

# Avery Dennison® HP 700 High Performance Calendered Series

## Opaque Permanent Kraft

(formerly: A6 Opaque Series – 78# )

Revision: 5 Dated: 01/27/14

### Uses:

Avery Dennison® HP 700 series calendered films are premium quality, flexible, opaque solid color vinyl films (*available in a number of finish options*), designed for use in a wide range of sign making applications. This product is ideal for a variety of intermediate term outdoor projects.



**Face:** calendered film  
3.0 mil (76 µm) gloss, matte  
2.8 mil (71 µm) high gloss



**Adhesive:** Permanent Clear Acrylic



**Liner:** 78# Bleached Kraft



**Durability:** Up to 6 years

### Application Surfaces:

Flat, Simple Curves

### Features:

- Outstanding durability and outdoor performance
- Dimensionally stable liner for easy converting
- Medium gloss finish
- Excellent conversion on CAD plotters
- Easy cutting & weeding
- Good dimensional stability
- Good UV, temperature, humidity, and salt-spray resistance

### Conversion:

- Thermal Die-Cutting
- Flat Bed Sign-Cut
- Drum Roller Sign-Cut
- Steel Rule Die-Cutting
- Thermal Transfer

### Common Applications:

- Trucks
- Trailers
- Cars & Vans
- Banners
- Architectural Signage
- Directional Signage
- Trains & light rail
- Buses
- Outdoor advertising

## Product Data Sheet

Page 1 of 5



Graphics  
Solutions

averygraphics.com  
AnswerLine: 800-231-4654

# Avery Dennison® HP 700 High Performance

## Calendered Series

Opaque Permanent Kraft

(formerly: A6 Opaque Series – 78# )

Revision: 5 Dated: 01/27/14

### Physical Characteristics:

Property	Value
Caliper, face	3.0 mil (76 µm) gloss, matte 2.8 mil (71 µm) high gloss
Caliper, adhesive	1.0mil (25 µm)
Dimensional stability	<0.03"(0.765mm)
Tensile at Yield	9.0 -15.0 lb/in (1.6 - 2.7 kg/cm)
Elongation	100% min.
Gloss at 60°	high gloss 90±10 gloss 70 matte <20
Adhesion: 15 min.	3.0 lbs/in (525 N/m)
24 hr.	4.4 lbs/in (770 N/m)
Flammability	Self Extinguishing
Shelf-Life	2 years from date on label (up to 2 years unprocessed, OR process within one year and apply within 1 year of processing)
Durability Vertical Exposure	Up to 6 years Gloss, matte - 6 years unless otherwise noted high gloss - 4 years
Min. Application Temperature	50° F (10° C)
Service Temperature	-40° - 180°F (-40° - 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.

#### Important:

Information on physical and chemical characteristics are based on tests believed to be reliable. The values are intended only as a source of information. This information is given without guaranty and do not constitute a warranty. The purchaser should independently determine, prior to use, the suitability of any material for their specific purpose. (Data represents average values where applicable, and is not intended for specification purposes)

#### Warranty:

All statements, technical information 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 with the understanding that Purchaser has independently determined the suitability of such products for its purposes. Avery Dennison products are warranted to be free from defects in material and workmanship for either two years (or the period stated on the specific product information literature in effect at time of delivery, if longer) from date of shipment if said product is properly stored and applied. 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 to repair or replacement of defective product without charge at Avery Dennison's plant or at the location of product (at Avery Dennison's election), or in the event replacement or repairs is not commercially practical, to Avery Dennison's issuing Purchaser a credit reasonable in light of the defect in the product.

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.

NO EXPRESS WARRANTIES AND NO IMPLIED WARRANTIES, WHETHER OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR USE, OR OTHERWISE (EXCEPT AS TO TITLE), OTHER THAN THOSE EXPRESSLY SET FORTH ABOVE WHICH ARE MADE EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, SHALL APPLY TO PRODUCTS SOLD BY AVERY DENNISON. AVERY DENNISON 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.

## Product Data Sheet

Page 2 of 5



Graphics Solutions

averygraphics.com  
AnswerLine: 800-231-4654

# Avery Dennison® HP 700 High Performance Calendered Series

## Opaque Permanent Kraft

(formerly: A6 Opaque Series – 78# )  
Revision: 5 Dated: 01/27/14

### Colors Cross Reference:

#### Gloss

Formerly A6 Opaque Series - 78#	HP 700 Premium Calendered Opaque Permanent Kraft	Formerly A6 Opaque Series - 78#	HP 700 Premium Calendered Opaque Permanent Kraft
A6001-O White	HP 700-101-O White	A6533-O Cool Blue	HP 700-633-O Cool Blue
A6002-O Matte White	HP 700-102-O Matte White	A6540-O Light Blue	HP 700-640-O Light Blue
A6003-O Clear	HP 700-103-O Clear §	A6542-O Cascade Blue	HP 700-642-O Cascade Blue
A6005-O True White	HP 700-105-O True White	A6573-O Medium Blue	HP 700-655-O Medium Blue
A6080-O Matte Black	HP 700-180-O Matte Black	A6570-O Vivid Blue	HP 700-670-O Vivid Blue
A6090-O Black	HP 700-190-O Black	A6583-O Royal Blue	HP 700-683-O Royal Blue
A6110-O Primrose Yellow	HP 700-210-O Primrose Yellow	A6587-O Impulse Blue	HP 700-687-O Impulse Blue
A6247-O Gold	HP 700-215-O Gold ±	A6595-O Dark Blue	HP 700-695-O Dark Blue
A6125-O Rubber Duckie	HP 700-225-O Rubber Duckie	A6597-O Dark Navy Blue	HP 700-697-O Dark Navy Blue
A6135-O Yellow	HP 700-235-O Yellow	A6615-O Real Teal	HP 700-715-O Real Teal
A6150-O Dark Yellow	HP 700-250-O Dark Yellow	A6620-O Teal	HP 700-720-O Teal
A6152-O Mustard	HP 700-252-O Mustard	A6625-O Turquoise	HP 700-725-O Turquoise
A6250-O Imitation Gold	HP 700-253-O Imitation Gold	A6658-O Iguana Green	HP 700-758-O Iguana Green
A6315-O Tangerine	HP 700-315-O Tangerine Δ	A6665-O Olive Green	HP 700-765-O Olive Green
A6180-O Bright Orange	HP 700-380-O Bright Orange Δ	A6666-O Sherwood Green	HP 700-766-O Sherwood Green
A6325-O Tomato Red	HP 700-425-O Tomato Red Δ	A6670-O Kelly Green	HP 700-770-O Kelly Green
A6330-O Cardinal Red	HP 700-430-O Cardinal Red	A6678-O Green	HP 700-778-O Green
A6332-O True Red	HP 700-432-O True Red	A6680-O Yellow Green	HP 700-780-O Yellow Green
A6340-O Red	HP 700-440-O Red	A6685-O Forest Green	HP 700-785-O Forest Green
A6345-O Fire Red	HP 700-445-O Fire Red	A6693-O Dark Green	HP 700-793-O Dark Green
A6350-O Dark Red	HP 700-450-O Dark Red	A6077-O Silver	HP 700-801-O Silver ±
A6360-O Spectra Red	HP 700-460-O Spectra Red	A6030-O Slate Gray	HP 700-830-O Slate Gray
A6370-O Burgundy	HP 700-470-O Burgundy	A6035-O Medium Gray	HP 700-835-O Medium Gray
A6408-O Soft Pink	HP 700-508-O Soft Pink	A6055-O Dark Gray	HP 700-855-O Dark Gray
A6415-O Blossom	HP 700-515-O Blossom	A6070-O Battleship Gray	HP 700-870-O Battleship Gray
A6419-O Blush	HP 700-519-O Blush	A6220-O Beige	HP 700-920-O Beige
A6465-O Purple	HP 700-565-O Purple	A6260-O Terra Cotta	HP 700-960-O Terra Cotta
A6470-O Berry	HP 700-570-O Berry	A6273-O Carmel	HP 700-973-O Carmel
A6508-O Vibrant Blue	HP 700-608-O Vibrant Blue §	A6283-O Dark Brown	HP 700-983-O Dark Brown
A6525-O Majestic Blue	HP 700-625-O Majestic Blue	A6290-O Chocolate Brown	HP 700-990-O Chocolate Brown
A6530-O Olympic Blue	HP 700-630-O Olympic Blue	A6533-O Cool Blue	HP 700-633-O Cool Blue
A6532-O Wedgwood Blue	HP 700-632-O Wedgwood Blue	A6540-O Light Blue	HP 700-640-O Light Blue

NOTE: Some color fade may occur in severe environmental areas. Reference IB 1.30 for durability guidelines.

± - pigmented adhesive, not reversible

#### Gloss Exceptions: 50 at 60°

A6077-O Silver  
A6247-O Gold  
A6508-O Vibrant Blue

#### Durability Exceptions:

± - 3 year durability  
§ - 4 year durability  
Δ - 5 year durability

## Product Data Sheet

Page 3 of 5



Graphics  
Solutions

averygraphics.com  
AnswerLine: 800-231-4654

# Avery Dennison® HP 700 High Performance Calendered Series

Opaque Permanent Kraft  
(formerly: A6 Opaque Series – 78# )  
Revision: 5 Dated: 01/27/14

## High Gloss

Formerly IC 600 series	HP 700 Premium Calendered Opaque Permanent Kraft	Formerly IC 600 series	HP 700 Premium Calendered Opaque Permanent Kraft
IC 600-100-O Transparent	HP 700-100-O High Gloss Transparent	IC 600-423-O Spicy Red	HP 700-423-O High Gloss Spicy Red
IC 600-110-O White	HP 700-110-O High Gloss White	IC 600-650-O Submariner Blue	HP 700-650-O High Gloss Submariner Blue
IC 600-170-O Black	HP 700-170-O High Gloss Black	IC 600-656-O Sapphire	HP 700-656-O High Gloss Sapphire
IC 600-291-O Dark Yellow	HP 700-291-O High Gloss Dark Yellow	IC 600-649-O Royal Blue	HP 700-649-O High Gloss Royal Blue
IC 600-222-O Yellow	HP 700-222-O High Gloss Yellow	IC 600-654-O Pacific Blue	HP 700-654-O High Gloss Pacific Blue
IC 600-230-O Lemon	HP 700-230-O High Gloss Lemon	IC 600-706-O Logan Green	HP 700-706-O High Gloss Logan Green
IC 600-412-O Burgundy	HP 700-412-O High Gloss Burgundy	IC 600-713-O Forest Green	HP 700-713-O High Gloss Forest Green
IC 600-413-O Red	HP 700-413-O High Gloss Red	IC 600-231-O Gold Metallic	HP 700-231-O High Gloss Gold Metallic

## Specification/Certification Compliance:

### 1) EU RoHS directive.

The following chart of colors offered in the Avery Dennison's HP700 series (formerly A6) , Permanent Adhesive Backed, Calendered Film construction meet the guidelines set forth for the Maximum Concentration Values (MCV) of the following restricted substances, as outlined in the EU RoHS Directive. (If a color is not listed, it does NOT meet the guidelines)

- |   |                          |
|---|--------------------------|
| 1) <b>Lead (Pb)</b>                                       | MCV < 0.10% = <1,000 ppm |
| 2) <b>Mercury (Hg)</b>                                    | MCV < 0.10% = <1,000 ppm |
| 3) <b>Hexavalent Chromium (CrVI)</b>                      | MCV < 0.10% = <1,000 ppm |
| 4) <b>Cadmium (Cd)</b>                                    | MCV < 0.01% = <100 ppm   |
| 5&6) <b>Polybrominated flame retardents (PBB or PBDE)</b> | MCV < 0.10% = 1,000 ppm  |

Color	Color	Color	Color
HP 700-101-O White	HP 700-519-O Blush	HP 700-655-O Medium Blue	UC700-793-O Dark Green
HP 700-102-O Matte White	HP 700-565-O Purple	HP 700-670-O Vivid Blue	HP 700-830-O Slate Gray
HP 700-103-O Clear	HP 700-570-O Berry	HP 700-683-O Royal Blue	HP 700-835-O Medium Gray
HP 700-180-O Matte Black	HP 700-608-O Vibrant Blue	HP 700-687-O Impulse Blue	HP 700-855-O Dark Gray
HP 700-190-O Black	HP 700-625-O Majestic Blue	HP 700-695-O Dark Blue	HP 700-870-O Battleship Gray
HP 700-430-O Cardinal Red	HP 700-630-O Olympic Blue	HP 700-697-O Dark Navy Blue	HP 700-920-O Beige
HP 700-440-O Red	HP 700-632-O Wedgwood Blue	HP 700-715-O Real Teal	HP 700-960-O Terra Cotta
HP 700-460-O Spectra Red	HP 700-633-O Cool Blue	HP 700-720-O Teal	HP 700-960-O Carmel
HP 700-470-O Burgundy	HP 700-640-O Light Blue	HP 700-725-O Turquoise	HP 700-983-O Dark Brown
HP 700-508-O Soft Pink	HP 700-642-O Cascade Blue	HP 700-758-O Iguana Green	HP 700-990-O Chocolate Brown

Avery does not knowingly use and is not aware of any of these restricted components being present in the original engineering of these products.

However, it is not always possible to preclude low level raw material or film contamination and this might results in these products containing some other metals at a trace level. Analysis of each substance does not necessarily form part of our quality control system.

### 2) Other certifications or compliance of these products can be obtained by contacting your Avery Dennison representative.

## 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.

## Product Data Sheet

Page 4 of 5



Graphics  
Solutions

averygraphics.com  
AnswerLine: 800-231-4654

# Avery Dennison<sup>®</sup> HP 700 High Performance Calendered Series

Opaque Permanent Kraft

(formerly: A6 Opaque Series – 78# )

Revision: 5 Dated: 01/27/14

## **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.

Revisions are italicized

Avery Dennison is a registered trademark of Avery Dennison Corp.

## Product Data Sheet

Page 5 of 5



Graphics  
Solutions

averygraphics.com  
AnswerLine: 800-231-4654