

What matters most to you...We're On It!

# Film-to-Glass Guide – Europe

Film Type	 Single Pane; Clear or Tinted	 Double Pane; Clear or Tinted	 Double Pane; Clear Low-e #2	 Double Pane; Clear Low-e #3	 Triple Pane; Clear
<b>Outside Weatherable Films</b>					
Sentinel Plus Silver 35 OSW	●	●	●	●	●
Sentinel Plus Silver 20 OSW	●	●	●	●	●
Sentinel Plus Stainless Steel 45 OSW	●	●	■	●	●
Sentinel Plus Stainless Steel 40 OSW	●	●	■	●	●
Sentinel Plus Stainless Steel 25 OSW	●	●	▲ <sup>1</sup>	●	●
Sentinel Plus Stainless Steel 15 OSW	●	●	●	●	●
Sentinel Plus Solar Bronze 20 OSW	●	●	●	●	●
Sentinel Plus SX 80 OSW	●	●	▲	■	▲
Sentinel Plus SX 50 OSW	●	●	●	●	●
Sentinel Plus DX 15 OSW	●	●	●	●	●
Sentinel Plus DX 5 OSW	●	●	●	●	●
Sentinel Plus QX 70 OSW	●	●	●	●	●
Sentinel Plus QX 40 OSW	●	●	●	●	●
Sentinel DX 50 OSW	●	●	●	●	●
Sentinel DX 35 OSW	●	●	●	●	●
Sentinel DX 20 OSW	●	●	●	●	●
Sentinel DX 5 OSW	●	●	●	●	●
<b>Silver</b>					
Silver 50	●	●	●	●	●
Silver 35	●	●	●	●	■
Silver 20	●	●	●	▲ <sup>2</sup>	■
Grey/Silver 15	▲	■	■	■	■
Grey/Silver/Grey 10	▲	■	■	■	■
<b>Sterling</b>					
Sterling 70	●	●	●	●	●
Sterling 60	●	●	●	●	●
Sterling 50	●	●	●	●	●
Sterling 40	●	●	●	▲ <sup>2</sup>	●
Sterling 20	●	●	●	▲ <sup>2</sup>	■
<b>LX</b>					
LX 70	●	●	●	●	●
LX 40	●	●	●	▲ <sup>2</sup>	■
<b>Ecolux</b>					
Ecolux 70	●	●	●	■	■
<b>Summer/Winter Low-Emissivity</b>					
Silver AG 50 Low-E	●	●	●	■	●
Silver AG 25 Low-E	●	●	●	■	■
<b>TrueVue</b>					
TrueVue 40	●	●	●	●	■
TrueVue 30	●	●	●	▲ <sup>2</sup>	■
TrueVue 15	●	●	●	▲ <sup>2</sup>	■
TrueVue 5	●	●	●	▲ <sup>2</sup>	■

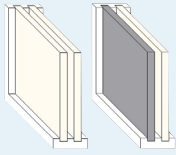
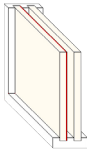
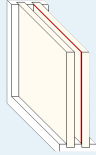

● = Low Risk

▲ = Caution, Submit Film-to-Glass Application for Risk Assessment\*

■ = Tempered Only

\* See Film-to-Glass Application Submittal instructions below.

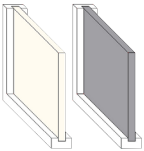
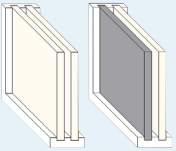
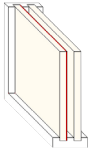
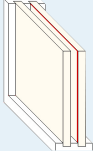
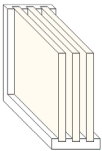
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Film Type	 Single Pane; Clear or Tinted	 Double Pane; Clear or Tinted	 Double Pane; Clear Low-e #2	 Double Pane; Clear Low-e #3	 Triple Pane; Clear
<b>Stainless Steel</b>					
Stainless Steel 50	●	●	●	● <sup>2</sup>	●
Stainless Steel 35	●	●	●	▲ <sup>2</sup>	■
Stainless Steel 30	▲	▲	■	■	■
Stainless Steel 20	▲	■	■	■	■
Stainless Steel 10	▲	■	■	■	■
<b>Solar Bronze</b>					
Solar Bronze 50	●	●	●	▲ <sup>2</sup>	■
Solar Bronze 35	●	●	●	▲ <sup>2</sup>	■
Solar Bronze 20	●	●	●	▲ <sup>2</sup>	■
<b>Quantum</b>					
Quantum/Silver/Quantum 20	▲	■	■	■	■
Quantum/Silver/Quantum 10	▲	■	■	■	■
<b>Specialty</b>					
Deep Etch	●	●	●	●	■
Clear Frost	●	●	●	●	●
Black Opaque	▲	■	■	■	■
White Opaque	●	▲	●	▲	●
4 Mil Graffitigard	●	●	●	●	●
6 Mil Graffitigard	●	●	●	●	●
7 Mil Graffitigard	●	●	●	●	●
<b>Clear Safety &amp; Security</b>					
2 Mil Clear	●	●	●	●	●
4 Mil Clear	●	●	●	●	●
7 Mil Clear	●	●	●	●	●
8 Mil Clear	●	●	●	●	●
10 Mil Clear	●	●	●	●	●
11 Mil Clear	●	●	●	●	●
14 Mil Clear	●	●	●	●	●
4 Mil Sentinel Clear OSW	●	●	●	●	●
<b>Solar Safety &amp; Security</b>					
4 Mil Stainless Steel 50	●	●	●	●	▲
4 Mil Stainless Steel 35	●	●	●	▲ <sup>2</sup>	■
4 Mil Stainless Steel 30	▲	▲	■	■	■
4 Mil Stainless Steel 20	▲	■	■	■	■
8 Mil Stainless Steel 50	●	●	●	●	■
8 Mil Stainless Steel 35	●	●	●	▲ <sup>2</sup>	■
8 Mil Stainless Steel 20	▲	■	■	■	■
10 Mil Stainless Steel 50	●	●	●	●	■
4 Mil Solar Bronze 35	●	●	●	▲ <sup>2</sup>	■
4 Mil Solar Bronze 20	●	●	●	▲ <sup>2</sup>	■
4 Mil Silver 20	●	●	●	▲ <sup>2</sup>	■
8 Mil Silver 35	●	●	●	●	■
8 Mil Silver 20	●	●	●	▲ <sup>2</sup>	■
8 Mil LX 70	●	●	●	●	●
<b>Outside Weatherable Clear Safety &amp; Security Films</b>					
Sentinel Plus 4 Mil Clear OSW	●	●	●	●	●
Sentinel 8 Mil Clear OSW	●	●	●	●	●

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Film Type	Single Pane; Clear or Tinted	Double Pane; Clear or Tinted	Double Pane; Clear Low-e #2	Double Pane; Clear Low-e #3	Triple Pane; Clear
<b>ULR</b>					
ULR 70	●	●	●	●	●
ULR 40	●	■	▲ <sup>2</sup>	▲ <sup>2</sup>	■
ULR 20	●	■	■	■	■
<b>Slate</b>					
Slate 40	●	●	●	▲ <sup>2</sup>	●
Slate 30	●	●	●	▲ <sup>2</sup>	■
Slate 20	●	●	●	▲ <sup>2</sup>	■
Slate 10	●	●	●	▲ <sup>2</sup>	■

# Film-to-Glass Information

## Film-to-Glass Guidance

Windows constructed of tempered or heat-strengthened glass are not at risk for glass breakage.

Film-To-Glass-Application needs to be submitted for any glazing type where at least one of the panes is 8mm or thicker.

## Film-to-Glass Application Disclaimers

Round, bent or laminated glass may be recommended by submitting a film-to-glass application. However, there is a high risk of glass breakage for applications with any of the following conditions:

1. Textured, wired or skylight glass;
2. Any glass with more than one window film applied;
3. Any window where light can be seen between the glass and the framing system;
4. Any plastic or polycarbonates;
5. Quadruple pane insulated glass (IG) units;
6. Suspended film insulated glass (IG) units;
7. Glass with paint, lettering, vinyl graphics or other ornamentation;
8. Any single pane with partial film installation. Film must be installed edge to edge;
9. Damaged, chipped, cracked or scratched glass;
10. Glass with concrete framing;
11. Glass with metal framing that has no gaskets or seals;
12. Glass with framing sealant or gaskets that are no longer resilient;
13. Broken glass or insulated glass (IG) unit/s with seal failure prior to film installation;
14. Any building that has a history of glass breakage and/or seal failure problems; or
15. Any film applied to spandrel glass

## Low-E Caution (LEC)

The following scenarios outline the necessary parameters when installing a Low-E Caution (LEC) film to an insulated glass (IG) unit. The Low-E Caution (LEC) indicates possible glass breakage and insulated glass (IG) unit seal failure, due to an increased risk when a LEC film is installed on a double pane, insulated glass (IG) unit with a Low-E coating.

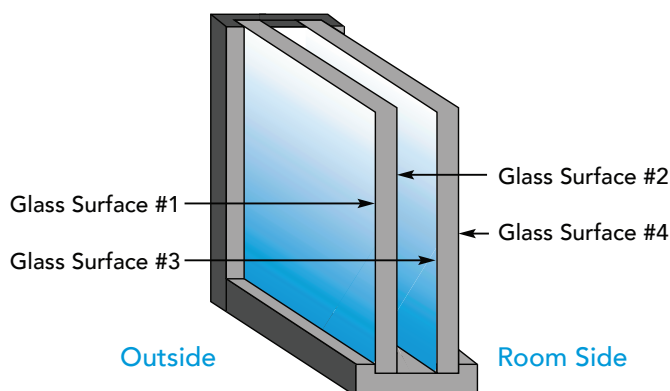
#1 ▲<sup>1</sup>

Any exterior LEC window film installed on a double pane insulated glass unit that has a low-e coating on surface #2 and a g-value (SHGC) of 0.58 or greater is a low risk for glass breakage and insulated glass (IG) unit seal failure.

#2 ▲<sup>2</sup>

Any interior LEC window film installed on double pane insulated glass unit that has a low-e coating on surface #3 and a g-value (SHGC) of 0.61 or less is a low risk for glass breakage and insulated glass (IG) unit seal failure.


Side View Of Dual Pane Insulated Glass (IG) Unit



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Saint-Gobain Innovative Materials  
Belgium SA/NV / Solar Gard  
HQ: Avenue Einstein 6, 1300 Wavre  
Contact address: Karreweg 18, 9870 Zulte, Belgium  
T: +32 9 240 95 66 E: [emea.info@solargard.com](mailto:emea.info@solargard.com)

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