

# Avery Dennison<sup>®</sup> MPI 2904 Easy Apply<sup>™</sup> Gloss White Polymeric Calendered Vinyl with Easy Apply<sup>™</sup> Adhesive Technology Revision 3

## Introduction

Avery Dennison MPI 2904 Gloss Easy Apply<sup>™</sup> is a gloss white polymeric calendered vinyl film designed for ease of application on a wide range of intermediate outdoor, general signage applications and vehicles graphics with flat or simple curved surfaces, and where good outdoor durability, high opacity and good print quality are required.

### Common Applications

- Outdoor signage
- Point of purchase
- Outdoor advertising
- Indoor advertising
- Exhibition graphics
- Vehicle Graphics (Flat or Simple Curved Surfaces)

### Application surface

Flat, simple curves



#### Face Film

80 micron gloss white polymeric calendered vinyl



#### Backing

Two side PE coated paper, 140 g/m<sup>2</sup>



#### Adhesive

Permanent grey acrylic with Easy Apply<sup>™</sup>



#### Outdoor life\*\*

Up to 5 years (unprinted)

### Features

- Gloss white polymeric calendered PVC film offering a cost effective solution for intermediate outdoor graphic needs
- Easy Apply<sup>™</sup> adhesive technology with air egress channels to easily eliminate bubbles and wrinkles during application
- Excellent printability across a range of technology and inks
- Gloss finish for great image clarity and colour pop
- StaFlat<sup>™</sup> liner provides excellent handling and converting properties
- Reliable outdoor durability and performance
- Very good dimensional stability after application
- Grey adhesive provides extra opacity for blackout performance
- Permanent adhesive for excellent adhesion to most surfaces
- Compatible with the Avery Dennison DOL 2000/2800/2900 series overlaminates
- Fire Group Number 1, certification<sup>#</sup> under the latest NCC specification C1.10 Fire Hazard Properties Standards

### Conversion<sup>+</sup>

- Flatbed cutters
- Friction fed cutters
- Die cutting
- Thermal transfer
- Screen printing
- Offset printing
- Cold overlaminate
- Electrostatic printing
- Latex inkjet
- Eco solvent inkjet
- Solvent inkjet
- UV curable inkjet

\*Always test with your combination of printer and inks prior to commercial use.



### Standards

Fire Group Number 1, certification<sup>#</sup> under the latest NCC specification C1.10 Fire Hazard Properties, Clause 4: Wall and Ceiling Linings. Standards (AS 5637.1: 2015 - Determination of fire Hazard. Part 1: Wall and Ceiling Linings). All films with a Group Number 1 fire rating can be used in any internal walls/ceiling building areas..

### Application

- Avery Dennison Graphics recommends a maximum total ink limit of 270% to ensure optimal performance.
- Dry application only. Do not use water and detergent or a commercial application fluid to position the graphic.
- Refer to Instructional Bulletins 1.01, 1.4, 4.06 & 4.14 for printing, laminating and application instructions.

### Notes

Materials have to be properly dried and cured before further processing, like laminating, varnishing, trimming, contour cutting or application. The residual solvents can otherwise change the products' specific features and properties.

## General

Calliper, face film	ISO 534	80 micron
Calliper, face film & adhesive	ISO 534	105 micron
Gloss	ISO 2813 @ 20°	60
Dimensional stability	FTM 14	1 mm max
Adhesion, 20 mins	FINAT FTM-1, Stainless steel	480 N/m
Adhesion, 24 hrs	FINAT FTM-1, Stainless steel	600 N/m
Flammability		Self extinguishing
Fire Standard Certification <sup>#</sup>	NCC specification C1.10 Fire Hazard Properties, Clause 4: Wall and Ceiling linings AS 5637.1: 2015 <sup>#</sup> Refer to <a href="#">Avery Dennison Fire Rating Overview document</a> Certification available upon request	Group Number 1
Shelf life	Stored at 22° C / 50-55% RH	2 years
Expected Durability**	Vertical exposure <sup>^</sup>	Up to 5 years (unprinted)

<sup>^</sup>See ICS Performance Guarantee Durability Bulletin for your specific printer and ink combination for further information

## Thermal

Application temperature	Minimum: + 10°C
Temperature range	-40°C to +82°C

## Chemical

Humidity resistance	120 hours exposure	No effect
Corrosion resistance	120 hours exposure	No contribution to corrosion
Water resistance	48 hour immersion	No effect
Chemical resistance	Mild acids Mild alkalis	No effect No effect
Solvent resistance	Applied to aluminium	No effect exposed to: Oils, greases, aliphatic solvents, motor oils, heptanes, kerosene, JP-4 fuel

### Important

Information on physical characteristics is based upon tests we believe to be reliable. The values listed herein are typical values and are not for use in specifications.

They are intended only as a source of information and are given without guarantee and do not constitute a warranty. Purchasers should independently determine, prior to use, the suitability of any material for their specific use.

All technical data is subject to change without prior notice.

### Warranty

Avery Dennison® materials are manufactured under careful quality control and are warranted to be free from defect in material and workmanship. Any material shown to our satisfaction to be defective at the time of sale will be replaced without charge. Our aggregate liability to the purchaser shall in no circumstances exceed the cost of the defective materials supplied. No salesman, representative or agent is authorised to give guarantee, warranty, or make any representation contrary to the foregoing. All Avery Dennison® materials are sold subject to the above conditions, being part of our standard conditions of sale, a copy of which is available on request.

### \*\*Expected Durability

The expected durability of Avery Dennison films are defined as the expected performance life of the Avery Dennison graphic film(s) within Zone 1 of the Avery Dennison zone system, in outdoor vertical exposure conditions.

The actual performance life will depend on a variety of factors, including selection and preparation of substrate, angle and direction of exposure, application methods, environmental conditions and cleaning/maintenance of the films.

In case of films used in areas of high temperatures or humidity, high altitudes and industrially polluted areas the performance will be further reduced.

### Expected Durability and Warranted Period Definitions

Expected durability is the expected period of time defined in the product data sheet, the product should, but is not warranted to, perform satisfactorily when applied in vertical exposure conditions as defined in Instructional Bulletin 1.30. The warranted period as defined in the appropriate ICS Performance Guarantee Bulletin, is the maximum period of time Avery Dennison will warrant the finished products performance in accordance with ICS Performance Guarantee Terms and Conditions 1.0, provided that the film is properly stored, converted and installed in accordance with Avery Dennison guidelines.

\*Compatible with most printer and ink combinations. Test prior to use.

## Testing Methods

### Dimensional stability:

Is measured on a 150 x 150 mm aluminium panel to which a specimen has been applied; 72 hours after application the panel is exposed for 48 hours to + 70°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 or float glass panel, 24 hours after the specimen has been applied under standardised conditions. Initial adhesion is measured 20 minutes after application of the specimen.

### Flammability:

A specimen applied to aluminium 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.

### Corrosion Resistance:

A specimen applied to aluminium is exposed to saline mist (5% salt) at 35°C. After exposure, the film is removed and the panel is examined for traces of corrosion.

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