Series-S LTR Easy Apply RS

Revision: 8 Dated: 07/16/18

#### Uses:

Avery Dennison SF100 Conform Chrome Series Films are a premium quality specialty film designed for use in vehicle and graphics markets where high end chrome accents are desired. The patented Avery Dennison Easy Apply<sup>™</sup> RS feature allows for faster positioning, bubble free application, and long term removability. Conform Chrome is available in Chrome/Silver, Gold, Blue, Black, Red, Rose Gold, Violet and Matte Silver Mirror colors.



Face: 5.7 mil (142 microns) chrome finish film



Adhesive: Gray Long Term Removable Acrylic



Liner: 90# StaFlat™, Poly-Coated with Avery Dennison® Easy Apply RS technology



Durability: Up to 3 years Vertical Exposure

Application Surfaces:

Flat, simple curves, curves, simple concave and convex shapes

#### Features:

- Very high gloss semi-conformable film. •
- Silver also available in a matte finish.
- Unique patented adhesive technology. (information below)
- Good conformability to irregular substrates
- Concave shaped
- Convex shaped
- Outstanding durability and outdoor performance
- Good UV, temperature, humidity, and salt-spray resistance
- Easy apply feature helps eliminate wrinkles and bubbles during application

#### **Common Applications:**

**Product Data Sheet** 

Graphics

Solutions

Trucks

Cars & Vans

Trailers

- Architectural Signage
- Emergency Vehicles

Note: Film may scratch during application, or during day in and out use. Scratching of the film is not covered by Material Warranty. See Application notes below. If excess heat or stretch is used during application, film may whiten and this is not covered by any

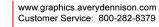
- **Outdoor Advertising**
- Trains & Light Rail

Buses

warranty.

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#### **Physical Characteristics:**

Property	Measurement	Typical Value			
Caliper, face		5.7 mil (142µm)			
Caliper, adhesive		1.2 mil (30 µm)			
Dimensional stability		<0.02" (508 mm)			
Tensile at Yield					
Elongation		90% min.			
Gloss	Hunter Gloss @ 60 degrees	90 GU			
Adhesion:		2.0 lbs/in (350 N/m) 2.5 lbs/in (438 N/m)			
Flammability	FMVSS 302 ASTM E84	P Self Extinguishing Class 1 or A rating			
Shelf-Life		1 years from the date of manufacture (when stored at the following temperatures and humidity conditions $68^{\circ}$ -77° F (20° - 25° C) and $50\pm5\%$ R. H.)			
Durability	Vertical Exposure	Silver - 3 Years Silver Colors & Matte Silver - 2 years			
	Horizontal Exposure	1 year			
Min. Application Temperature		50° F (10° C)			
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			

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### Avery Dennison<sup>®</sup> SF100 Conform Chrome Series-S LTR Easy Apply RS Revision: 8 Dated: 07/16/18

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 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.

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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.

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#### **IMPORTANT INFORMATION:**

SF100- Conform Chrome Series Films are chrome accent films designed to add special effects and a sporty touch to graphics. Before using, user shall determine the suitability of the product for its intended use and accepts responsibility to ensure compliance with any and all laws and regulations concerning the use of chrome film on vehicles or in the ultimate graphic application, end user assumes all risk and liability in connection therewith.

DO NOT OVERHEAT OR OVERSTRETCH GRAPHICS DURING APPLICATION. IF TOO MUCH HEAT OR STRETCH IS USED THE FILM WILL WHITEN AND THERE IS NO WARRANTY FOR WHITENING OF FILM DURING APPLICATION.

To minimize scratching during application, and during the life of the graphic, it is recommended that the convertor protects the film with the use of DOL1460Z. The DOL1460Z laminated to the top of the film prior to application provides greater structure to the product, and improves abrasion resistance. However, greater care should be taken to ensure proper conformability for the end use application.

Some surface imperfections are not uncommon in the film, these are not considered a defect.

#### **Related Documents:**

The following Avery Dennison literature will provide complete 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 (<u>www.graphics.averydennison.com</u>).

Document Title	Reference Number
Substrate Cleaning and Preparation	Instructional Bulletin #1.10
Storage, Maintenance, and Cleaning of PVC Films	Instructional Bulletin #1.20
Warranty of Avery Dennison Films	Instructional Bulletin #1.30
Application Instructions for Avery Dennison™ Films SF100-843-S LTR EZ RS Conform Chrome	Instructional Bulletin #4.00.2
Premask Recommendations	Instructional Bulletin #5.50
Removal Instructions	Instructional Bulletin #4.10

#### **Application:**

Film is designed for application to solid surfaces like automobiles, buses, and trains and applied over existing graphic films.

All substrates must be cleaned according to Avery Dennison® recommended cleaning practices as outlined in IB# 1.1 "Substrate Cleaning and Preparation".

When utilizing Conform Chrome films, it is recommended that the applicator utilizes a WetEdge Squeegee. The applicator should use the cloth wrapped edge, which is then wet with soap & water solution in order to minimize any scratching of the chrome surface.

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Conform Chrome should be heated gently and applied to complex surfaces carefully. Excessive heat and stretching may cause product discoloration or "whitening". Whitening is not covered by material warranty.

See Instructional Bulletin 4.00.2 Application Instructions for Conform Chrome.

To minimize scratching during application, and during the life of the graphic, it is recommended that the convertor protects the film with the use of DOL1460. The DOL1460 laminated to the top of the film prior to application provides greater structure to the product, and improves abrasion resistance. However, greater care should be taken to ensure proper conformability for the end use application.

NOTE: Conform Chrome is especially designed as an accent film. Cutting for the purpose of preparing sizes or shapes has proven to be feasible. However, signcutting of letters and graphics is not recommended.

NOTE: Due to the low vapor permeability of Conform Chrome, application to surfaces with the potential for outgassing such as new paint or plastics (including painted OEM plastics) should be avoided. Application to these surfaces can result in bubbling of the film. It is the installer's responsibility to determine if the substrate is suitable for the application.

#### **Durability:**

Durability is based on vertical exposure, unless otherwise notated. Definitions for exposure angles, and Zone Charts, which may reduce the overall durability of the product are available in Instruction Bulletin 1.3; Durability of Films. Materials applied in horizontal applications in the USA desert southwest, or Zone 3 in the charts will have zero years durability coverage. Otherwise durability is shown above in the "Physical Characteristics" section of this data sheet.

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 directly affect the durability of this product series is; surface texture, surface preparation, application method, angle and direction of the sun, environmental conditions, cleaning & maintenance.

#### **Colors & Expected Durability**

Vertical Durability for Zone 1 vertical applications is noted in the chart below. Color samples are available from samples.graphics@averydennison.com, or through your sales or customer service contact. Reference Instructional Bulletin 1.30 for zones by geographic location.

NOTE: Some color fade may occur in severe environmental areas. Reference IB 1.30 for durability guidelines.

Most colors are considered opaque; however it is up to the end user to determine if the level of opacity meets their needs. Color samples are available from samples.graphics@averydennison.com or through your sales, or customer service contact.

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Chrome	Vertical Durability Zone 1 Years	HP750 Series Name	Vertical Durability Zone 1 Years
SF100-843-S LTR Easy Apply™ RS			
Chrome/Silver	3	SF100-474-S LTR Easy Apply™ RS Red	2
SF100-196-S LTR Easy Apply™ RS Black	2	SF100-256-S LTR Easy Apply™ RS Blue	2
		SF100-211-S LTR Easy Apply™ RS Rose	
SF100-510-S LTR Easy Apply™ RS Violet	2	Gold	2
		SF100-844-S LTR Easy Apply™ RS Matte	
SF100-604-S LTR Easy Apply™ RS Gold	2	Silver	2

#### Unsuitable Uses:

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

- Film applied to stainless steel
- 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
- Film applied to non-Avery Dennison Films
- 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

#### **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.

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#### **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.

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; note that there may be damage to existing graphic when the Avery Dennison 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 against 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

**Revisions are italicized** 

Patent Registration: US6,630,049, US7,060,351, US7,344,618, EP1276605, EP1282472

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