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# Safety & Security Interior Films

Optically clear glazing protection



Avery Dennison has over two decades of experience in developing and manufacturing multi-laminate safety and security window films, designed to protect people and property against flying glass shards from a wide variety of hazards and threats.

**Avery Dennison's safety and security films are suitable for building codes and insurance policies that often demand glazing that meets certain safety standards such as impact-resistant glass in schools, break-ins or blast protection for retail locations.**

Avery Dennison's safety and security interior films have outstanding optical clarity and cleanliness - the result of top grade polyester, our proprietary transparent adhesive, and tight adherence to demanding ISO 9001 quality-assurance standards.

## SF Clear i PS

**SF Clear** safety and security interior window films feature exceptional clarity, low reflectance and high levels of UV protection. A full range of film thicknesses include 4, 7, 12 and 15 mil ensures the appropriate protection solution.



## AG Clear ix PS

**AG Clear ix** window films by Avery Dennison can be applied either on the interior or exterior side of most glass window systems for anti-graffiti protection. **AG Clear ix** anti graffiti films provide a tough, invisible layer between vandals and glass, helping to keep vulnerable surfaces clear, clean and scratch free. Avery Dennison's **AG Clear ix** films are available in thicknesses 4 and 6 mil.



Graphics Solutions



Anti-graffiti



Shard retention



UV Block



Aesthetics

## SF Matte i PS

**SF Matte i** safety and security decorative interior window film is white matte in appearance and is available in thicknesses 5 and 12 mil to provide privacy and personal safety in retail, bathroom and office applications. The product combines anti-fragmentation security with an attractive sandblasted effect, delivering a safe and cost-effective alternative to privacy glass or partitions.



## SF Clear mod PS

Add safety and security protection to any Avery Dennison solar window film by installing it in combination with safety modular film **SF Clear Mod**. Avery Dennison's **SF Clear Mod** safety and security interior modular window films are available in thicknesses of 4, 7, and 12 mil for varying hazard protection.



## Features and Benefits

**SF Clear and Modular i** Interior Window Film Products provide:

- > Increased protection from glass shattered by impact, blast, crime or natural disaster
- > Superb optical clarity for no compromise vision
- > Up to 99% UV block to reduce fading and sun damage

**SF Matte i** Interior Window Film Products provide:

- > Increased protection from glass shattered by impact, crime or natural disaster
- > Privacy with aesthetic appeal - sandblasted white effect
- > Up to 99% UV block to reduce fading and sun damage

**AG Clear ix** Interior/Exterior Window Film Products provide:

- > Easy clean and replacement to protect glass glazing surfaces
  - > Up to 97% UV block to reduce fading and sun damage
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Optical and Solar Properties**	SF Clear 4 mil i	SF Clear 7 mil i	SF Clear 8 mil i	SF Clear 12 mil i	SF Clear 15 mil i
Item Number	R12306T	R19801T	R22301T	R32303T	R39803T
Pane	Single	Single	Single	Single	Single
Visible Light Transmitted	89%	88%	88%	87%	87%
Visible Light Reflected (Interior)	10%	11%	11%	11%	11%
Visible Light Reflected (Exterior)	10%	11%	11%	11%	11%
Ultra Violet Block	97%	99%	99%	99%	99%
Total Solar Energy Reflected	9%	9%	9%	10%	11%
Total Solar Energy Transmitted	81%	80%	80%	78%	77%
Total Solar Energy Absorbed	10%	11%	11%	12%	12%
Glare Reduction	1%	2%	2%	3%	3%
Selective InfraRed Reduction (SIRR)					
InfraRed Energy Rejection (IRER)					
Shading Coefficient	0.96	0.95	0.95	0.94	0.94
Solar Heat Gain Coeff. (G-Value)	0.84	0.83	0.83	0.82	0.82
U-Value Winter (IP)	1.07	1.07	1.07	1.07	1.07
U-Value Winter (SI)	6.07	6.07	6.07	6.07	6.07
Total Solar Energy Rejected (%)	16%	17%	17%	18%	18%
Mechanical Properties	SF Clear 4 mil i	SF Clear 7 mil i	SF Clear 8 mil i	SF Clear 12 mil i	SF Clear 15 mil i
Thickness	4 mil	7 mil	8 mil	12 mil	15 mil
Tensile Strength at Break	28,500 PSI	26,000 PSI	28,500 PSI	28,500 PSI	28,500 PSI
Break Strength	112 lb/ inch	180 lb/ inch	224 lb/ inch	336 lb/inch	420 lb/inch
Elongation at Break	125%	140%	125%	125%	140 %
Peel Strength	7 lb/ inch	7 lb/ inch	7 lb/ inch	7 lb/inch	8 lb/inch
<b>Safety Testing</b>					
<b>Fire</b>					
BS 476 Fire Propagation		√			
ASTM D1929 Ignition	√	√			
ASTM E84 Surface Burn	√				
<b>Anti Graffiti</b>					
Paris Metro Anti Graffiti	√				
<b>Impact</b>					
AS/NZS 2208	√	√	√		
ANSI Z97.1 12" pendulum fall	√				
ANSI Z97.1 18" pendulum fall	√				
ANSI Z97.1 48" pendulum fall		√	√		
CPSC 1201 Cat 1 18" pendulum fall	√				
CPSC 1201 Title 16 48" pendulum fall	√	√	√		
BS 6206 B	√				
EN 12600 2B2	√	√	√		
EN 12600 1B1		√	√		
EN 356 P4A				√	√
DIN 52290 Part 4, A1				√	
<b>Bomb Blast</b>					
Siach Gefen IDF Testing (x2 + No Bar)				√	
Bomb Blast GSA Level C (4 psi, 30 psi/msec) P(3B)	√	√			
Bomb Blast GSA Level D (10.2 psi, 90.6 psi/msec)				√	
UL 972 Burglary Resisting Glazing Material (3A) x2 + No Bar on Both Sides				√	
<b>Wind Debris</b>					
ASTM E330				√	
TAS 201, 202, 203, Florida Building Code (Dade County Small Missile Test) Hurricane				√	

\*\* Performance results are calculated on 3 mm glass using NFRC methodology and LBNL Window 5.2 software, and are subject to variations in process conditions within industry standards and are only intended for estimating purposes.

Optical and Solar Properties**	SF Clear 4 mil Mod	SF Clear 7 mil Mod	SF Clear 12 mil Mod	SF Matte 5 mil i	SF Matte 12 mil i	AG Clear 4 mil ix	AG Clear 6 mil ix
Item Number	R12306C	R19801C	R32303C	R22301T	R32311C	R123G3X	R173G3X
Pane	Single	Single	Single	Single	Single	Single	Single
Visible Light Transmitted	89%	88%	87%	58%	55%	90%	90%
Visible Light Reflected (Interior)	10%	11%	11%	%	%	11%	12%
Visible Light Reflected (Exterior)	10%	11%	11%	25%	28%	11%	12%
Ultra Violet Block	97%	99%	99%	98%	99%	92%	97%
Total Solar Energy Reflected	9%	9%	10%	20%	23%	10%	11%
Total Solar Energy Transmitted	81%	80%	78%	55%	51%	82%	82%
Total Solar Energy Absorbed	10%	11%	12%	25%	26%	8%	7%
Glare Reduction	1%	2%	3%	36%	38%	0%	2%
Selective InfraRed Reduction (SIRR)					46%	21%	22%
InfraRed Energy Rejection (IRER)					37%	18%	18%
Shading Coefficient	0.96	0.95	0.94	0.72	0.69	0.97	0.97
Solar Heat Gain Coeff. (G-Value)	0.84	0.83	0.82	0.62	0.60	0.84	0.84
U-Value Winter (IP)	1.07	1.07	1.07	1.07	1.07	1.04	1.07
U-Value Winter (SI)	6.07	6.07	6.07	6.05	6.08	5.91	6.00
Total Solar Energy Rejected (%)	16%	17%	18%	38%	40%	16%	16%

Mechanical Properties	SF Clear 4 mil Mod	SF Clear 7 mil Mod	SF Clear 12 mil Mod	SF Matte 5 mil i	SF Matte 12 mil i	AG Clear 4 mil ix	AG Clear 6 mil ix
Thickness	4 mil	7 mil	12 mil	5 mil	12 mil	4 mil	6 mil
Tensile Strength at Break	28,500 PSI	26,000 PSI	28,500 PSI	25,000 PSI	28,500 PSI	28,500 PSI	28,500 PSI
Break Strength	112 lb/ inch	180 lb/ inch	336 lb/inch	140 lb/inch	336 lb/inch	112 lb/ inch	112 lb/ inch
Elongation at Break	125%	140%	125%	140 %	125 %	125%	125%
Peel Strength	7 lb/ inch	7 lb/ inch	7 lb/inch	5-7 lb/inch	7 lb/inch	3-4 lb/ inch	2-3 lb/ inch
<b>Safety Testing</b>							
<b>Fire</b>							
BS 476 Fire Propagation		√					
ASTM D1929 Ignition	√	√					
ASTM E84 Surface Burn	√						
<b>Anti Graffiti</b>							
Paris Metro Anti Graffiti	√						
<b>Impact</b>							
AS/NZS 2208	√	√		√			
ANSI Z97.1 12" pendulum fall	√						
ANSI Z97.1 18" pendulum fall	√						
ANSI Z97.1 48" pendulum fall		√					
CPSC 1201 Cat 1 18" pendulum fall	√						
CPSC 1201 Title 16 48" pendulum fall	√	√					
BS 6206 B	√						
EN 12600 2B2	√	√		√			
EN 12600 1B1		√					
EN 356 P4A			√				
DIN 52290 Part 4, A1							
<b>Bomb Blast</b>							
Siach Gefen IDF Testing (x2 + No Bar)			√				
Bomb Blast GSA Level C (4 psi, 30 psi/msec) P(3B)	√	√					
Bomb Blast GSA Level D (10.2 psi, 90.6 psi/msec)			√				
UL 972 Burglary Resisting Glazing Material (3A) x2 + No Bar on Both Sides			√				
<b>Wind Debris</b>							
ASTM E330			√				
TAS 201, 202, 203, Florida Building Code (Dade County Small Missile Test) Hurricane			√				

\*\* Performance results are calculated on 3 mm glass using NFRC methodology and LBNL Window 5.2 software, and are subject to variations in process conditions within industry standards and are only intended for estimating purposes.

## About Avery Dennison

Avery Dennison (NYSE: AVY) is a global materials science and manufacturing company specializing in the design and manufacture of a wide variety of labeling and functional materials. Headquartered in Glendale, California, the company employs approximately 30,000 employees in more than 50 countries. Reported sales in 2017 were \$ 6.6 billion. Learn more at [www.averydennison.com](http://www.averydennison.com)