

# Hardcoated Polyester Films

For protective overlay and dry erase applications

## Technical Information Sheet

### Hardcoated PET - for enhanced performance

Challenging applications in the fields of electronic display, electrical appliances or graphic overlaminates demand an enhanced polyester film - a film that supplies greater abrasion and chemical resistance, cleanability and processability than standard uncoated films.

With vast experience in the field of protective laminates, Avery Dennison Hanita has the know-how to engineer the right coated film to precisely fit custom requirements. By combining different grades, thicknesses and types of base polyester film with the appropriate hard coat, Avery Dennison Hanita can fine-tune an optimal solution for the application, at an effective price.

### 1. Choose your film

**Substrate:** Polyester Film – 15-300 µm

- > **Width:** 10-1900 mm
- > **Length:** Up to 6,000 lm roll
- > **Appearance:** Metallized, clear (clear - super clear), brushed, glossy, matte, white, ultra-matte.
- > **Dimensional Stability:** Heat stabilized to MD: 0.3% TD: 0.1%, controlled shrink according to requirements.

**Alternative Substrates:** PC, PMMA - available on request.

### 2. Select your hardcoat

**Clear hardcoat:** with high abrasion, scuff and scratch resistance, high resistance to chemicals, wipe clean surface.

**Ultra Matte hardcoat:** with high abrasion, scuff and scratch resistance, and high resistance to chemicals.

**Premium clear hardcoat:** with high abrasion, scuff and scratch resistance, high resistance to chemicals, wipe clean surface, with high-durability weathering resistance designed for external use.

### 3. Add optional developments

Additional second side coatings can include print primers, adhesives or adhesion promoting treatments. Further product enhancements can include multi-ply lamination with metallized, high conductivity or nano-coated films; dry-erase/anti-graffiti properties; anti-fingerprint cleanability or anti-bacterial protection.

#### Possible Applications

- > Display devices
- > Graphic/labeling overlaminates
- > Dry erase notice boards
- > Exterior signage
- > Protective laminates for white goods etc
- > Functional decor

#### Benefits

- > Abrasion, scratch and scuff resistance
- > Cleanability
- > Anti-graffiti
- > Optimized planarization (smoothing) of surface
- > Chemical resistance

| Property                           | Test                                     | Clear | Ultra Matte | Premium |
|------------------------------------|--|-------|-------------|---------|
| <b>Delta Haze (Taber Abrasion)</b> | ASTM D1044                               | 3 - 5 | -6          | 2 - 3.5 |
| <b>Pencil Hardness</b>             | ASTM D3363<br>Wolf –Willborn pencil test | 4H*   | 5H*         | 4H*     |
| <b>Cross Hatch</b>                 | ASTM D3359b                              | Pass  | Pass        | Pass    |
| <b>Specular Gloss @60°</b>         | ASTM D2457                               | 178   | 10          | 170     |

\* Results dependent on substrate

**Chemical Resistance of hardcoat** – 24 hour immersion at room temperature; repeated scrubbing with chemical saturated cloth.

|                                | Clear | Ultra Matte | Premium |
|--------------------------------|-------|-------------|---------|
| <b>Ethanol</b>                 | Pass  | Pass        | Pass    |
| <b>10% Hydrochloric acid</b>   | Pass  | Fail        | Pass    |
| <b>5% Sodium hydroxide</b>     | Pass  | Pass        | Pass    |
| <b>Toluene</b>                 | Pass  | Pass        | Pass    |
| <b>MEK</b>                     | Pass  | Pass        | Pass    |
| <b>Water with 2% detergent</b> | Pass  | Pass        | Pass    |
| <b>Window cleaner</b>          | Pass  | Pass        | Pass    |
| <b>10% Acetic acid</b>         | Pass  | Pass        | Pass    |

## Weathering

|   | Clear | Ultra Matte | Premium |
|---|-------|-------------|---------|
| <b>Weathering resistance for interior use</b> | Pass  | Pass        | Pass    |
| <b>Weathering resistance for exterior use</b> | -     | -           | Pass    |

For further information contact [surfacing.films@eu.averydennison.com](mailto:surfacing.films@eu.averydennison.com)

DISCLAIMER - All Avery Dennison statements, technical information and recommendations are based on 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. All Avery Dennison's products are sold subject to Avery Dennison's general terms and conditions of sale, see <http://terms.europe.averydennison.com>

©2018 Avery Dennison Corporation. All rights reserved. Avery Dennison and all other Avery Dennison brands, this publication, its content, product names and codes are owned by Avery Dennison Corporation and/or its Affiliates. All other brands and product names are trademarks of their respective owners. This publication must not be used, copied or reproduced in whole or in part for any purposes other than marketing by Avery Dennison.