

# Avery Dennison<sup>®</sup> MPI 2528 Perforated 50/50

Permanent StaFlat™

(formerly: MPI 4002)

Revision: 7 Dated: 11/15/16

## Uses:

Avery Dennison® HP MPI 2528 Perforated Window Film 50/50 is a perforated flexible calendered film for use on exterior-mount one-way visual panels. Graphics printed on this material are visible from the front and “invisible” from the back when mounted on windows. HP MPI 2528’s 50/50 perforation pattern provides an open area of 50% allowing for the best possible visibility through a one-way graphic panel. This film is intended for vehicle windows or applications where visibility through the graphic is important.



**Face:** 7 mil (178 microns) matte white calendered



**Adhesive:** Black Removable Acrylic



**Liner:** 90# StaFlat with clear back laminate



**Durability:** Up to 3 years (unprinted)

## Application Surfaces:

Flat, simple curves

## Features:

- One-way visibility for window applications
- 50/50 hole pattern allows visibility for vehicle graphics
- 1.5 mil hole provides light transmission
- Great image clarity and color pop
- Provides up to 50% reduction of indoor solar heat gain for window applications

## Conversion:

- Flat Bed Sign-Cut
- Drum Roller Sign-Cut
- Steel Rule Die-Cutting
- Solvent based inkjet
- Mild/Eco Solvent inkjet

## Common Applications:

- Stationary Windows
- Vehicle Windows

## Product Data Sheet

Page 1 of 3



Graphics Solutions

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## Physical Characteristics:

Property	Typical Values
Caliper, face	7 mil (178µm)
Caliper, adhesive	1.0mil (25 µm)
Dimensional stability	<0.03" (0.76mm)  Note: Ink loads in excess of 250% may cause increased shrinkage of the printed film.
Tensile at Yield	N/A
Elongation	N/A
Gloss	N/A
Gloss	N/A
Adhesion: 15 min.    Removable	4.0 lbs/in (700 N/m)
Flammability	Self Extinguishing
Shelf-Life	1 year when stored at the following temperatures and humidity conditions 68°-77° F (20° - 25° C) and 50±5% R. H.
Durability	Vertical Exposure Unprinted – 3 years Printed – Up to 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.

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 graphics products are warranted to be free from defects in material and workmanship for two years from the date of manufacture. When the product is properly applied, the warranty period is as stated in the product's specific Product Data Sheet in effect at the time of shipment to Avery Dennison's customer.

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Page 2 of 3



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## **Dimensional stability:**

Is measured on a 6" x 6" (150 x 150 mm) aluminum panel to which a specimen has been applied; 72 hours after application the panel is scored in a cross pattern, exposed for 48 hours to 150°F (65°C), after which the shrinkage is measured.

## **Adhesion:**

(FTM-1, FINAT) is measured by peeling a specimen at a 180° angle from a stainless steel panel, 24 hours after the specimen has been applied under standardized conditions. Initial adhesion is measured 15 minutes after application of the specimen.

## **Flammability:**

A specimen applied to aluminum is subjected to the flame of a gas burner for 15 seconds. The film should stop burning within 15 seconds after removal from the flame.

## **Temperature range:**

A specimen applied to stainless steel is exposed at high and low temperatures and brought back to room temperature. 1 hour after exposure the specimen is examined for any deterioration. Note: Prolonged exposure to high and low temperatures in the presence of chemicals such as solvents, acids, dyes, etc. may eventually cause deterioration.

## **Chemical Resistance:**

All chemical tests are conducted with test panels to which a specimen has been applied 72 hours after application the panels are immersed in the test fluid for the given test period. 1 hour after removing the panel from the fluid, the specimen is examined for any deterioration.

## **Special Considerations:**

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.

Revisions are italicized

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Page 3 of 3



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