# Avery Dennison® Automotive Window Film HP Pro Series

Revision: 1 Dated: 06/12/17

### Introduction

Avery Dennison<sup>®</sup> AWF HP Pro is a high-performance, metal-dye hybrid film range available with different light transmission levels. With a sleek charcoal tone, AWF HP Pro film protects against heat, glare and harmful UV radiation. The film is optimized with metallized polyester and color-stable dye to ensure low exterior reflectiveness.

### Description

Film Series: High- Performance automotive window films

Color: Charcoal

Technology: Metal- Dye Hybrid combined with UV Stable Dye

Thickness: 38 micron (1.5 mil)

Adhesive: Permanent- Solvent based acrylic

Liner: PET

Color Stable: Yes

#### Conversion

Product is designed for automotive window tinting purposes and is easy to size by manual cutting during application. Material should be applied using the wet application method.

### Features:

- Premium hybrid film; giving premium heat & glare protection with minimal mirror effect
- Excellent UV block, >99%
- Excellent handling with controlled shrink
- Reduced drying time
- Exceptional solar performance
- Superior aesthetics, ultimate clarity and color stability

## **Common Applications:**

On the internal side of glass substrate of:

- Personal Vehicles
- Commercial and Fleet Vehicles

Before apply the product, the user shall determine the suitability of the product for its intended use. The user shall ensure that the application and the intended use of the product is in accordance with any and all applicable laws and regulations concerning the use of automotive window film, and user assumes all risk and liability in connection therewith.



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## PRODUCT CHARACTERISTICS

# **Optical & Solar Properties:**

	HP Pro 05	HP Pro 15	HP Pro 25	HP Pro 35
Visible Light Transmitted	5%	15%	25%	37%
Visible Light Reflected	8%	7%	7%	8%
Ultra Violet Block	>99%	>99%	>99%	>99%
Total Solar Energy Reflected	8%	7%	8%	8%
Total Solar Energy Transmitted	16%	30%	35%	40%
Total Solar Energy Absorbed	76%	63%	58%	52%
Glare Reduction	94%	83%	72%	58%
Shading Coefficient	0.44	0.55	0.57	0.64
Total Solar Energy Rejected	64%	53%	50%	45%

**Note:** Performance results are calculated on 6mm clear glass using NFRC methodology and LBNL Window 5.2 software, and are subject to variations in process conditions within industry.

# Shelf Life and storage conditions:

When stored in original packaging upon arrival at the customer: 2 years. Recommended Storage conditions are 20 °C (± 2 °C) with 50 %RH (± 5%)

# Warranty:

5 years

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### **DEFINITIONS**

## **Visible Light Transmitted (VLT)**

The percentage of total visible light (380-780 nanometers) to be passed through a glazing system. Test method - ASTM E 903-96.

## Visible Light Reflected (VLR)

The percentage of total visible light to be reflected by a glazing system. Test method - ASTM E 903-96.

### **Total Solar Energy Reflected**

The percentage of total solar energy (300-2500 nanometers) to be reflected by a glazing system. Test method - ASTM E 903-96.

# **Total Solar Energy Transmitted**

The percentage of total solar energy (300-2500 nanometers) to be passed through a glazing system.

## **Total Solar Energy Absorbed**

The percentage of total solar energy (300-2500 nanometers) to be absorbed by a glazing system. Solar absorption is that portion of total solar energy neither transmitted nor reflected. Since solar transmittance and reflectance are measured directly, the following equation is used for calculating solar absorption. Test method - ASTM E 903. Total solar energy absorbed = 100% - (Total solar energy reflected) - (Total solar energy transmitted).

#### **Ultra Violet Block**

The percentage of Ultraviolet radiation (300-380 nanometers) to be blocked by a glazing system. Ultraviolet is one portion of the total solar energy spectrum which greatly contributes to fading and deterioration of fabric and furnishings.

### **Shading Coefficient (SC)**

The ratio of the solar heat gain through a given glazing system to the solar heat gain under the same conditions for clear, unshaded double strength window glass (DSA). Shading coefficient defines the sun control capability or efficiency of the glazing system.

### Glare Reduction

Glare usually defined as being the difficulty of seeing in the presence of bright light such as direct or reflected sunlight or artificial light such as car headlamps at night. Window film can provide glare reduction of up to 95%.

### Total Solar Energy Rejected (TSER)

Measures the window film's ability to reject solar energy in the form of visible light, infrared radiation and ultraviolet light. The higher the TSER number, the more solar energy is rejected away from the window.

