

# 3M™ Safety & Security Window Film

## Safety Silver S20

### Technical Data

#### Product Features & Benefits

- Combination safety / solar control window film
- Help protect from broken glass hazards
- Increase privacy, reduce glare and eye discomfort
- Increase comfort and help reduce air conditioning costs
- Helps extend the life of furnishings by significantly reducing harmful UV rays

#### Applications

- Bomb Blast Mitigation
- Building Envelope Protection
- Helping to Deter Break & Entry
- Safety Glazing
- Seismic Preparedness
- Spontaneous Glass Breakage

#### Performance Testing\*

Method	Glass Substrate	Film Attachment	Rating	
<b>Safety Glazing / Impact Resistance</b>				
16 CFR 1201	1/4" annealed	--	Category 2, 400 ft-lbs	
ANSI Z97.1			Class A (Unlimited), 400 ft-lbs	
<b>Building Envelope Protection: Impact and Pressure Cycling</b>				
ASTMs E1886 / E1996	1/4" tempered	IPA	Missile Level A, +/- 60 psf	
<b>Blast Mitigation</b>			<b>Blast Load</b>	<b>Rating</b>
GSA TS01-2003 / ASTM F1642	1/4" annealed	IPP	4 psi, 28 psi*msec	GSA Level 2 / ASTM "Minimal Hazard"
		IPA	6 psi, 42 psi*msec	GSA Level 2 / ASTM "Minimal Hazard"
	1/4" tempered	IPA	4 psi, 28 psi*msec	GSA Level 2 / ASTM "No Hazard"
	1" double pane (tempered)	IPA	6 psi, 42 psi*msec	GSA Level 2 / ASTM "No Hazard"

\* Glazing systems vary. Contact 3M for more information.

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

Film Thickness	8 mils
Film Construction	Laminated polyester
<b>Tensile Properties (ASTM D882)</b>	
Tensile Strength	25,000 psi
Break Strength	200 lbs/in
Elongation at Break	85%
Yield Strength	15,000 psi
Elongation at Yield	7%
Modulus	607 kpsi
Abrasion Resistance (ASTM D1044)	+3% Δ Haze
Peel Strength	4.5 lb/in
Flammability (ASTM E84)	Class A

<b>Solar Properties – film applied to 1/4" glass</b>				
	1/4" Clear	1/4" Tint	Dual Clear	Dual Tint
<b>VLT</b>	18%	11%	17%	10%
<b>VLR-Int</b>	62%	62%	62%	62%
<b>VLR-Ext</b>	61%	25%	59%	24%
<b>SHGC</b>	0.25	0.30	0.33	0.28
<b>TSER</b>	76%	71%	67%	72%
<b>UV Block</b>	99%	99%	99%	99%
<b>Glare ↓</b>	80%	80%	79%	79%
<b>U-Value</b>	1.02	1.02	0.47	0.47
<b>Solar Heat ↓</b>	70%	53%	53%	45%

#### IMPORTANT NOTICE:

This product is **not approved** in the State of Florida for use as hurricane, windstorm, or impact protection from wind-borne debris from a hurricane or windstorm. In compliance with Florida Statute 553.842, this product may not be advertised, sold, offered, provided, distributed, or marketed in the State of Florida as hurricane, windstorm, or impact protection from wind-borne debris from a hurricane or windstorm.

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.