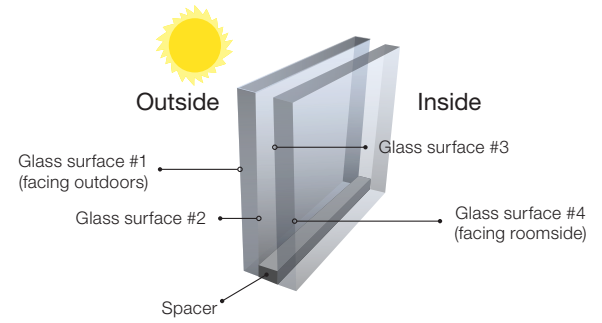


# Architectural Window Films

## Film to Glass Application Chart

This Film To Glass (FTG) Application Chart is for guidance purposes only. For more information regarding the application of one of the products included in this FTG on a particular glass surface, please contact our technical team at [windowfilms.techsupport@averydennison.com](mailto:windowfilms.techsupport@averydennison.com)



### IMPORTANT

This chart refers to annealed glass. See terms and conditions available online at URL: <http://graphics.averydennison.com/architectural-window-films>

#### ✔ Compatible

\* Tinted glazing recommendations are based upon simulations done on 45% LT tinted glass. Film can be applied on darker tinted glass if glass is fully tempered or based on written approval from Avery Dennison technical support.

#### ○ Conditional Compatibility

Film can be applied if VLT is lighter than 45% or if glass is fully tempered.

#### ▲ Tempered / heat strengthened

Film can be applied only if the glass is tempered, and not annealed (for IGU requirement for both panels).

#### ✘ Incompatible

## Interior

- Must be sealed if within 10 miles / 16km of the ocean. Use neutral sealing agent Dow Corning 791 or 795, Max 5000 by GE or equivalent neutral silicone seal agent. No edge sealing required on such location in case of fixed/stationary/immovable windows that are not exposed to environment.
- Projects larger than 5500 sqft (500 sqm) need prior written approval from Avery Dennison.
- Laminated clear applies only to 1/4" + 1/4" (6.35mm + 6.35mm) structures and thinner.
- Light and white inks are approved for print on DS Print SR films. Other colored or dark inks printed on DS Print SR films require prior approval from the Avery Dennison technical support team. DS Print SR films are not suitable for direct exposure to the sun.
- Refers to application of clear safety films unless it's in combination with other Avery Dennison window films in which case the Safety Clear Mod film receives the characteristics and warranty of the film that is applied on it.
- Window films are not warranted for seal failure.

|                      |                                      | Single Pane |        |                              | IG Unit        |                | Clear IG Unit - Low E |                        |
|----------------------|--------------------------------------|-------------|--------|------------------------------|----------------|----------------|-----------------------|------------------------|
|                      |                                      | Clear       | Tinted | Clear Laminated <sup>3</sup> | Clear          | Tinted         | On #3                 | High Performance on #2 |
| Reflective           | R Silver 20i                         | ✔           | ✔      | ✔                            | ✔              | ○              | ✔                     | ✔                      |
|                      | R Silver 35i                         | ✔           | ✔      | ✔                            | ✔              | ○              | ▲                     | ✔                      |
|                      | R Silver 20i Low E                   | ✔           | ✔      | ✔                            | ✔              | ○              | ✔                     | ✔                      |
| Dual Reflective      | DR OptiTune 05i                      | ✔           | ✔      | ✔                            | ✔              | ○              | ▲                     | ✔                      |
|                      | DR OptiTune 15i                      | ✔           | ✔      | ✔                            | ✔              | ○              | ▲                     | ✔                      |
|                      | DR OptiTune 20i                      | ✔           | ✔      | ✔                            | ✔              | ○              | ✔                     | ✔                      |
|                      | DR OptiTune 30i                      | ✔           | ✔      | ✔                            | ✔              | ○              | ▲                     | ✔                      |
|                      | DR OptiTune 40i                      | ✔           | ✔      | ✔                            | ✔              | ✔              | ▲                     | ✔                      |
|                      | DR OptiShade 15i                     | ✔           | ✔      | ✔                            | ✔              | ○              | ▲                     | ✔                      |
|                      | DR OptiShade 25i                     | ✔           | ✔      | ✔                            | ✔              | ○              | ▲                     | ✔                      |
|                      | DR OptiShade 35i                     | ✔           | ✔      | ✔                            | ✔              | ○              | ▲                     | ✔                      |
| Neutral              | NT PerLite Ceramic 20i               | ✔           | ✔      | ▲                            | ▲              | ○              | ▲                     | ▲                      |
|                      | NT PerLite Ceramic 35i               | ✔           | ✔      | ✔                            | ✔              | ✔              | ▲                     | ✔                      |
|                      | NT PerLite Ceramic 50i               | ✔           | ✔      | ✔                            | ✔              | ✔              | ✔                     | ✔                      |
|                      | NT PerLite Ceramic 70i               | ✔           | ○      | ○                            | ✔              | ○              | ✔                     | ▲                      |
|                      | NT Natura 05i                        | ✔           | ▲      | ▲                            | ▲ <sup>6</sup> | ▲ <sup>6</sup> | ▲ <sup>6</sup>        | ▲ <sup>6</sup>         |
|                      | NT Natura 15i                        | ✔           | ▲      | ▲                            | ▲ <sup>6</sup> | ▲ <sup>6</sup> | ▲ <sup>6</sup>        | ✔ <sup>6</sup>         |
|                      | NT Natura 30i                        | ✔           | ○      | ○                            | ✔              | ○              | ✔                     | ✔                      |
| Spectrally Selective | SP e-Lite 45i <sup>1</sup>           | ✔           | ✔      | ✔                            | ✔              | ✔              | ▲                     | ✔                      |
|                      | SP e-Lite 70i <sup>1</sup>           | ✔           | ✔      | ✔                            | ✔              | ✔              | ✔                     | ✔                      |
| Design               | DS Matte 2 mil i                     | ✔           | ✔      | ✔                            | ✔              | ○              | ✔                     | ✔                      |
|                      | DS Black i                           | ▲           | ▲      | ▲                            | ✘              | ✘              | ✘                     | ✘                      |
|                      | DS White i                           | ✔           | ✔      | ✔                            | ✔              | ○              | ▲                     | ▲                      |
|                      | DS UV Filter i                       | ✔           | ✔      | ✔                            | ✔              | ✔              | ✔                     | ✔                      |
|                      | DS Print SR 2/4 mil i <sup>4</sup>   | ✔           | ✔      | ✔                            | ✔              | ✔              | ✔                     | ✔                      |
| Safety & Security    | SF Clear 4/7/8/12/15 mil i           | ✔           | ✔      | ✔                            | ✔              | ✔              | ✔                     | ✔                      |
|                      | SF Clear 4/7/12 mil Mod <sup>5</sup> | ✔           | ✔      | ✔                            | ✔              | ✔              | ✔                     | ✔                      |
|                      | SF Matte 5/12 mil i                  | ✔           | ✔      | ✔                            | ✔              | ✔              | ▲                     | ✔                      |
|                      | AG Clear 4/6 mil ix                  | ✔           | ✔      | ✔                            | ✔              | ✔              | ✔                     | ✔                      |
| Solar Safety         | R Silver 20 4/9 mil                  | ✔           | ✔      | ✔                            | ✔              | ✔              | ✔                     | ✔                      |
|                      | NT PerLite Ceramic 35 6/10 mil       | ✔           | ✔      | ✔                            | ✔              | ✔              | ▲                     | ✔                      |

**✓ Compatible**

\* Tinted glazing recommendations are based upon simulations done on 45% LT tinted glass. Film can be applied on darker tinted glass if glass is fully tempered or based on written approval from Avery Dennison technical support.

**○ Conditional Compatibility**

Film can be applied if VLT is lighter than 45% or if glass is fully tempered.

**▲ Tempered / heat strengthened**

Film can be applied only if the glass is tempered, and not annealed (for IGU requirement for both panels).

**✗ Incompatible**

All exterior films require sealing! Use neutral sealing agent Dow Corning 791 or 795, Max 5000 by GE or approved equivalent neutral silicone seal agent for exterior applications.

^ Laminated clear applies only to 1/4" + 1/4" (6.35 mm + 6.35 mm) structures.

# Exterior

|                      |                        | Single Pane |        |                              | IG Unit |        | Clear IG Unit - Low E |                        | IG Unit Low E                                     |
|----------------------|------------------------|-------------|--------|------------------------------|---------|--------|-----------------------|------------------------|---|
|                      |                        | Clear       | Tinted | Clear Laminated <sup>^</sup> | Clear   | Tinted | On #3                 | High Performance on #2 | Solar coated glass #2 + High Performance Low E #3 |
| Reflective           | R Silver 20X           | ✓           | ✓      | ✓                            | ✓       | ✓      | ✓                     | ✓                      | ✓   |
|                      | R Silver 35X           | ✓           | ✓      | ✓                            | ✓       | ✓      | ✓                     | ✓                      | ✓   |
|                      | R Silver 20X Poly      | ✓           | ✓      | ✓                            | ✓       | ✓      | ✓                     | ✓                      | ✓   |
|                      | R Silver 20 XTRM       | ✓           | ✓      | ✓                            | ✓       | ✓      | ✓                     | ✓                      | ✓   |
|                      | R SkyLite 20 XTRM      | ✓           | ✓      | ✓                            | ✓       | ✓      | ✓                     | ✓                      | ✓   |
|                      | R SkyLite 20 XTRM Poly | ✓           | ✓      | ✓                            | ✓       | ✓      | ✓                     | ✓                      | ✓   |
| Dual Reflective      | DR Grey 10X            | ✓           | ✓      | ✓                            | ✓       | ✓      | ✓                     | ✓                      | ✓   |
|                      | DR Grey 20X            | ✓           | ✓      | ✓                            | ✓       | ✓      | ✓                     | ✓                      | ✓   |
|                      | DR Grey 35X            | ✓           | ✓      | ✓                            | ✓       | ✓      | ✓                     | ✓                      | ▲   |
|                      | DR Grey 10 XTRM        | ✓           | ✓      | ✓                            | ✓       | ✓      | ✓                     | ✓                      | ✓   |
|                      | DR Grey 20 XTRM        | ✓           | ✓      | ✓                            | ✓       | ✓      | ✓                     | ✓                      | ✓   |
|                      | DR Grey 35 XTRM        | ✓           | ✓      | ✓                            | ✓       | ✓      | ✓                     | ✓                      | ▲   |
| Spectrally Selective | SP e-Lite 45X          | ✓           | ✓      | ✓                            | ✓       | ✓      | ✓                     | ✓                      | ▲   |
|                      | SP e-Lite 70X          | ✓           | ✓      | ✓                            | ✓       | ✓      | ✓                     | ✓                      | ▲   |
|                      | SP Blue 75X            | ✓           | ○      | ✓                            | ✓       | ▲      | ✓                     | ▲                      | ▲   |
| Design               | DS Bronze 20X          | ✓           | ✓      | ✓                            | ✓       | ✓      | ✓                     | ✓                      | ✓   |
|                      | DS Blue 35X            | ✓           | ✓      | ✓                            | ✓       | ✓      | ✓                     | ✓                      | ✓   |
| Clear Films          | SF Clear 4/7 mil X     | ✓           | ✓      | ✓                            | ✓       | ✓      | ✓                     | ✓                      | ✓   |
|                      | Clear 4/6 mil poly X   | ✓           | ✓      | ✓                            | ✓       | ✓      | ✓                     | ✓                      | ✓   |
| Surface Protection   | AG Clear 4/6 mil ix    | ✓           | ✓      | ✓                            | ✓       | ✓      | ✓                     | ✓                      | ✓   |

### Important restrictions and limitations on installation:

- It is the installer's responsibility to ensure that the film chosen is compatible with the glazing system.
- All film types can be applied to tempered glass, except for DS Black i and DS White i - see chart for limitations.
- Pane size: for glass with an edge dimension over 11.5 ft (3.5 m), and/or the surface of double pane glass has more than 40 sqft (3.7 sqm) surface area- use only on tempered glass.
- Pane thickness: clear glass > 3/8" (9.5 mm), tinted glass > 1/4" (6 mm) - use only on tempered glass unless given special approval otherwise.
- FTG chart refers to altitude up to 1640 ft (500 m). Above this altitude please consult with our technical support team. Altitude > 7000 ft (2310 m) - installation requires prior written approval from Avery Dennison (unless specifically specified, e.g. clear laminate).
- Installation on laminated glass requires prior written approval from Avery Dennison.
- Interior of skylights - installation requires prior written approval from Avery Dennison. These installations require sealing on all four edges.

### Warranty is invalid if:

- Installation practices do not conform to Avery Dennison's published installation policies and procedures.
- Two or more films are applied to the same glass surface (with the exception of Avery Dennison Modular Film).
- Automotive film is applied to flat glass constructions.
- The filmed windows are triple or more pane construction, textured, wire film glass, or an IG unit inclusive of a suspended film, unless approved otherwise.
- Film is applied to any glass on which there is paint, lettering, signs, stickers or other permanent or temporary ornamentation (with the exception of small safety labels).
- Filmed glass has prior damage, is chipped, has cracked edges, has holes in it, or light is visible between the frame and the glass.
- Film is applied to non-glass substrates (unless specifically specified, i.e. Poly Films).
- Film is only partially applied to glass.
- Pane is shaded by exterior overhangs, extensions, columns, pillars etc.
- Glass is architecturally odd-shaped, and larger than 20 sqft (1.8 sqm).
- Damage is caused by acts of nature (accidents, floods, fire, explosion etc.).
- Avery Dennison XTRM films are installed by non-Avery Dennison Certified installers.

For information on warranty terms, exclusions and certain limitations that apply please see the applicable product data sheets and other literature and bulletins on our website: [graphics.averydennison.com/windowfilms](http://graphics.averydennison.com/windowfilms)

All statements, technical information and recommendations about Avery Dennison products are based upon tests and information believed to be reliable but do not constitute a guarantee or warranty of any kind. All Avery Dennison products are sold with the understanding that Purchaser has independently determined the suitability of such products for its intended and other purposes.



Graphics Solutions

For more information please contact  
**Kingston Coatings, LLC**

Sidney McAlister 615-491-4265  
Main 615-952-4903 Text 24/7 615-330-5294

[Sales@KingstonCoatings.com](mailto:Sales@KingstonCoatings.com)  
[www.kingstoncoatings.com](http://www.kingstoncoatings.com)