

Avery Dennison® SW900 Series Supreme Wrapping Film™

Opaque/Metallic/Specialty

Easy Apply™ RS Long Term Removable - StaFlat™

Revision: 16 Dated: 07/30/20

Uses:

Avery Dennison SW900 Easy Apply Cast Vinyl Film Series is a premium quality cast film designed for use in vehicle and graphics markets where high quality film finish and cost effective full color wrapping is required. The patented Avery Dennison Easy Apply RS feature allows for faster positioning, bubble free application, and long term removability.



Face: 3.2 mil (80 µm) to 4.7 mil (119 µm) high gloss, satin or matte cast film



Adhesive: Long Term Removable Acrylic



Liner: 90# StaFlat, Poly-Coated with Easy Apply RS technology



Durability: See durability table starting on page 6

Application Surfaces:

Flat, Flat with Rivets, Corrugations, Deep Recesses

*NOTE: Films with face thickness 4 mil (102 micron) and above may have reduced conformability.

Features:

- SW900 Gloss, satin or matte, super conformable film
- SW900X Extreme Textures includes Carbon Fiber, Brushed Metallic, and Rugged
- Unique patented adhesive technology
- Superior conformability to irregular substrates
 - Deeply concave shaped
 - Extremely convex shaped
 - Best conformance in channels
- Outstanding durability and outdoor performance
- Excellent UV, temperature, humidity, and salt-spray resistance
- SW900 custom colors available (contact your sales representative)
- Easy Apply feature helps prevent wrinkles and bubbles during application
- Excellent removability

Common Applications:

- Trucks
- Trailers
- Cars & Vans
- Emergency Vehicles
- Buses

Product Data Sheet

Page 1 of 8



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Physical Characteristics:

| Property | Measurement | Typical Value |
|------------------------------|---------------------------|---|
| Caliper, face | | 3.2 mil (80 µm) to 4.7 mil (119 µm) Reference Color & Durability Chart in this document for caliper for specific film <i>*NOTE: Films with face thickness 4 mil (102 micron) and above may have reduced conformability.</i> |
| Caliper, adhesive | | 1.2 mil (30 µm) |
| Dimensional stability | | <0.010"(0.254 mm) |
| Tensile at Yield | | 4.0 - 8.0 lb/in (0.7–1.5 kg/cm) |
| Elongation | | 200% at break |
| Gloss | Hunter Gloss @ 60 degrees | Gloss - >85 GU Satin – 20-30 GU Matte - <15 GU |
| Adhesion: | 15 min 24 hr 1 week | 2.1lbs/in (367N/m) 2.5 lbs/in (437 N/m) 3.0 lbs/in (525 N/m) |
| Flammability | FMVSS 302 ASTM E-84 | Self Extinguishing Class 1 or A |
| Shelf-Life | | 2 years from the date of manufacture (when stored at the following temperatures and humidity conditions 68°-77° F (20° - 25° C) and 50±5% R. H.) |
| Durability | Vertical Exposure | Reference color and durability charts in this data sheet. See page 6 |
| Min. Application Temperature | | 50° F (10°C) Flat & Simple Curves 60°F (16° C) Complex curves |
| Service Temperature | | -50° to 180°F (-45° to 82° C) (Reasonable range of temperatures which would be expected under normal environmental conditions). |
| Chemical resistance | | Resistant to most mild acids, alkalis, and salt solutions |
| Removable | | For the length of the applicable durability period. Reference durability charts in this data sheet. See Page 6 |
| Compliance | | California Proposition 65 |
| MSDS | | MSDS Article Letter |

Product Data Sheet

Page 2 of 8



Graphics
Solutions

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Data represents average values where applicable, and is not intended for specification purposes.

Warranty:

This Warranty applies to the Product listed in this Data Sheet. All statements, technical information (including physical and chemical characteristics) and recommendations about Avery Dennison products are based upon tests believed to be reliable but do not constitute a guarantee or warranty. All Avery Dennison products are sold subject to the Purchaser's assent and agreement that Purchaser is responsible for, and has independently determined, the suitability of such products for its purposes or its customer's purposes. Avery Dennison products are warranted to be free from defects in material and workmanship (i) for two years from the date of manufacture, or (ii) from the date of manufacture until the expiration of the period stated on the specific Product Data Sheet in effect at the time of delivery. Such time periods are subject in either case to the proper storing and application of said product, and the failure to properly store or apply the product, including without limitation the failure to follow any applicable Instructional Bulletin, negates any warranty. It is expressly agreed and understood that Avery Dennison's sole obligation and Purchaser's exclusive remedy under this warranty, under any other warranty, express or implied, or otherwise, shall be limited exclusively to: (a) repair or replacement of defective product without charge at Avery Dennison's plant or at the location of the product (at Avery Dennison's election), or (b) in the event repair or replacement are not commercially practical, a credit amount up to the price of the product taking into account the defect in the product in Avery Dennison's sole discretion.

THE WARRANTY EXPRESSLY SET FORTH ABOVE IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR USE AND/OR NON-INFRINGEMENT. SELLER SPECIFICALLY DISCLAIMS AND EXCLUDES ALL OTHER SUCH WARRANTIES. NO WAIVER, ALTERATION, ADDITION OR MODIFICATION OF THE FOREGOING CONDITIONS SHALL BE VALID UNLESS MADE IN WRITING AND MANUALLY SIGNED BY AN OFFICER OF AVERY DENNISON.

AVERY DENNISON'S LIABILITY FOR DEFECTIVE PRODUCTS SHALL NOT EXCEED THE PURCHASE PRICE PAID THEREFORE BY PURCHASER AND IN NO EVENT SHALL AVERY DENNISON BE RESPONSIBLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES WHETHER FORESEEABLE OR NOT, CAUSED BY DEFECTS IN SUCH PRODUCT, WHETHER SUCH DAMAGE OCCURS OR IS DISCOVERED BEFORE OR AFTER REPLACEMENT OR CREDIT, AND WHETHER OR NOT SUCH DAMAGE IS CAUSED BY AVERY DENNISON'S NEGLIGENCE.

All sales and contracts for sale of Products are subject to Purchaser's assent and agreement to this Warranty. Avery Dennison hereby objects to any terms or conditions contained in any purchase order or other communication of any kind from the Purchaser that is conflicting, inconsistent or additional to this Agreement.



Failure to install the film in full compliance with Avery Dennison's installation instructions may result in personal injury or property damage. Read and follow all instructions when installing the film.

Product Data Sheet

Page 3 of 8



Graphics
Solutions

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Easy Apply™ RS Long Term Removable - StaFlat™

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Related Documents:

The following Avery Dennison literature will provide necessary information to the user for proper application, storage, and other requirements and is available upon request from your Avery Dennison representative or from the Avery Dennison website (graphics.averydennison.com).

| Document Title | Reference Number |
|---|--|
| Substrate Cleaning and Preparation | Instructional Bulletin #1.10 |
| Storage, Maintenance, and Cleaning of PVC Films | Instructional Bulletin #1.20 |
| Cleaning and Maintenance of Vehicle Wraps | Instructional Bulletin #1.50 |
| Application of Avery Dennison SW 900 Series Films | Instructional Bulletin #4.08 |
| Premask Recommendations | Instructional Bulletin #5.50 |
| Removal Instructions | Instructional Bulletin #4.10 |

Application:

Avery Dennison SW900 Wrapping Film is designed for application on to solid surfaces such as passenger vehicles and buses.

Important Note: Never use a wet application method to apply this film.

Some slight color shift may occur between rolls or lots, therefore, minimizing the mixing of rolls/lots on a specific vehicle is encouraged. If multiple rolls are needed be sure to use only rolls from the same production lot.

All vehicle substrates must be cleaned according to Avery Dennison recommended cleaning practices as outlined in [IB # 1.10](#) "Substrate Cleaning and Preparation".

Due to the unique finish and manufacturing process of metallic and pearlescent films, variances in color can be visible when the material is oriented in different directions. When utilizing metallic, pearlescent and Color Flow films, always keep the application direction of the film consistent with the orientation of the film when cut from the roll and applied to the vehicle. One roll should be used per vehicle, wherever possible to minimize any possible color shifts between rolls or lots.

See [IB 4.08](#) "Application Avery Dennison SW 900 (Supreme Wrap) Film" for complete application recommendations. For cleaning and care recommendations see [IB 1.50](#).

NOTE: SW900 Series is designed as a wrap film. Cutting for the purpose of preparing sizes or shapes has proven to be feasible. However, signcutting of letters and graphics is not recommended.

Product Data Sheet

Page 4 of 8



Graphics
Solutions

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Important Note: Only use Avery Dennison recommended cleaning products and solutions (noted in [IB 1.50](#)). Cleaning and maintenance products should conform to the following:

- Free from abrasive components
- Ideally pH balanced, thus not highly acidic or alkaline (pH level between 5 and 9)
- Free from alcohol (non isopropyl), acids, ammonia, chlorine, glycol ethers, harmful detergents, petroleum distillates and phosphates

Unsuitable Uses:

This Avery Dennison product is not designed or recommended for the following uses. Unsuitable applications or exposure conditions include, but is not limited to:

- Paint that is not thoroughly cured or dried
- Low surface energy substrates (i.e. Tedlar® coatings, rubber, unpainted plastic etc)
- Substrate surfaces that are not clean and smooth (little or no variation in texture)
- Painted substrates with poor paint-to-substrate, or paint-to-paint bond
- Stainless steel
- Film applied to non-Avery Dennison Films
- Film applied to pre-existing graphics (pre-approval required)
- Watercraft below the static water line
- Watercraft which are not edge sealed
- Non-OEM painted vehicles
- Graphic removal from paint with poor adhesion or existing graphics
- Graphics exposed to oil, harsh chemicals, or gasoline vapors or spills
- Graphics where application tape must adhere to liner
- Signcutting of letters and graphics

Removability:

The removability listed in the physical characteristics section “Clean removability” means removable with less than 20% adhesive residue when using appropriate heat and chemical removal methods. See [Instructional Bulletin 4.10](#) for removal instructions.

Product Data Sheet

Page 5 of 8



Graphics
Solutions

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Revision: 16 Dated: 07/30/20

Avery Dennison does not warrant removability from the following substrates:

- Surfaces with poor paint-to-substrate adhesion
- Wallboard (painted or unpainted)
- Pre existing graphics that must remain intact; damage to existing graphic when film is removed
- Improperly cured paint
- Oxidized or chalked substrates
- Stainless Steel

Avery Dennison makes no warranty for:

- **Paint/Clear Coat Staining:** Avery Dennison does not warrant vehicle paint staining that may be visible after removing material which has cracked or discolored. At the first sign of a change in the surface of the material contact your Avery Dennison Sales or Technical Representative.
- Ease or speed of removal of any graphic
- Removal from automotive paint that is greater than 5 years old
- Removal from paint that is improperly cured
- Removal from aged paint or metals, surface oxidation or chalking; user must test, approve and accept liability for such applications
- *Saltwater marine applications*
- *Marine applications below the water line*

Application to Glass:

- Because of the unique properties and varieties of glass, special considerations must be considered for windows and graphic applications. Avery Dennison accepts no liability for glass breakage.
- Glass absorbs heat when exposed to sunlight. The degree of absorption across windows can vary because of shading, heating, and cooling ventilation, and insulation from window frames. These temperature differences across the window produce stress, which can cause glass breakage. The ability of glass to resist breakage because of temperature stress is affected by window size, glass thickness, glass treatments, quality, and design.
- Window cleaning methods also vary, from the type of cleaners used, to the washing methods employed. Specific chemicals used in window cleaners may affect the adhesion of pressure-sensitive graphics. Power washing methods may impact the adhesion of graphics, if the water pressure or temperature exceeds the graphic's adhesion capability. Power washing window graphics is not recommended.

Note: Avery Dennison does not recommend the use of SW900 Wrapping Film to be used as block out film for window applications.

Product Data Sheet

Page 6 of 8



Graphics
Solutions

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Durability:

Durability is the period of time the product is expected to perform satisfactorily when applied in vertical exposure conditions by zone as defined in Instructional Bulletin 1.30, provided that the film is properly stored, converted and installed in accordance with Avery Dennison guidelines. The term of Avery Dennison's warranty is equal to the product's durability.

Abrasion and Loss of Gloss are not covered by any Avery Dennison Warranty. These changes are considered normal wear and tear.

Other factors which may reduce the durability of this product series include: surface texture, surface preparation, application method, angle and direction of the sun, environmental conditions, cleaning & maintenance.

Products containing petroleum distillates or solvents such as soaps, waxes, or protective coatings, void any warranty, and may cause premature failure of the material.

Matte finished materials are subject to extreme color and gloss shift when exposed to cleaners, wax, and polish. Test an inconspicuous area prior to using any cleaners, wax, and polish. The end user assumes complete responsibility to ensure that matte finishes are not affected during cleaning or protecting.

SW 900 & SW 900X Durability:

| Months | Zone 1 | | Zone 2 | | Zone 3 | |
|---|-----------|---------------------------|-----------|---------------------------|-----------|---------------------------|
| | Vertical | Non Vertical / Horizontal | Vertical | Non Vertical / Horizontal | Vertical | Non Vertical / Horizontal |
| SW900 Black & White | 12 years | 3 years | 9.6 years | 6 months | 5.8 years | 4 months |
| SW900 Colors -including Obsidian black | 10 years | 2 years | 8 years | 6 months | 4.8 years | 4 months |
| SW900 Metallics & Pearlescents | 5 years | 2 years | 4 years | 6 months | 2.4 years | 4 months |
| SW900 Metallics (with gold flake)* | 36 months | 12 months | 30 months | 6 months | 18 months | 4 months |
| SW900X Textured Films | 48 months | 12 months | 36 months | 6 months | 24 months | 4 months |
| SW900 Diamond Line | 36 months | 12 months | 30 months | 6 months | 18 months | 4 months |
| SW900 Color Flow Series | 48 months | 12 months | 36 months | 6 months | 24 months | 4 months |
| SW900-713-O Matte Vintage Green | 48 months | 12 months | 36 months | 6 months | 24 months | 4 months |

Reference IB 1.30 for zones by geographic location.

- Non-vertical: The face of the graphic is between 10° to 45° from vertical. Specifically for Supreme Wrapping Film (SW900) Non-vertical exposure performance will be calculated using the Horizontal exposure value.
- Horizontal: The face of the graphic is between 45° and 90° from vertical, for Supreme Wrapping Film (SW900) Horizontal applications will be warranted as stated in this ICS Performance Guarantee Bulletin.
- Vertical: The face of the graphic is between 0 and 10 degrees from vertical.

Product Data Sheet

Page 7 of 8



Graphics
Solutions

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*Colors with gold flake include:

| Name | Name | Name |
|----------------------------------|--------------------------------|---|
| SW900-199 Gloss Metallic Eclipse | SW900-419 Gloss Metallic Spark | SW900-679 Gloss Metallic Magnetic Burst |
| SW900-255 Gloss Sand Sparkle | SW900-448 Gloss Passion Red | SW900-762 Gloss Metallic Radioactive |
| SW900-261 Satin Energetic Yellow | SW900-568 Gloss Fun Purple | SW900-767 Satin Hope Green |
| SW900-316 Satin Stunning Orange | SW900-629 Satin Wave Blue | SW900-716 Satin Cool Teal |

Film Thickness / Conformability:

Films with face thickness 4 mil (102 micron) and above may have reduced conformability. These films include:

| Name | Color | Face Caliper | Name | Color | Finish Caliper |
|--------------------|-------------------------|--------------------------------|-------------------|-------------------------|------------------|
| SW 900-109-O | White Pearl | 4.2 mil (107 µm) | SW 900-117-O | White Pearl Satin | 4.2 mil (107 µm) |
| SW900-326-S | Gold Orange Pearlescent | 4.2 mil (107 µm) | SW900-415-O | Red | 4.2 mil (107 µm) |
| SW900-419-M | Spark | 4.2 mil (107 µm) | SW900-427-O | Soft Red | 4.2 mil (107 µm) |
| SW900-433-O | Cardinal Red | 4.2 mil (107 µm) | SW900-436-O | Carmine Red | 4.2 mil (107 µm) |
| SW900-437-S | Red Rush Pearlescent | 4.2 mil (107 µm) | SW900-438-O | Satin Carmine Red | 4.2 mil (107 µm) |
| SW900-514-O | Bubblegum Pink Satin | 4.2 mil (107 µm) | SW900-731-O | Lime Green | 4.2 mil (107 µm) |
| SW900-758-O | Grass Green | 4.2 mil (107 µm) | SW900-759-O | Satin Grass Green | 4.2 mil (107 µm) |
| SW900-762-M | Radioactive | 4.2 mil (107 µm) | SW900-777-S | Light Green Pearlescent | 4.2 mil (107 µm) |
| SW 900-194-X | Black Carbon Fiber | 4.2 mil (107 µm) | SW 900-115-X | White Carbon Fiber | 4.2 mil (107 µm) |
| SW900 Diamond line | All colors | 5.4 to 5.7 mil (137 to 140 µm) | SW900 Rugged line | All colors | 4.5 mil (114 µm) |

Opacity:

Most colors are considered opaque; however it is up to the end user to determine if the level of opacity meets their needs.

The following colors may be considered less than fully opaque, and may demonstrate color shift when applied, or allow show through of paint lines of dissimilar colors, or overlap of material:

| Name | Color | Finish | Name | Color | Finish |
|-------------|-----------------------------|--------|-------------|----------------------------|--------|
| SW900-225-O | Yellow | Gloss | SW900-234-O | Ambulance yellow | Gloss |
| SW900-245-O | Dark Yellow | Gloss | SW900-438-O | Carmine Red Satin | Satin |
| SW900-321-O | Matte Orange | Matte | SW900-444-M | Cherry Red Matte Metallic | Matte |
| SW900-372-O | Satin Orange | Satin | SW900-472-M | Garnet Matte Metallic | Matte |
| SW900-370-O | Orange | Gloss | SW900-624-S | Bahama Blue Pearlescent | Gloss |
| SW900-371-M | Blaze Orange Matte Metallic | Matte | SW900-745-M | Green Apple Matte Metallic | Matte |
| SW900-226-O | Satin Yellow | Satin | | | |

Contact your Avery Dennison approved distributor your sales or customer service contact at Avery Dennison for 5" x 8" color swatches for review prior to use.

Revisions are italicized

Avery Dennison is a registered trademark of Avery Dennison Corporation

Patent registration: US6,630,049, US7,060,351, US7,344,618, US7,332,205, EP1276605, EP1282472

Product Data Sheet

Page 8 of 8



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