

# Safety & Security Exterior Films

## Hazard & Anti-Graffiti Protection



Safety

Avery Dennison has over two decades of experience in developing and manufacturing multi-laminate safety, security and anti-graffiti window films, designed to protect people and property against a wide variety of threats as well as the window itself from vandalism. Exterior protection of glass and rigid plastic window systems is particularly relevant in the public domain such as bus shelters, subways, buses, trains stadiums, commercial buildings and institutions.

**Avery Dennison's anti-graffiti, sacrificial films provide a cost effective and convenient method for protecting glass and plastic windows against vandalism and damage.**

All of Avery Dennison exterior window films provide excellent UV block, protecting people and property from damaging ultraviolet rays.

### SF Clear X

**SF Clear X** safety and security exterior window films feature exceptional clarity, low reflectance and high levels of UV protection. Film thicknesses 4 and 7 mil are available to provide appropriate protection solutions.

### AG Clear ix

**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.

### Clear Poly X

**Clear Poly X** exterior window film is engineered for application on most rigid plastic substrates and delivers anti-graffiti protection, with an easy wipe-clean surface, and thick construction to protect from gouging and acid attacks. Removing and replacing scratched or scuffed **Clear Poly X** film is simple - any adhesive residue rubs off without damaging the exposed plastic window pane. Recommended for exterior use on bus shelters, safety guards, stadiums or acoustic barriers. Avery Dennison's **Clear Poly X** exterior window films are available in thicknesses 4 and 6 mil to provide the required protection.

## Features and Benefits

**SF Clear X** Exterior 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

**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

**Clear Poly X** Exterior Window Film Products provide:

- > Compatibility with most rigid plastic substrates
- > Easy clean and replacement to protect rigid plastic substrates
- > Superb optical clarity for no compromise vision
- > Up to 99% UV block to reduce fading and sun damage

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Anti-graffiti



Shard retention



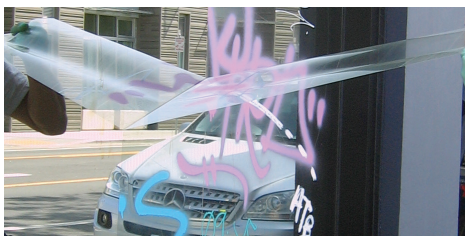
UV Block

Optical and Solar Properties**	SF Clear 4 mil X	SF Clear 7 mil X	AG Clear 4 mil ix	AG Clear 6 mil ix	Clear 4 mil Poly X	Clear 6 mil Poly X
Item Number	R12100X	R19600X	R123G3X	R173G3X	R1731XP	R1731XP
Pane	Single	Single	Single	Single	Single	Single
Visible Light Transmitted	88%	88%	90%	90%	88%	88%
Visible Light Reflected (Interior)	10%	11%	11%	12%	10%	10%
Visible Light Reflected (Exterior)	10%	11%	11%	12%	10%	10%
Ultra Violet Block	99%	99%	92%	97%	99%	99%
Total Solar Energy Reflected	10%	9%	10%	11%	10%	9%
Total Solar Energy Transmitted	80%	80%	82%	82%	80%	80%
Total Solar Energy Absorbed	10%	11%	8%	7%	10%	11%
Glare Reduction	2%	2%	0%	2%	2%	2%
Selective InfraRed Reduction (SIRR)	22%		21%	22%		
InfraRed Energy Rejection (IRER)	18%		18%	18%		
Shading Coefficient	0.96	0.95	0.97	0.97	0.96	0.95
Solar Heat Gain Coeff. (G-Value)	0.83	0.83	0.84	0.84	0.83	0.82
U-Value Winter (IP)	1.04	1.04	1.04	1.07	1.04	1.07
U-Value Winter (SI)	5.91	5.91	5.91	6.00	5.91	6.05
Total Solar Energy Rejected (%)	17%	17%	16%	16%	17%	18%

Mechanical Properties	SF Clear 4 mil X	SF Clear 7 mil X	AG Clear 4 mil ix	AG Clear 6 mil ix	Clear 4 mil Poly X	Clear 6 mil Poly X
Thickness	4 mil	7 mil	4 mil	6 mil	4 mil	6 mil
Tensile Strength at Break	28,500 PSI	26,000 PSI	28,500 PSI	28,500 PSI	28,500 PSI	28,000 PSI
Break Strength	112 lb/ inch	180 lb/ inch	112 lb/ inch	112 lb/ inch	112 lb/ inch	125 lb/ inch
Elongation at Break	125%	140%	125%	125%	125%	150%
Peel Strength	7 lb/ inch	7 lb/ inch	3-4 lb/ inch	2-3 lb/ inch	1-2 lb/ inch	1-2 lb/ inch
Safety Testing						
Anti Graffiti						
Paris Metro Anti Graffiti	√					
Impact						
AS/NZS 2208	√					
EN 12600 2B2	√					
EN 12600 1B1		√				



SF Clear X



AG Clear ix



Clear Poly X

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\*\* 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.