

# Avery Dennison® 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



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

Permanent StaFlat™

(formerly: MPI 4002)

Revision: 7 Dated: 11/15/16

## 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.

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.

## Product Data Sheet

Page 2 of 3



Graphics  
Solutions

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

Permanent StaFlat™

(formerly: MPI 4002)

Revision: 7 Dated: 11/15/16

## **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

Avery Dennison is a registered trademark of Avery Dennison Corp.

## Product Data Sheet

Page 3 of 3



Graphics  
Solutions

