

3M™ Lámina de Seguridad para Autos

SAS 20 (4 mil)

Información Técnica:

- Entrega protección frente a roturas de vidrio
- Resistencia al impacto incrementada para seguridad y protección adicional
- Ayuda a proteger activos valiosos dentro del vehículo (daño y/o robo)
- Diseño libre de metal, no interfiere con señales
- 99% protección UV
- Reduce brillo y decoloramiento interior
- Incluye una capa adicional en su estructura para privacidad
- Tonalidad intermedia-oscuro
- Permite el ingreso de un 17% de luz visible
- Rechaza la energía solar en un 58%
- Reduce el calor en un 28%

Desempeño del producto:

SAS 20 4M				
	Single Pane		Single Pane (Auto)	
Film	1/4" Clear	SAS 20 4M	1/4" Auto75	SAS 20 4M
Solar Heat Gain Coefficient	0.82	0.59	0.59	0.42
Visible Light Transmitted	89%	20%	75%	17%
Visible Light Reflected Interior	9%	5%	7%	5%
Visible Light Reflected Exterior	8%	5%	7%	5%
U Value	1.03	1.02	1.02	1.02
UV Block	38%	98%	NA	99%
Total Solar Energy Rejected	19%	41%	41%	58%
Glare Reduction	NA	78%	NA	78%
Heat Loss Reduction	NA	0%	NA	0%
Solar Heat Reduction	NA	28%	NA	29%

Film Properties* (nominal)

Product	Film Thickness	Tensile Strength	Break Strength	Elongation at Break	Abrasion Resistance
SAS 20 4M	0.004" (0.10 mm)	25,000 psi	100 lbs/in	>125 %	< 5% haze increase

*not for specification purposes

Impact Resistance for Burglary Resistant Glazing**

Product	Glass Substrate	Test Type	Impact Energy	# of Impacts
SAS 20 4M	3/16" (4.8mm) tempered	High Impact	88 J	1
		High Impact (after center punch)	27 J	1
		Multiple Impact	17 J	5

**modified method of UL 972, Burglarly Resisting Glazing Material

Technical Information: The technical information, recommendations and other statements contained in this document are based upon tests or experience that 3M believes are reliable, but the accuracy or completeness of such information is not guaranteed.

Product 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. Given the variety of factors that can affect the use and performance of a 3M product, user is solely responsible for evaluating the 3M product and determining whether it is fit for a particular purpose and suitable for user's method of application.

3M™ Lámina de Seguridad para Autos

SAS 35 (4 mil)

Información Técnica:

- Entrega protección frente a roturas de vidrio
- Resistencia al impacto incrementada para seguridad y protección adicional
- Ayuda a proteger activos valiosos dentro del vehículo (daño y/o robo)
- Diseño libre de metal, no interfiere con señales
- 99% protección UV
- Reduce brillo y decoloramiento interior
- Incluye una capa adicional en su estructura para privacidad
- Tonalidad intermedia-clara
- Permite el ingreso de un 27% de luz visible
- Rechaza la energía solar en un 55%
- Reduce el calor en un 24%

Desempeño del producto:

SAS 35 4M				
	Single Pane		Single Pane (Auto)	
Film	1/4" Clear	SAS 35 4M	1/4" Auto75	SAS 35 4M
Solar Heat Gain Coefficient	0.82	0.62	0.59	0.45
Visible Light Transmitted	89%	32%	75%	27%
Visible Light Reflected Interior	9%	5%	7%	5%
Visible Light Reflected Exterior	8%	5%	7%	4%
U Value	1.03	1.02	1.02	1.02
UV Block	38%	98%	NA	99%
Total Solar Energy Rejected	19%	38%	41%	55%
Glare Reduction	NA	64%	NA	65%
Heat Loss Reduction	NA	0%	NA	0%
Solar Heat Reduction	NA	24%	NA	24%

Film Properties* (nominal)

Product	Film Thickness	Tensile Strength	Break Strength	Elongation at Break	Abrasion Resistance
SAS 35 4M	0.004" (0.10 mm)	25,000 psi	100 lbs/in	>125 %	< 5% haze increase

*not for specification purposes

Impact Resistance for Burglary Resistant Glazing**

Product	Glass Substrate	Test Type	Impact Energy	# of Impacts
SAS 35 4M	3/16" (4.8mm) tempered	High Impact	88 J	1
		High Impact (after center punch)	27 J	1
		Multiple Impact	17 J	5

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3M™ Lámina de Seguridad para Autos

SAS 50 (4 mil)

Información Técnica:

- Entrega protección frente a roturas de vidrio
- Resistencia al impacto incrementada para seguridad y protección adicional
- Ayuda a proteger activos valiosos dentro del vehículo (daño y/o robo)
- Diseño libre de metal, no interfiere con señales
- 99% protección UV
- Reduce brillo y decoloramiento interior
- Incluye una capa adicional en su estructura para privacidad
- Tonalidad clara, no perturba la visión
- Permite el ingreso de un 42% de luz visible
- Rechaza la energía solar en un 51%
- Reduce el calor en un 25%

Desempeño del producto:

SAS 50 4M				
	Single Pane		Single Pane (Auto)	
Film	1/4" Clear	SAS 50 4M	1/4" Auto75	SAS 50 4M
Solar Heat Gain Coefficient	0.82	0.67	0.59	0.49
Visible Light Transmitted	89%	49%	75%	42%
Visible Light Reflected Interior	9%	6%	7%	6%
Visible Light Reflected Exterior	8%	6%	7%	5%
U Value	1.03	1.02	1.02	1.02
UV Block	38%	98%	NA	99%
Total Solar Energy Rejected	19%	33%	41%	51%
Glare Reduction	NA	44%	NA	44%
Heat Loss Reduction	NA	0%	NA	0%
Solar Heat Reduction	NA	18%	NA	17%

Film Properties* (nominal)

Product	Film Thickness	Tensile Strength	Break Strength	Elongation at Break	Abrasion Resistance
SAS 50 4M	0.004" (0.10 mm)	25,000 psi	100 lbs/in	>125 %	< 5% haze increase

*not for specification purposes

Impact Resistance for Burglary Resistant Glazing**

Product	Glass Substrate	Test Type	Impact Energy	# of Impacts
SAS 50 4M	3/16" (4.8mm) tempered	High Impact	88 J	1
		High Impact (after center punch)	27 J	1
		Multiple Impact	17 J	5

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3M™ Lámina de Seguridad para Autos

SAS Clear (4 mil)

Información Técnica:

- Entrega protección frente a roturas de vidrio
- Resistencia al impacto incrementada para seguridad y protección adicional
- Ayuda a proteger activos valiosos dentro del vehículo (daño y/o robo)
- Diseño libre de metal, no interfiere con señales
- 99% protección UV
- Reduce brillo y decoloramiento interior
- Visualmente imperceptible, tonalidad muy clara
- Permite el paso del 74% de luz visible
- Rechaza la energía solar en un 42%

Desempeño del producto:

SAS Clear 4M				
	Single Pane		Single Pane (Auto)	
Film	1/4" Clear	SAS Clear 4M	1/4" Auto75	SAS Clear 4M
Solar Heat Gain Coefficient	0.82	0.79	0.59	0.58
Visible Light Transmitted	89%	88%	75%	74%
Visible Light Reflected Interior	9%	9%	7%	7%
Visible Light Reflected Exterior	8%	9%	7%	7%
U Value	1.03	1.05	1.02	1.05
UV Block	38%	97%	NA	98%
Total Solar Energy Rejected	19%	21%	41%	42%
Glare Reduction	NA	1%	NA	1%
Heat Loss Reduction	NA	0%	NA	0%
Solar Heat Reduction	NA	3%	NA	2%

Film Properties* (nominal)

Product	Film Thickness	Tensile Strength	Break Strength	Elongation at Break	Abrasion Resistance
SAS Clear 4M	0.004" (0.10 mm)	25,000 psi	100 lbs/in	>125 %	< 5% haze increase

*not for specification purposes

Impact Resistance for Burglary Resistant Glazing**

Product	Glass Substrate	Test Type	Impact Energy	# of Impacts
SAS Clear 4M	3/16" (4.8mm) tempered	High Impact	88 J	1
		High Impact (after center punch)	27 J	1
		Multiple Impact	17 J	5

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