

# 3M™ Safety & Security Window Film





## Safety S40 (SH4CLARL)

### Technical Data

#### Product Features & Benefits

- Optically clear, 4-mil (0.10 mm) thick film for application to interior glass surface
- Provides shatter resistance to protect from broken glass hazards caused by seismic activity, spontaneous glass breakage, and other low force impact events
- Can be combined with 3M Impact Protection Attachment systems for additional safety and security
- Exhibits strong adhesion to glass and shock absorbing properties
- Protective hardcoat provides scratch resistance and durability
- Protects from the harmful effects of UV light and reduces fading of interior furnishings
- Easily cleaned with typical window cleaning solutions

#### Product Performance & Technical Data

Safety S40								
	Single Pane		Tinted		Double Pane		Double tinted	
Film	1/4" Clear	Safety S40	1/4" tint	Safety S40	Dual 1/4" Clear	Safety S40	Dual 1/4" tint	Safety S40
Solar Heat Gain Coefficient	0.82	0.82	0.63	0.59	0.70	0.68	0.51	0.46
Visible Light Transmitted	89%	87%	47%	47%	79%	77%	47%	45%
Visible Light Reflected Interior	9%	8%	6%	6%	15%	15%	13%	14%
Visible Light Reflected Exterior	8%	8%	6%	6%	15%	15%	8%	14%
U Value	1.03	1.03	1.03	1.03	0.47	0.47	0.47	0.47
UV Block	38%	99%	NA	99%	NA	99%	NA	99%
Total Solar Energy Rejected	19%	19%	37%	41%	30%	32%	49%	54%
Glare Reduction	NA	2%	NA	1%	NA	3%	NA	5%
Heat Loss Reduction	NA	0%	NA	0%	NA	0%	NA	0%
Solar Heat Reduction	NA	0%	NA	6%	NA	3%	NA	9%

#### Film Properties\* (nominal)

Product	Film Thickness	Single or Multi-ply	Tensile Strength	Break Strength	Elongation at Break	Abrasion Resistance
Safety S40	0.004"	Single	25,000 psi	100 lbs/in	>125 %	< 5% haze increase

\*not for specification purposes

#### Important:

The information provided in this report is believed to be reliable; however, due to the wide variety of intervening factors, 3M does not warrant that the results will necessarily be obtained. All details concerning product specifications and terms of sale are available from 3M.



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# 3M™ Safety & Security Window Film





## Safety S70 (SH7CLARL)

### Technical Data

#### Product Features & Benefits

- Optically clear, 7-mil (0.18 mm) thick film for application to interior glass surface
- Provides shatter resistance to protect from broken glass hazards caused by seismic activity, spontaneous glass breakage, and other impact events
- Typical applications include bomb blast mitigation and safety glazing
- Can be combined with 3M Impact Protection Attachment systems for additional safety and security
- Exhibits strong adhesion to glass and shock absorbing properties
- Protective hardcoat provides scratch resistance and durability
- Protects from the harmful effects of UV light and reduces fading of interior furnishings
- Easily cleaned with typical window cleaning solutions

#### Product Performance & Technical Data

Safety S70								
	Single Pane		Tinted		Double Pane		Double tinted	
Film	1/4" Clear	Safety S70	1/4" tint	Safety S70	Dual 1/4" Clear	Safety S70	Dual 1/4" tint	Safety S70
Solar Heat Gain Coefficient	0.82	0.79	0.63	0.59	0.70	0.68	0.51	0.46
Visible Light Transmitted	89%	86%	47%	47%	79%	77%	47%	43%
Visible Light Reflected Interior	9%	9%	6%	6%	15%	16%	13%	8%
Visible Light Reflected Exterior	8%	9%	6%	6%	15%	16%	8%	8%
U Value	1.03	1.03	1.03	1.03	0.47	0.47	0.47	0.47
UV Block	38%	98%	NA	99%	NA	99%	NA	99%
Total Solar Energy Rejected	19%	21%	37%	41%	30%	32%	49%	54%
Glare Reduction	NA	3%	NA	1%	NA	3%	NA	9%
Heat Loss Reduction	NA	0%	NA	0%	NA	0%	NA	0%
Solar Heat Reduction	NA	3%	NA	6%	NA	3%	NA	9%

#### Film Properties\* (nominal)

Product	Film Thickness	Single or Multi-ply	Tensile Strength	Break Strength	Elongation at Break	Abrasion Resistance
Safety S70	0.007"	Single	25,000 psi	175 lbs/in	>125 %	< 5% haze increase

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# 3M™ Safety & Security Window Film





## Safety S80 (SH8CLARL)

### Technical Data

#### Product Benefits

- Increase protection from windstorms, blasts, and earthquakes.
- Deters smash and grab theft and forced entry burglaries.
- Reduce fading from UV light.
- Extend the life and vibrancy in the fabric of furniture and carpets.
- Reduces injury risk from flying glass.

#### Product Performance & Technical Data

Safety S80								
	Single Pane		Tinted		Double Pane		Double tinted	
Film	1/4" Clear	Safety S80	1/4" tint	Safety S80	Dual 1/4" Clear	Safety S80	Dual 1/4" tint	Safety S80
Solar Heat Gain Coefficient	0.82	0.79	0.63	0.59	0.70	0.68	0.51	0.46
Visible Light Transmitted	89%	86%	47%	47%	79%	77%	47%	43%
Visible Light Reflected Interior	9%	9%	9%	6%	15%	16%	13%	8%
Visible Light Reflected Exterior	8%	9%	13%	6%	15%	16%	8%	8%
U Value	1.03	1.03	1.03	1.03	0.47	0.47	0.47	0.47
UV Block	38%	99%	NA	99%	NA	99%	NA	99%
Total Solar Energy Rejected	19%	21%	37%	41%	30%	32%	49%	54%
Glare Reduction	NA	3%	NA	1%	NA	3%	NA	9%
Heat Loss Reduction	NA	0%	NA	0%	NA	0%	NA	0%
Solar Heat Reduction	NA	3%	NA	6%	NA	3%	NA	9%

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# 3M™ Safety & Security Window Film





## Safety S140 (SH14CLARL)

### Technical Data

#### Product Benefits

- Increase protection from windstorms, blasts, and earthquakes.
- Deters smash and grab theft and forced entry burglaries.
- Reduce fading from UV light.
- Extend the life and vibrancy in the fabric of furniture and carpets.
- Reduces injury risk from flying glass.

#### Product Performance & Technical Data

Safety S140								
	Single Pane		Tinted		Double Pane		Double tinted	
Film	1/4" Clear	Safety S140	1/4" tint	Safety S140	Dual 1/4" Clear	Safety S140	Dual 1/4" tint	Safety S140
Solar Heat Gain Coefficient	0.82	0.78	0.63	0.59	0.70	0.68	0.51	0.46
Visible Light Transmitted	89%	85%	47%	47%	79%	72%	47%	43%
Visible Light Reflected Interior	9%	10%	9%	6%	15%	16%	13%	8%
Visible Light Reflected Exterior	8%	10%	13%	6%	15%	16%	8%	8%
U Value	1.03	1.03	1.03	1.03	0.47	0.47	0.47	0.47
UV Block	38%	99%	NA	99%	NA	99%	NA	99%
Total Solar Energy Rejected	19%	22%	37%	41%	30%	32%	49%	54%
Glare Reduction	NA	4%	NA	1%	NA	9%	NA	9%
Heat Loss Reduction	NA	0%	NA	0%	NA	0%	NA	0%
Solar Heat Reduction	NA	4%	NA	6%	NA	3%	NA	9%

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