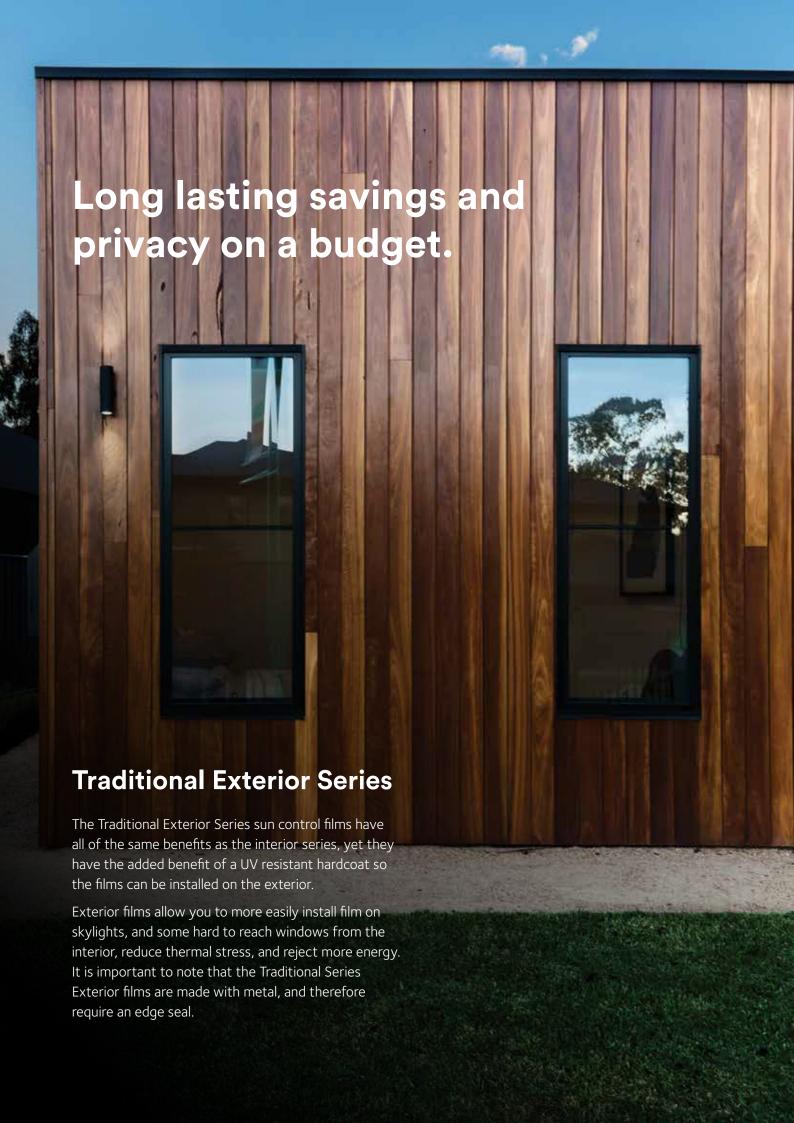
Infrared Rejection

\*\*\*\*

Energy Savings

Edge sealing required if water can pool at the edge of the film

<sup>\*\*</sup> Based on emission calculations performed in compliance with the GHG Protocol Product Life Cycle Accounting and Reporting Standard (2011), third party assured by Quality Associates Incorporated, and energy savings calculation completed by CONSOL Energy. Contact 3M for details.



### Long lasting savings and privacy on a budget with 3M™ Sun Control Exterior Solar Series.

- Classic silver or neutral reflective film with excellent solar protection
- · Increased reflection helps increase daytime privacy
- · Helps reduce glare or eye discomfort
- · Can create a more uniform exterior appearance
- · Comprehensive 3M Warranty

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Best ★★★★
Better ★★★
Good ★★
Fair ★★

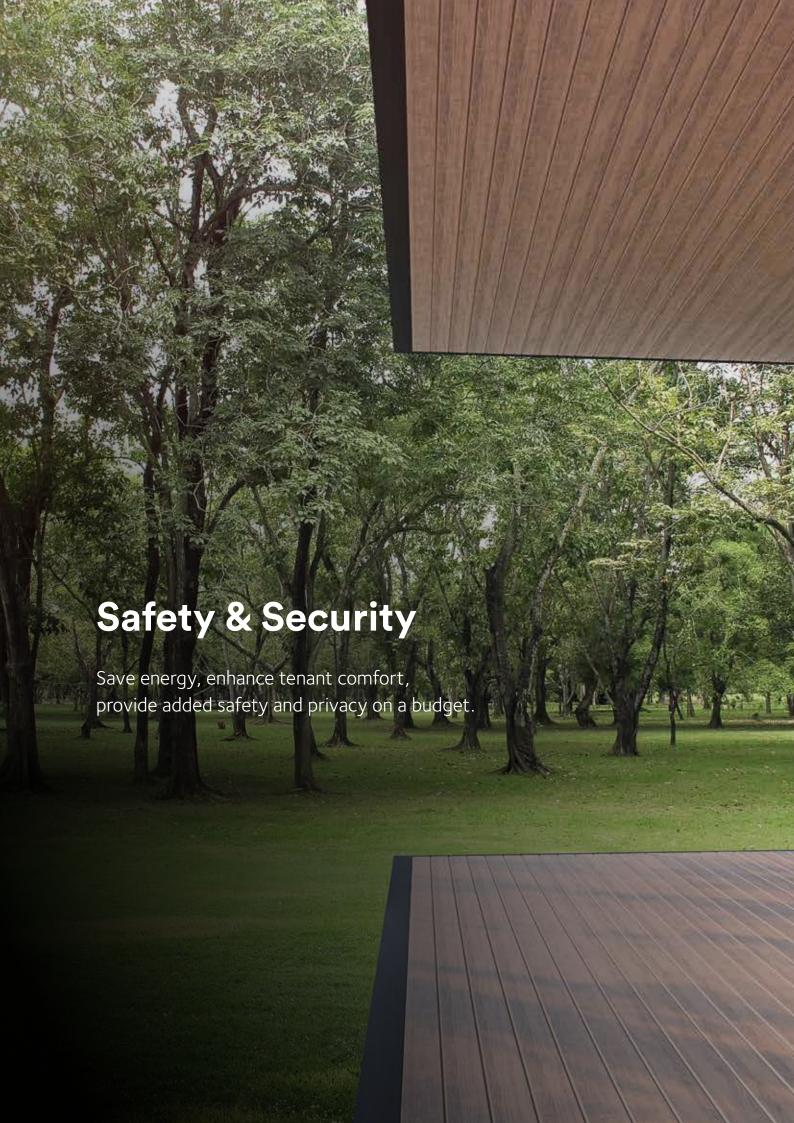
Not Recommended 🖈

In comparison to other  $3M^{\text{\tiny TM}}$  Sun Control Window Films

### **Product Performance and Technical Data**

			Visible Light	:	Total Solar v		U Value				Visible Light
Glass Type (6.35mm)	Film Type	Reflected (interior)	Reflected (exterior)	Transmitted	Energy Rejected	rgy Coefficient		Solar Heat Reduction	UV Light Rejected	Glare Reduction	to Solar Heat Gain Ratio
	Silver 15 Exterior	56%	57%	17%	79%	0.21	5.79	74%	99%	81%	0.9
Clear	Silver 35 Exterior	34%	32%	36%	63%	0.35	5.82	55%	99%	59%	1.0
	Neutral 35 Exterior	16%	14%	40%	49%	0.49	5.79	37%	99%	55%	0.9
	Silver 15 Exterior	23%	57%	10%	82%	0.18	5.79	71%	99%	82%	0.6
Tinted	Silver 35 Exterior	15%	31%	22%	69%	0.29	5.82	51%	99%	58%	0.7
	Neutral 35 Exterior	9%	13%	24%	57%	0.41	5.79	32%	99%	55%	0.6
	Silver 15 Exterior	55%	58%	15%	85%	0.15	2.67	79%	99%	81%	1.1
Double Clear	Silver 35 Exterior	33%	36%	33%	71%	0.28	2.69	59%	99%	58%	1.2
	Neutral 35 Exterior	21%	15%	36%	61%	0.38	2.67	44%	99%	54%	1.1
Tinted Clear	Silver 15 Exterior	27%	57%	9%	88%	0.12	2.67	76%	99%	81%	0.8
	Silver 35 Exterior	21%	32%	19%	78%	0.21	2.69	57%	99%	60%	0.9
	Neutral 35 Exterior	15%	14%	22%	70%	0.29	2.67	41%	99%	53%	0.8

Material Description	Width (inch)	Width (mm)	Length (m)
3M Silver 15 Exterior 914mm	36	914	30.4
3M Silver 15 Exterior 1524mm	60	1524	30.4
3M Silver 15 Exterior 1829mm	72	1829	30.4
3M Silver 35 Exterior 1524mm	60	1524	30.4
3M Silver 35 Exterior 1829mm	72	1829	30.4
3M Neutral 35 Exterior 1524mm	60	1524	30.4
3M Neutral 35 Exterior 1829mm	72	1829	30.4
	3M Silver 15 Exterior 914mm  3M Silver 15 Exterior 1524mm  3M Silver 15 Exterior 1829mm  3M Silver 35 Exterior 1524mm  3M Silver 35 Exterior 1829mm  3M Neutral 35 Exterior 1524mm	3M Silver 15 Exterior 914mm       36         3M Silver 15 Exterior 1524mm       60         3M Silver 15 Exterior 1829mm       72         3M Silver 35 Exterior 1524mm       60         3M Silver 35 Exterior 1829mm       72         3M Neutral 35 Exterior 1524mm       60	3M Silver 15 Exterior 914mm       36       914         3M Silver 15 Exterior 1524mm       60       1524         3M Silver 15 Exterior 1829mm       72       1829         3M Silver 35 Exterior 1524mm       60       1524         3M Silver 35 Exterior 1829mm       72       1829         3M Neutral 35 Exterior 1524mm       60       1524







3M's national network of Select Partners can install your Architectural and Window Film solutions to the highest possible standards. Assisting you with finding the right solution and have access to 3M<sup>TM</sup> Thinsulate, 3M<sup>TM</sup> Prestige and 3M<sup>TM</sup> Ultra Range.

All partners must pass 3M's thorough auditing process to achieve this elite status and are recognised by 3M as leaders in the Architectural and Window Film industries.

To engage a 3M Select Partner for your Architectural and Window Film projects, please contact your local Spicers representative on 1300 132 644 or visit the link below.





Find a 3M Select Partner www.3m.com.au/3M/en\_AU/graphics-signage-au/resources/find-an-installer/

## **3M Safety & Security**



### **Break and Entry**

- Reinforces your windows to provide precious time and helps to deter unwanted individuals from entering your building or home
- Help protect occupants and assets





### Safety Glazing and Human Impact

- Upgrade your glass to meet safety glazing codes\*
- Help protect building occupants from broken glass hazards





### Seismic and Spontaneous Glass Breakage

Glass fragment retention film for increased protection of people, property and possessions





## Bomb Blast and Explosion Protection

 Help protect people from flying glass shards and shrapnel, one of the most common causes of blast related injuries and fatalities

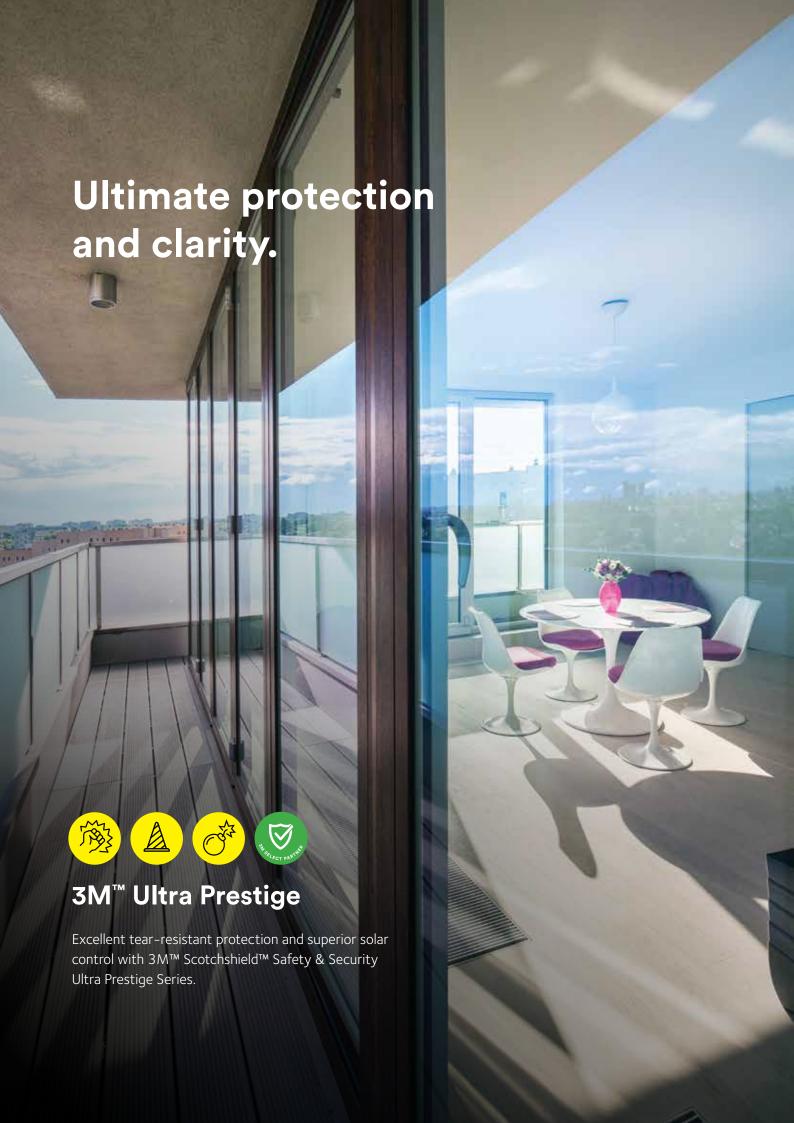




### **Anti-Graffiti**

- Protect your glass and your image from vandalism caused by scratching, gouging, tagging or acid etching
- Less costly and less disruptive than replacing new windows





- Combines the benefits of 3M<sup>™</sup> Ultra Series with the benefits of 3M<sup>™</sup> Prestige Series Window Film
- Tear resistant glass fragment retention film for increased protection of people, property and possessions
- Can be combined with 3M<sup>™</sup> Impact Protection Adhesive (Attachment System) for additional safety and security
- · High visual light transmission providing excellent aesthetics
- Low interior and exterior reflectivity enhances views while maintaining exterior appearance
- Helps extend the life of furnishings by significantly reducing harmful UV rays, the largest cause of fading
- Comprehensive 3M Warranty

Break and Entry	****
Safety Glazing	****
Seismic	****
Blast Mitigation	****
Visible Light Transmission	****
Low Reflection	****
Infrared Rejection	****

Best ★★★★
Better ★★★
Good ★★
Fair ★★

Not Recommended \*

In comparison to other 3M™ Safety & Security Window Films

### **Product Performance and Technical Data**

		Visible Light			Total Solar	Solar Heat Gain	U Value				Visible Light
Glass Type (6.35mm)	Film Type	Reflected (interior)	Reflected (exterior)	Transmitted	Energy Rejected	Coefficient (G Value)	W/ m²k	Solar Heat Reduction	UV Light Rejected	Glare Reduction	to Solar Heat Gain Ratio
Cl	Ultra PR70	8%	9%	68%	49%	0.51	5.8	38%	99.9%	23%	1.4
Clear	Ultra PR50	7%	8%	49%	56%	0.44	5.8	46%	99.9%	44%	1.1
T	Ultra PR70	7%	6%	41%	56%	0.44	5.8	31%	99.9%	36%	0.9
Tinted	Ultra PR50	6%	6%	30%	60%	0.40	5.8	38%	99.9%	53%	0.7
Double Clear	Ultra PR70	12%	16%	61%	44%	0.56	2.7	21%	99.9%	14%	1.1
	Ultra PR50	9%	15%	44%	47%	0.53	2.7	25%	99.9%	37%	0.8
Tinted Clear	Ultra PR70	11%	9%	36%	58%	0.42	2.7	19%	99.9%	29%	0.9
	Ultra PR50	8%	8%	26%	60%	0.40	2.7	22%	99.9%	49%	0.6

<sup>3</sup>M products are tested to multiple industry standards. Glazing systems vary. Contact 3M for more information.

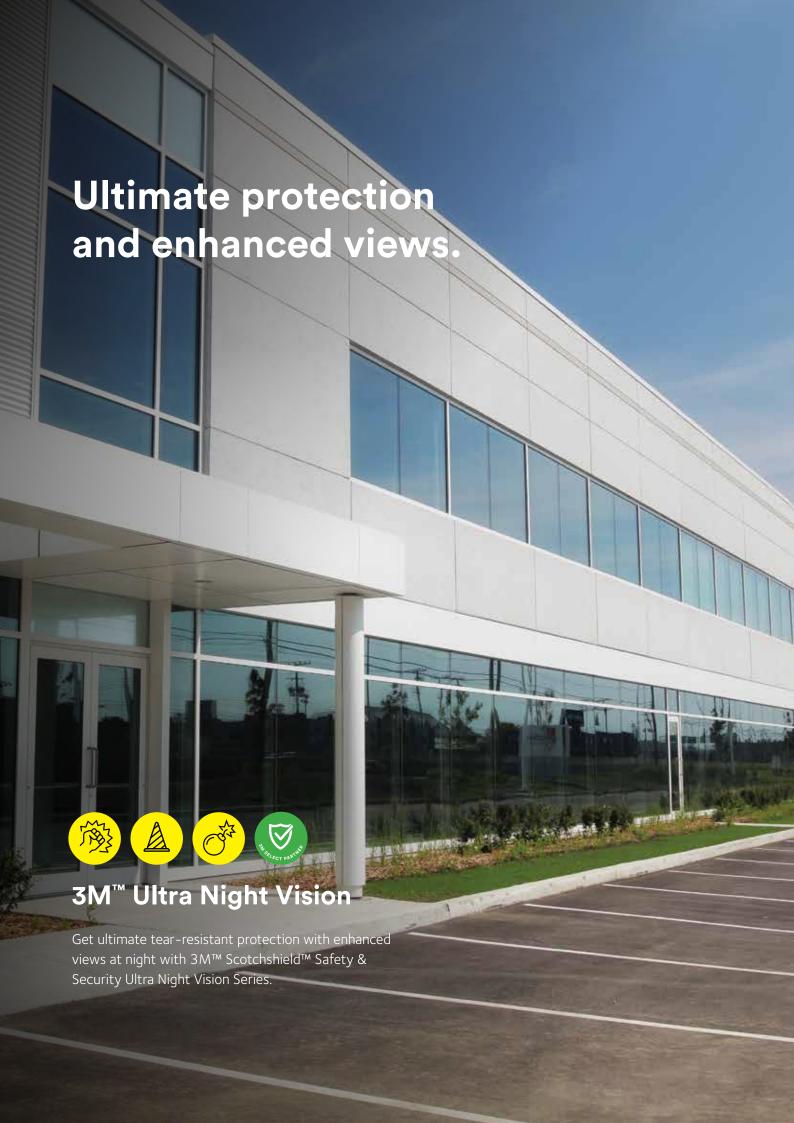
### Film Properties (nominal)

Note: The following technical information and data are based upon limited 3M testing conditions and should not be used for specification purposes.

Film Type	Film Thickness	Construction	Tear Resistance	Tensile Strength	Break Strength	Elongation at Break	Peel Strength	Abrasion Resistance
Ultra Prestige	8 mil (0.22mm / 220µm)	Micro-layered	1,100 lbs%	"27,000 psi (186 MPa)"	"215 lbs/in (956 N/25mm)"	120%	"> 4 lbs/in (18 N/25mm)"	<3%

Material	Material Description	Width (inch)	Width (mm)	Length (m)
400713	3M Scotchshield Ultra Prestige 50 914mm	36	914	30.4
400714	3M Scotchshield Ultra Prestige 50 1524mm	60	1524	30.4
400715	3M Scotchshield Ultra Prestige 50 1829mm	72	1829	30.4
400716	3M Scotchshield Ultra Prestige 70 914mm	36	914	30.4
400717	3M Scotchshield Ultra Prestige 70 1524mm	60	1524	30.4
400718	3M Scotchshield Ultra Prestige 70 1829mm	72	1829	30.4

<sup>\*</sup>Building codes vary, please consult with 3M and your local code official\*Building codes vary, please consult with 3M and your local code official.



- Combines the safety and security benefits of 3M<sup>™</sup>
   Scotchshield<sup>™</sup> Safety & Security Window Film with the sun control benefits of 3M<sup>™</sup> Sun Control Night Vision<sup>™</sup> Series
- Micro-layered film designed for tear-resistance and enhanced protection of people, property and possessions
- Helps to increase security and provide added protection against smash-and-grab burglaries
- Great heat rejection helps generate energ improved comfort
- · Enhanced views with low interior reflectivity, especially at night
- · Helps reduce glare and eye discomfort
- Can be combined with 3M<sup>™</sup> Impact Protection Adhesive (Attachment System) for additional safety and security
- Helps extend the life of furnishings by significantly reducing harmful UV rays, the largest cause of fading
- Comprehensive 3M Warranty

Break and Entry	****
Safety Glazing	****
Seismic	****
Blast Mitigation	****
Energy Savings	***
Heat Rejection	***
Glare Reduction	***
Interior Visible Reflection	****

Best ★★★★
Better ★★★
Good ★★
Fair ★★

Not Recommended \*

In comparison to other 3M™ Safety & Security Window Films.

#### **Product Performance and Technical Data**

			Visible Light	:	Total Solar	Solar Heat Gain	U Value				Visible Light
Glass Type (6.35mm)	Film Type	Reflected (interior)	Reflected (exterior)	Transmitted	Energy Rejected	Coefficient (G Value)	W/ m²k	Solar Heat Reduction	UV Light Rejected	Glare Reduction	to Solar Heat Gain Ratio
Clear	Ultra NV25	7%	17%	27%	58%	0.42	5.8	49%	99.9%	70%	0.6
Tinted	Ultra NV25	7%	9%	16%	62%	0.38	5.8	40%	99.9%	75%	0.4
Double Clear	Ultra NV25	8%	22%	24%	49%	0.51	2.7	27%	99.9%	66%	0.4
Tinted Clear	Ultra NV25	8%	11%	14%	61%	0.39	2.7	24%	99.9%	72%	0.3

### Film Properties (nominal)

Note: The following technical information and data are based upon limited 3M testing conditions and should not be used for specification purposes.

Film Type	Film Thickness	Construction	Tear Resistance	Tensile Strength	Break Strength	Elongation at Break	Peel Strength	Abrasion Resistance
Ultra Night Vision S25	8 mil (0.22mm / 220µm)	Micro-layered	1,100 lbs%	"27,000 psi (186 MPa)"	"215 lbs/in (956 N/25mm)"	95%	">4 lbs/in (18 N/25mm)"	≤3%

Material	Material Description	Width (inch)	Width (mm)	Length (m)
400719	3M S/Shield Ultra Night Vis S25 914mm	36	914	30.4
400720	3M S/Shield Ultra Night Vis S25 1524mm	60	1524	30.4
400721	3M S/Shield Ultra Night Vis S25 1829mm	72	1829	30.4



- Combines the benefits of 3M Safety Series with the benefits of 3M Neutral 35 or 3M Silver P18 Series Sun Control Window Films
- Helps protect people from flying glass shards, one of the most common causes of blast related injuries and fatalities
- Great heat rejection helps provide energy savings and improved comfort
- · Helps reduce glare and eye discomfort
- Silver or Neutral tones can create a more uniform exterior appearance
- · Increased reflection helps enhance exterior privacy
- Can be combined with 3M<sup>™</sup> Impact Protection Adhesive (Attachment System) for additional safety and security
- · Comprehensive 3M Warranty

Energy Savings	****
Glare Rejection	****
Visible Reflection	**
Visible Transmission	**
Blast Mitigation	***
Break and Entry	****
Safety Glazing	***
Seismic	****

Best ★★★★
Better ★★★
Good ★★
Fair ★★

Not Recommended \*

In comparison to other 3M™ Safety & Security Window Films

#### **Product Performance and Technical Data**

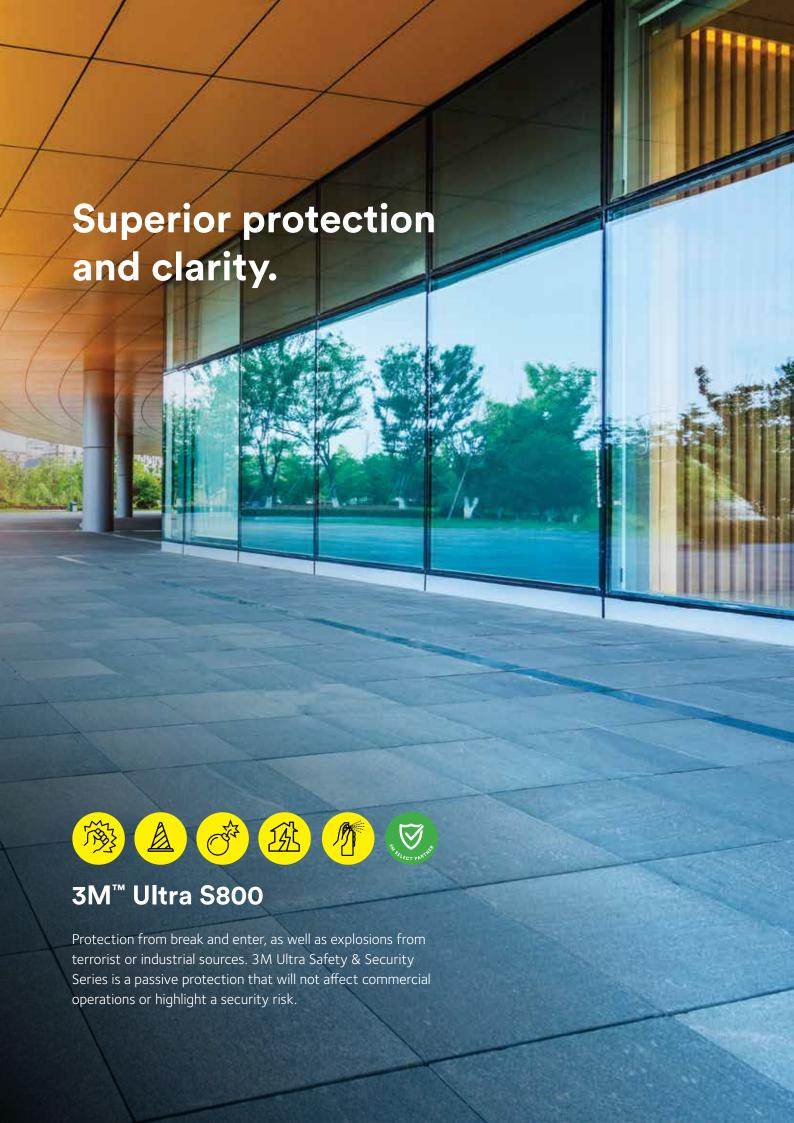
			Visible Light	1	Total Solar	Solar Heat Gain Coef-	U Value				Visible Light
Glass Type (6.35mm)	Film Type	Reflected (Interior)	Reflected (Exterior)	Transmitted	Energy Rejected	ficient (G Value)	W/ m²k	Solar Heat Reduction	UV Light Rejected	Glare Reduction	to Solar Heat Gain Ratio
Cl	Neutral S35	13%	21%	38%	55%	0.45	5.8	45%	99%	58%	0.8
Clear	Silver S20	58%	56%	17%	77%	0.23	5.8	72%	99%	81%	0.7
<del></del>	Neutral S35	12%	10%	22%	60%	0.40	5.8	36%	99%	65%	0.6
Tinted	Silver S20	58%	53%	10%	73%	0.27	5.8	58%	99%	85%	0.3
Double	Neutral S35	14%	25%	34%	49%	0.51	2.7	27%	99%	52%	0.6
Clear	Silver S20	68%	55%	16%	67%	0.33	2.7	53%	99%	78%	0.4
Tinted Clear	Neutral S35	13%	12%	20%	61%	0.39	2.7	23%	99%	61%	0.5
	Silver S20	58%	23%	9%	73%	0.27	2.7	47%	99%	82%	0.3

#### Film Properties (nominal)

Note: The following technical information and data are based upon limited 3M testing conditions and should not be used for specification purposes.

Film Type	Film Thickness	Construction	Tensile Strength	Break Strength	Elongation at Break	Peel Strength	Abrasion Resistance
Neutral S35	8 mil (0.2mm / 200µm)	Laminated	23,000 psi (159 MPa)	170 lbs/in (707 N/25mm)	80%	4.5 lbs/in (20 N/25mm)	3% Haze Increase
Silver S20	8 mil (0.2mm / 200µm)	Laminated	22,000 psi (152 MPa)	159 lbs/in (707 N/25mm)	76%	4.5 lbs/in (20 N/25mm)	3% Haze Increase

Material	Material Description	Width (inch)	Width (mm)	Length (m)
400722	3M Security Silver S20 1524mm	60	1524	30.4
400723	3M Safety & Security Neutral S35 1524mm	60	1524	22.8



Ultra S800

# Keep danger out with 3M<sup>™</sup> Scotchshield<sup>™</sup> Safety & Security Window Film Ultra.

#### Micro-layered, tear-resistant film for enhanced protection of people, property and possessions

- · Mitigates hazards from shattered glass due to natural disasters
- Helps protect people from flying glass shards, one of the most common causes of blast related injuries and fatalities
- Increases security and helps provide added protection against smash and grab burglaries
- Can be combined with 3M<sup>™</sup> Impact Protection Adhesive (Attachment System) for additional safety and security
- Helps extend the life of furnishings by significantly reducing harmful UV rays, the largest cause of fading
- Comprehensive 3M Warranty

Blast Mitigation	****
Break and Entry	****
Safety Glazing	****
Seismic	****

Best ★★★★

Better ★★★

Good ★★★

Not Recommended 🖈

In comparison to other 3M™ Safety & Security Window Films

### Film Properties (nominal)

Note: The following technical information and data are based upon limited 3M testing conditions and should not be used for specification purposes.

Film Type	Film Thickness	Construction	Tear Resistance	Tensile Strength	Break Strength	Elongation at Break	Peel Strength	Abrasion Resistance
Ultra S800	8 mil (0.22mm / 220µm)	Micro-layered	1,200 lbs%	"32,000 psi (220 MPa)"	255 lbs/in (1,134 N / 25mm)	130%	> 6 lbs/in (27 N / 25mm)	<3%

Material	Material Description	Width (inch)	Width (mm)	Length (m)
400711	3M Safety Shield Ultra S800 914mm	36	914	30.4
400710	3M Safety Shield Ultra S800 1524mm	60	1524	30.4
400712	3M Safety Shield Ultra S800 1828mm	72	1829	30.4



- Increases security and provides added protection against smash and grab burglaries
- Mitigates hazards from shattered glass due to natural and human causes
- Helps extend the life of furnishings by significantly reducing harmful UV rays, the largest cause of fading
- Helps provide protection to people and property from flying glass in natural disasters
- Can be combined with 3M<sup>™</sup> Impact Protection Adhesive (Attachment System) for additional safety and security

Break	\$40	\$70	S80	S140
and Entry	*	***	***	****
Safety Glazing	***	****	*****	*****
Seismic	****	****	****	****
Blast Mitigation	*	***	****	***
Anti-Graffiti	**	***	***	****

Best ★★★★
Better ★★★
Good ★★★
Fair ★★
Not Recommended ★

## Film Properties (nominal) — not for specification purposes

Note: The following technical information and data are based upon limited 3M testing conditions and should not be used for specification purposes.

Film Type	Film Thickness	Construction	Tensile Strength	Break Strength	Elongation at Break	Peel Strength	Abrasion Resistance
Safety S40	4 mil (0.1mm / 100µm)	Single ply	25,000 psi (172 MPa)	100 lbs/in (445 N / 25mm)	>125%	> 4 lbs/in (18 N / 25mm)	<5%
Safety S70	7 mil (0.18mm / 180µm)	Single ply	25,000 psi (172 MPa)	175 lbs/in (778 N / 25mm)	>125%	> 5 lbs/in (22 N / 25mm)	<5%
Safety S80	8 mil (0.22mm / 220μm)	2-ply	25,000 psi (172 MPa)	200 lbs/in (890 N / 25mm)	>125%	> 2 lbs/in (9 N / 25mm)	<5%
Safety S140	14 mil (0.36mm / 360µm)	3-ply	25,000 psi (172 MPa)	350 lbs/in (1,557 N / 25mm)	>125%	> 2 lbs/in (9 N / 25mm)	<5%

 $<sup>3 \</sup>textit{M} \textit{ products are tested to multiple industry standards. Glazing systems vary. \textit{Contact } 3 \textit{M} \textit{ for more information.} \\$ 

Material	Material Description	Width (inch)	Width (mm)	Length (m)
400691	3M Safety S40 1016mm	40	1016	45.7
400692	3M Safety S40 1270mm	50	1270	45.7
400693	3M Safety S40 1524mm	60	1524	45.7
451699	3M Safety S70 914mm	36	914	30.4
400697	3M Safety S70 1016mm	40	1016	30.4
400698	3M Safety S70 1270mm	50	1270	30.4
400699	3M Safety S70 1524mm	60	1524	30.4
400700	3M Safety S70 1829mm	72	1829	30.4
400703	3M Safety S80 1524mm	60	1524	30.4
400704	3M Safety S140 1020mm	40	1020	22.9
400705	3M Safety S140 1270mm	50	1270	22.9
400706	3M Safety S140 1520mm	60	1524	22.9

<sup>\*</sup>Building codes vary, please consult with 3M and your local code official\*Building codes vary, please consult with 3M and your local code official.



- Designed for both exterior and interior applications
- Exterior durability gives you an extended warranty from the most trusted global brand in window films
- Glass fragment retention film helps hold shattered glass together to protect people, property and possessions from:
  - Spontaneous glass breakage
  - Seismic events
  - Low-force glass impacts
- Can be combined with 3M<sup>™</sup> Impact Protection Adhesive Attachment Systems for additional safety and security
- Helps extend the life of furnishings by significantly reducing harmful UV rays, the largest cause of fading



Best ★★★★
Better ★★★
Good ★★★

Not Recommended 🖈

In comparison to other  $3M^{\text{\tiny TM}}$  Safety Window Films.

#### Film Properties (nominal) — not for specification purposes

Note: The following technical information and data are based upon limited 3M testing conditions and should not be used for specification purposes.

Film Type	Film Thickness	Construction	Tensile Strength	Break Strength	Elongation at Break	Peel Strength	Abrasion Resistance
Safety S40X	4 mil (0.1mm / 100μm)	Single ply	25,000 psi (172 MPa)	100 lbs/in (445 N/25mm)	>115%	>5 lbs/in (22 N/25mm)	≤5%
Safety S70X	7 mil (0.18mm / 180µm)	Single ply	25,000 psi (172 MPa)	178 lbs/in (792 N/25mm)	>150%	>5 lbs/in (22 N/25mm)	≤5%

<sup>3</sup>M products are tested to multiple industry standards. Glazing systems vary. Contact 3M for more information.

Material	Material Description	Width (inch)	Width (mm)	Length (m)
400694	3M Safety S40 Exterior 914mm	36	914	30.4
400695	3M Safety S40 Exterior 1524mm	60	1524	30.4
400696	3M Safety S40 Exterior 1829mm	72	1829	30.4
400701	3M Safety S70 Exterior 1524mm	60	1524	30.4
400702	3M Safety S70 Exterior 1829mm	72	1829	30.4

<sup>\*</sup>Building codes vary, please consult with 3M and your local code official\*Building codes vary, please consult with 3M and your local code official.





Clear Security 3M™ Anti-Graffiti

- Surface protection against most scratches, acid etching, gouges and tagging
- · Easy removal
- · A fraction of the cost of new glass
- 99% UV rejection helps reduce fading of display merchandise

#### Film Properties (nominal) — not for specification purposes

Note: The following technical information and data are based upon limited 3M testing conditions and should not be used for specification purposes.

Film Type	Film Thickness	Tensile Strength	Break Strength	Elongation at Break	Peel Strength	Puncture Strength	Abrasion Resistance
AG4	≥ 4 mil* (≥0.1mm / 100µm)*	>25,000 psi	100 lbs/in	>100%	1,000 g/in	93 lbs	<5%
AG6	≥ 6 mil* (≥0.15mm / 150µm)*	>25,000 psi	175 lbs/in	>100%	1,000 g/in	132 lbs	<5%

<sup>3</sup>M products are tested to multiple industry standards. Glazing systems vary. Contact 3M for more information.

#### **Product Guide**

Material	Material Description	Width (inch)	Width (mm)	Length (m)
400681	3M Anti Graffiti AG-4 1524mm	60	1524	30.4
400682	3M Anti Graffiti AG-4 1829mm	72	1829	30.4
400683	3M Anti Graffiti AG-6 1524mm	60	1524	30.4
400684	3M Anti Graffiti AG-6 1829mm	72	1829	30.4



#### **Events and Seasonal Tourism**

Events and seasonal tourism give you a limited-time opportunity to significantly increase sales for your business. Vandalism occurring during peak sales opportunities not only damages your image but may deter limited-time customers from giving your store a chance.

Glass replacement would be costly and more disruptive, while 3M™ Anti-Graffiti Film can be removed and replaced quickly, and without the need to remove your windows.



#### Maintaining Your Image

When you see a building with graffiti or scratches on the window, what do you immediately think about that building or part of town? Your store is your livelihood. Do not let future customers have that opinion about your business. Protect your windows with 3 M™ Anti-Graffiti Film so that signs of vandalism can be removed quickly, which can help you maintain your valued reputation.



#### **Civil Unrest**

During times of civil unrest, large groups of passionate individuals can quickly generate damage. Use 3M™ Anti-Graffiti Film to help protect your windows and minimize damage. Damaged glass is very expensive to replace. Why replace the entire window when you can simply replace a cost-effective barrier? 3M™ Anti-Graffiti Film will reduce the risk of this expensive mistake.

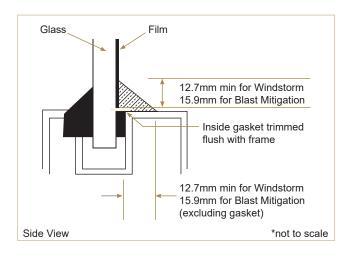
<sup>\*</sup>Building codes vary, please consult with 3M and your local code official\*Building codes vary, please consult with 3M and your local code official.

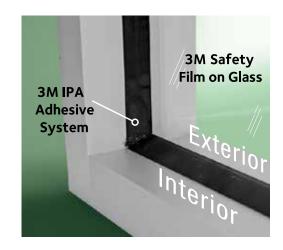


## 3M™ Impact Protection Adhesive (IPA) Attachment System

3M Impact Protection Adhesive (IPA) is a wet seal application.

- Commercial and Residential applications
- · Discrete appearance available in White, Black and Grey





Material	Material Description	Volume (ml)	Colour
170904	3M Impact Protection Adhesive - IPA	575	WHITE
170902	3M Impact Protection Adhesive - IPA	575	BLACK
170903	3M Impact Protection Adhesive - IPA	575	GREY

## Glossary

Energy Savings	High heat rejection helps provide energy savings in the summer (Solar Control Films). Increased insulation helps provide					
	energy savings in the winter (Low-E films). This reduces the need for Heating, Ventilation and Air-Conditioning (HVAC) within the building.					
Exterior Durability	External films have an ultraviolet inhibitor in the hard coat to reduce the breakdown of the polyester from direct solar exposure which prolongs the lifespan of the film.					
Glare Reduction	The percentage reduction of glare when comparing glass before and after installing film.					
Heat Loss Reduction	The percentage of heat energy that is prevented from conducting out through a filmed glazing system when compared to the same unfilmed glazing system.					
Heat Rejection	Total Solar Energy Rejected (TSER). The percentage of the total solar energy that the film/glazing blocks.					
Infrared Rejection	Reduction in solar Infra-Red radiation. Infra-Red Rejection (IRR): Measured from 900-1000nm. Infra-Red Energy Rejection (IRER): Measured from 780-2500nm.					
Solar Heat Gain Coefficient (SHGC)	The fraction of solar radiation admitted through a window, both directly transmitted and absorbed subsequently released inward. This ratio describes the filmed glazing performance over the entire solar spectrum; the lower the SHGC (G-Value) the better the overall performance.					
Solar Heat Reduction	The percentage reduction of solar energy that is allowed through the filmed glazing when compared to the same unfilmed glazing system.					
Total Solar Energy Rejected (TSER)	The percentage of the total solar energy that the filmed glazing blocks. This is a combination of Ultraviolet, Visible light, Solar Infrared & long wavelength Infrared radiation, which all contribute to heat energy conducted through glazing.					
Visible Light Transmitted (VLT)	Percentage of visible light allowed to pass through the filmed glazing. The lower the VLT the darker the film.					
U-Value W/m^²K	Describes the amount of heat energy that is conducted through the filmed glazing. Watts per Square Metre of glass per degree in temperature difference from inside to outside. U Values close to zero conduct less heat energy through the system and therefore have better performance.					
	Example: A 6mm clear pane of glass has a U-value of a single pane of glass is around $\sim$ 5.0W/m2K, while an insulated wal is $\sim$ 0.20W/(m2K). An insulated roof could be around $\sim$ 0.13W/m2K.					
UV Light Rejected	Percentage of the total Ultraviolet (UV) radiation blocked by filmed glazing.					
Visible Light Reflected (Exterior)	Percentage of visible light reflected from the film/shading effect on the outside.					
Visible Light Reflected (Interior)	Percentage of visible light reflected from the film/shading effect on the inside.					
Visible Light to Solar Heat Gain Ratio	Defined as the ratio of visible light transmission to the level of heat rejected. The higher the value the clearer the film whilst blocking a greater amount of heat. This is also known as Luminous Efficacy.					
Winter Insulation	Winter Insulation is the ability of filmed glazing systems to reduce the amount of radiant heat loss through to the outside					
Year Round Comfort	Films that offer performance year round through insulating properties in winter and offer heat reduction properties in summer, keeping you comfortable in All Seasons( $\Lambda^{TM}$ ).					

#### Warranty and Limited Remedy:

3M warrants that each 3M product meets the applicable 3M product specification at the time 3M ships the product. 3M MAKES NO OTHER EXPRESS OR IMPLIED WARRANTIES OR CONDITIONS, INCLUDING ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. If the 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. Limitation of Liability: Except where prohibited by law, 3M will not be liable for any loss or damage arising from the 3M product, whether direct, indirect, special, incidental or consequential, regardless of the legal theory asserted.

### Safety & Security Film

Salety & Security Filling	
Abrasion Resistance	Measures the ability of the film's surface to resist scratching. The lower the % change in haze, the more durable the film is and the more likely to maintain appearance after multiple cleans (using recommended cleaning procedures).
Anti-Graffiti (AG)	AG is a sacrificial film of different thicknesses designed to offer surface protection against most scratches, acid etching, gouges and tagging. These films are designed for easy removal and replacement.
Blast Mitigation	Retrofitted Security Films (with attachments systems) can help protect people by holding glass in place to reducing flying glass shards, one of the most common causes of blast related injuries and fatalities.
Break and Entry	Deter & Delay: The shatter resistance of a security film (usually with an attachment system of the film to the frame) will hold the glass in place and slow the progress of entry into a facility through the film and glass system.
Break Strength	Relates to the force needed to pull a safety film apart; tensile strength comes from this number.  The 3M Ultra series films have a higher break strength than any other polyester film.
Construction	Safety & Security films are a Polyester (PET) film that may be a Single or Double layer or in the case of the 3M Scotchshield Ultra a multi-layered construction. The Ultra Films offer the highest tear resistance due to these multiple layers.
Elongation at Break	All films will stretch, the more they stretch before breaking the greater the amount of energy they absorb. This is measured in a percentage increase beyond its original construction.
Film Thickness	Thickness of a film will usually increase the strength and durability of the film. This is not always the case as the micro-layering technology used for constructing the 3M Ultra series provides the ultimate strength whilst offering a similar thickness to other single-ply or double-ply films. This is usually measured in Microns and/or Mils (imperial).
Peel Strength	Adhesive properties relate to the film's ability to retain broken glass fragments - this is critical for wide range of safety film applications.
Safety Glazing	Most building codes define safety glazing as 'Grade A' safety standards for human impact. Suitably tested Safety film can bring non-code glass up to the required safety standard, this can be dependent on the glass size and thickness.
Seismic	Earthquake activity can lead to shattered glass from movement of buildings and window frames. This could create potentially dangerous glass shards that become hazardous to building occupants.
Spontaneous Glass Breakage (SGB)	SGB is associated only with toughened glass that has a Nickel Sulphide (NiS) impurity within the glass. Over time this may cause the NiS to expand, placing internal pressure on the glass causing it to shatter.
Tear Resistance	Relates to the film's ability to absorb energy prior to failure. Safety & Security films are exposed to 'Graves Tear' force (Tensile Tear) during many glass breakage events. The higher the tear resistance of the film, the greater the total energy absorbed & the more resilient the film is when under pressure.
Tensile Strength	The breaking strength of a material when subjected to a stretching. The higher the tensile strength of the Safety & Security film, relates directly to the films strength and maintaining its integrity while under pressure. This is commonly expressed as pounds (or tons) per square inch (kg/m²) of original cross sectional area.



3M Window Films

# Residential & Commercial Quality Promise.

3M Australia Pty Ltd ('3M') warrants for the Warranty Period set out below (subject to the conditions set out in this Warranty) that the 3M™ Window Films (as described below) will be free from defects in material and manufacture and maintain:

- 1. Solar reflective properties without cracking, grazing or peeling;
- 2. Adhesion properties without blistering, bubbling or delaminating from the glass; and
- 3. Appearance without discolouration.

Please refer to 3M Terms and Conditions which can be provided to you by the installer.

3M Film	Warrant	y Period	(Years)*										
	1	2	4	5	7	10	12	15	Lifetime				
Prestige Series**								С	R				
Ceramic Series							С		R				
Night Vision™ Series							С		R				
Neutral Series						С			R				
Classic Series						С			R				
Prestige Exterior (1 year labour only)**					R&C	R&C							
Safety Exterior (1 year labour only)				R&C	R&C								
Exterior Silver, Neutral & Bronze (1 year labour only)	R&C	R&C											
Scotchshield™ Safety & Security Ultra Prestige Series**								С	R				
Scotchshield™ Safety & Security Ultra Night Vision™ Series**							С		R				
Scotchshield™ Safety & Security Ultra Clear Series**							С		R				
Solar Safety Series						С			R				
Standard Clear Security Series							С		R				
Black Chrome Series				С		R							
Colour Stable Series				С		R							
Affinity Series						С			R				
Low Emissivity Films						С			R				
Anti-Graffiti Films (Interior & Exterior)	R&C												

<sup>\*</sup> Warranties are Non-transferable

Note: Exterior Prestige and Safety Exterior films require edge sealing only in areas where the water could be pooling



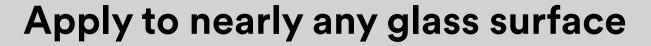
<sup>\*\*</sup>Available to 3M Select Installers Only

## 3M<sup>™</sup> Glass Finishes

With over 100+ unique designs, patterns and textures, 3M™ Glass Finishes give you an easy way to add that extra element of design to your space.

3M offer a variety of portfolios to choose from each developed with a specific design need in mind, including: 3M™ FASARA™ Glass Finishes, 3M™ DI-NOC™ Glass Finishes, 3M™ CRYSTAL Dusted and Frosted Glass Finishes, and 3M™ DICHROIC Glass Finishes.

All glass finish films are ideal for privacy and decorative applications in offices, hotels, retail stores, restaurants, healthcare environments, and designed for ease of application and cleaning.



3M™ Glass Finishes can be easily applied to most new or existing glass surfaces. They require no extra hardware or setup — and no added maintenance or special cleaning. Also, as needs change, these decorative films can be quickly applied and removed.



Entrances



Doors



Ceilings



**Balconies** 



Windows



Staircases



**Partitions** 



Corridors

## 3M™ FASARA™ **Glass Finishes**

- Made from a durable polyester film with a pressure sensitive adhesive backing
- Capture the look of custom etched, cut or sandblasted glass
- Choose from a variety of patterns created in collaboration with leading designers from across the globe
- Tailor the light, privacy and style of your space



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