Technical specficiation sheet

Ball & Doggett
ballanddoggett.com.au

Product: Avery Dennison® MPI 1440 Ultra Clear

Category: Display & Visual - Eco solvent, Solvent, Latex & UV inkjet

Technical specifications:

Features

- Optically clear, high gloss PVC free polyurethane film
- 3D conformable film
- Excellent printability on eco-solvent, solvent, latex and UV curable printers
- Advanced face formulation provides increased colour gamut and consistency
- Dimensionally stable mottle reduction PET liner for easy converting properties
- Permanent adhesive provides long term durability
- Outstanding outdoor durability performance with overlaminate films: DOL 6460 High Gloss, DOL 1000Z Series & MPI 1440 Ultra Clear
- MPI 1440 Ultra Clear can also be used as a protective overlaminate film, with the additional benefit of holding only one product in stock
- ICS Performance Guarantee Warranty for horizontal applications
- Excellent dimensional stability
- Premium graphics applications from vehicle to architectural window installation

Description

Film: 40 micron high gloss optically clear polyurethane

Adhesive: Permanent clear acrylic

Liner (Backing): One side silicone coated transparent PET film, 72 g/m2

Indoor life:** Up to 12 years unprinted **Application surface:** Flat, simple curves, rivets and compound curves & corrugations

Standards

AS/NZS 4586-2013 slip resistance classification of new pedestrian surfaces: Appendix A, B, Dual Classifications: P3, D1
In order to interpret the classifications, please refer to Standards Australia Handbook
SA HB 198:2014 , Guide to the specification and testing of slip resistance of pedestrian surfaces, which recommends minimum classifications for a wide variety of locations.

Application

- Avery Dennison recommend a maximum total ink limit of 270% to ensure optimal performance
- Product is only warranted and recommended for use with DOL 6460 High Gloss, DOL 1000Z Series & MPI 1440 Ultra Clear laminates
- Refer to Instructional Bulletins:1.2 Wet Application Method, 1.17 Key Considerations for Vehicle Wrapping and Conforming Applications & 4.14 for printing instructions

Uses

Avery Dennison MPI 1440 is a high gloss ultra clear PVC free 3D conforming Polyurethane film, designed for premium graphics applications. It comes with a permanent adhesive and long term outdoor durability, superior 3D conformability for a wide range of applications form vehicle to architectural window installation. The face film has been especially developed for exceptional print results on all major printer platforms using Latex, Eco-Solvent, Solvent and UV-Curing inks and can also be used as a protective overlaminate film.

Common Applications:

- Architectural window decoration
- Glass decoration
- Partial or full car wrapping
- Long term applications

Conversion +

○ Flatbed cutters	○ Thermal transfer	○ Cold overlaminating	◉ Eco solvent inkjet
○ Friction fed cutters	○ Screen printing	○ Electrostatic printing	◉ Solvent inkjet
○ Die cutting	○ Offset printing	◉ Latex inkjet	◉ UV inkjet

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

Updated: 10.20

General

Calliper, face film	ISO 534	40 micron
Calliper, face film & adhesive	ISO 534	70 micron
Dimensional stability^^	FINAT FTM 14	0.3 mm max
Adhesion, 15 mins	FINAT FTM-1, Stainless steel	440 N/m
Adhesion, 24 hrs	FINAT FTM-1, Stainless steel	600 N/m
Flammability		Self extinguishing
Shelf life	Stored at 22° C/50-55 % RH	2 years
Expected Durability **	Vertical exposure ^	Up to 12 years (unprinted)

^ See ICS Performance Guarantee Durability Bulletin for your specific printer and ink combination for further information
^^ Ink loads in excess of 250% may cause increased shrinkage of the printed film

Thermal

Application temperature		Minimum: + 10°C
Temperature range		- 45°C to + 80°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	No effect
	Mild alkalis	No effect
Solvent resistance	Applied to aluminium	No effect exposed to: Oils, greases, aliphatic solvents, motor oils, heptanes, kerosene, JP-4 fuel

Note

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.

Certified for HP Latex Inks

For further details please check the HP media locator website at: hp.com/go/mediasolutionslocator

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 35ºC. After exposure, the film is removed and the panel is examined for traces of corrosion.

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.