Avery Dennison® 7140 Glass Protection Film
Gloss Highly Transparent Polyester Removable

Features
- Highly transparent protective film for glass windows
- High caliper provides excellent protection
- Excellent clarity without optical distortion
- Clean removability

Description
- **Film**: 100 micron gloss highly transparent treated polyester
- **Adhesive**: Removable acrylic
- **Backing**: one side siliconised polyester
- **Outdoor life**: Up to 3 years Asia Pacific

Conversion*
- Flat bed cutters
- Friction fed cutters
- Die cutting
- Thermal transfer
- Screen printing
- Cold over laminating
- Estat printing
- Water based inkjet
- Solvent inkjet
- UV Cured inkjet

Common Applications
- Buses, Trains & Trams
- Bus shelters

Standards
United Kingdom – BS 476
Germany - DIN 5510
Class 1 Fire rated
Brennbarkeitssklasse S4
Rauchentwicklungsklasse SR 2
Tropfbarkeitssklasse ST 2

Uses
Avery Dennison 7140 Window Protection Film is a high gloss, highly protects glass against damage by vandalism. After scratching, the film can be easily removed & replaced while the glass remains undamaged.

Application
Avery Dennison 7140 Glass Protection Film can be die cut and hand cut into the required shapes before application

Note
Polyester films are not compatible with acrylic, polycarbonate and other substrates that have a tendency to outgass. Application of Polyester films to these substrates should be avoided as bubbling or blistering can occur due to the inability of Polyester to allow transmission of gas generated by these substrates.
## General

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Standard/Method</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caliper, facelfilm</td>
<td>ISO 534</td>
<td>100 micron</td>
</tr>
<tr>
<td>Caliper, facelfilm &amp; adhesive</td>
<td>ISO 534</td>
<td>125 micron</td>
</tr>
<tr>
<td>Adhesion, ultimate</td>
<td>FINAT FTM-1, applied to glass</td>
<td>125 N/m</td>
</tr>
<tr>
<td>Removability</td>
<td></td>
<td>Excellent</td>
</tr>
<tr>
<td>Tensile strength</td>
<td>DIN 53455</td>
<td>175 N/mm²</td>
</tr>
<tr>
<td>Scratch resistance</td>
<td>ASTM D 1044</td>
<td>7%</td>
</tr>
<tr>
<td>Shrinkage</td>
<td>Mil. Spec. 30 mins 120°C</td>
<td>Max. 1 mm</td>
</tr>
<tr>
<td>Flammability</td>
<td></td>
<td>Self-extinguishing</td>
</tr>
<tr>
<td>Shelf life</td>
<td>Stored at 22°C/50-55% RH</td>
<td>1 year</td>
</tr>
<tr>
<td>Durability **</td>
<td>Vertical exposure</td>
<td>Up to 3 years</td>
</tr>
</tbody>
</table>

## 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.

**Durability**

Durability is based on exposure conditions in the Asia Pacific region. Actual performance life will depend on substrate preparation, exposure conditions and maintenance of the marking. For instance, in the case of signs facing north in the southern hemisphere or south in the northern hemisphere; in areas of long high temperature exposure such as northern Australia; in industrially polluted areas or high altitudes, exterior performance will be decreased.

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

***Information unavailable at time of printing.

## Test 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 (93% salt) at 30°C. After exposure, the film is removed and the panel is examined for traces of corrosion.