

DAS Shield™ Surface-Applied Film Technical Data Sheet

DAS SHIELD™ is designed to increase In-Building wireless deployment options for DAS (Distributed Antenna Systems) and Small Cells as well as for helping contain Wi-Fi footprints for enhanced security. External Macro Cell signals can be attenuated minimizing interference and thereby allowing improved efficiency and potentially simpler and less expensive installations.

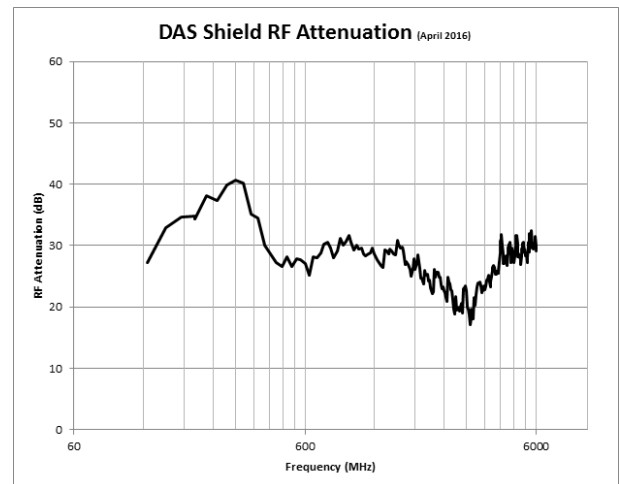
DAS SHIELD™ is a component of architectural Shielding Technology which is a set of materials and application techniques primarily aimed at attenuating RF signals from entering or leaving buildings. DAS SHIELD™ is applied to window interiors to attenuate RF Signals while maintaining high Visible Light Transmission. The technology also has secondary benefits including safety, energy savings, and UV protection.

PERFORMANCE CHARACTERISTICS

RF Attenuation (700 MHz – 6 GHz)	Avg >24dB
IR Transmission (940 nm)	< 17%
Ultraviolet Transmission (<380 nm)	< 1%
Visible Light Transmission (400-780 nm)	70%
Visible Light Reflectance (400-780 nm)	8%
Total Solar Energy Rejected	50%
Shading Coefficient	0.51
Solar Heat Gain Coefficient	0.44
Estimated Thickness	0.002"

BENEFITS

- ◆ Reduce RF interference at building exterior resulting in potentially lower DAS power requirements and fewer/smaller remotes and antennas
- ◆ Minimizes “Macro Cell” interference with 4G LTE DAS deployments, especially in dense urban environments
- ◆ Added security for WLAN (Wireless Local Area Network) or 802.11 and other wireless technologies
- ◆ Energy savings and possible LEED credits
- ◆ EMI (Electromagnetic Interference) and PMI (Passive Modulation Interference) reduction and RF Shielding
- ◆ UV (Ultraviolet) Protection for fade control and health



PRODUCT OVERVIEW

Intended Use:

RF attenuation for buildings with Small Cell and Distributed Antenna Systems. DAS Shield creates a signal differential at the window to ensure Cellular connectivity is made with the In-Building Wireless system and EMI protection.

Areas of Application:

Buildings intended to operate Small Cell and Distributed Antenna Systems.

MATERIAL SAFETY

See film and sealant Material Safety Datasheets (MSDS)

STRUCTURE

Multiple layers of metal and metal oxides, sputter coated on PET surface.

Adhesive Type:

Clear Distortion Free (CDF)

APPLICATION

Areas of Application: Interior and exterior glass.

Surface Preparation: The glass surface to which the shatter-resistant window film is to be applied should be clean and free of paint, foreign compounds, smears, and spatters.

Sealant: Dow Corning 995

Curing Period: 7-60 days

STORAGE

Store in a cool, dry place. Keep packages closed to prevent contamination.

CARE AND MAINTENANCE

For best results, clean windows with a soft, clean, rubber squeegee, cotton, or microfiber cloth and common household -strength liquid glass cleaner such as Windex®, GlassPlus®, or silicone cleaner/polisher specifically made for window films.

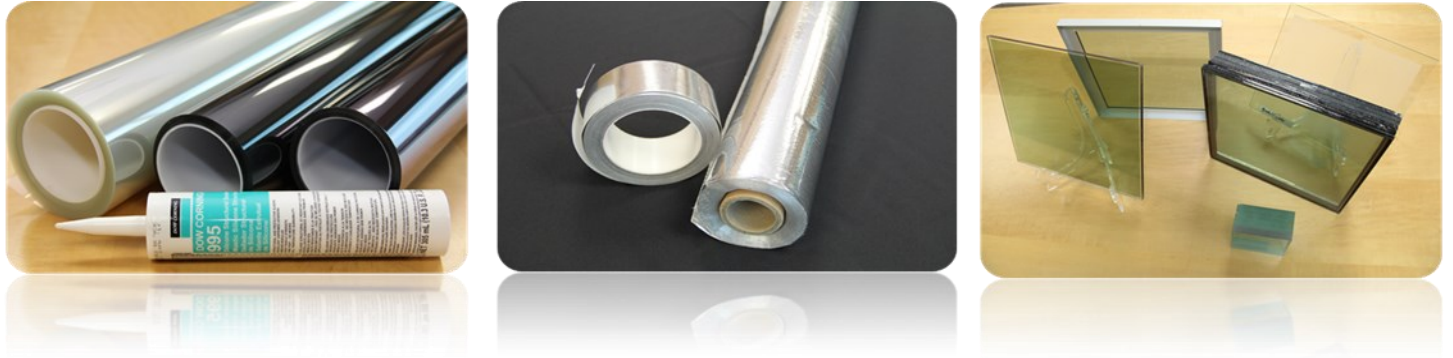
WARRANTY

Signals Defense™ signal protection film is warranted against crazing, cracking, peeling, demetalizing, bubbling and delaminating, for a period of 3-10 years from the date of original installation and subject to existing glass conditions. Additional extended warranty available upon request and with prior approval. Full terms, conditions, and warranty information is available upon request.

Architectural Shielding

Since 2000, Signals Defense's patented surface applied window films and glass products have been the U.S. Government's choice for TEMPEST film protection. Signals Defense window technology provides high Radio Frequency (RF) and Infrared (IR) attenuation with high visible light transmittance and low reflectivity resulting in minimal aesthetic impact. As a result of the high attenuation provided by SD Technology, existing buildings fitted with windows may be converted to Sensitive Compartmented Information Facilities (SCIF) ICD 705 standards. SD Technology is available in Film, Glass, and Polycarbonate. Mesh and foil architectural shielding materials are also available.

From a TSCM (Technical Surveillance Counter-Measure) perspective, Signals Defense Films is the least expensive method to mitigate the largest amount of eavesdropping and espionage techniques.



About Us

Signals Defense technology is the de facto written standard for the US Government and organizations desiring to properly secure locations handling sensitive and/or classified information. Signals Defense helps shield a building and protect enterprise data: sensitive files and emails; confidential customer, patient and employee data; financial records; strategic and product plans; and other intellectual property.

In addition, our film technology offers an element of security that no one else can currently provide helping to protect from inside and outside leakage of sensitive materials and information. Our company has expanded to offer other RF and IR shielding materials to include rFoil and paints. We also offer shades and blinds that are designed to shield against harmful UV/solar energy and provide additional privacy.

We serve industry leaders in many sectors including financial services, healthcare, government, public, industrial, insurance, energy and utilities, consumer and retail, education, media and entertainment, and technology.



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