

Technical Bulletin

1002 – Glass Surface numbering and
where to locate coatings

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**Australian
GlassGroup®**

TB 1002 - Glass Surface numbering and where to locate coatings

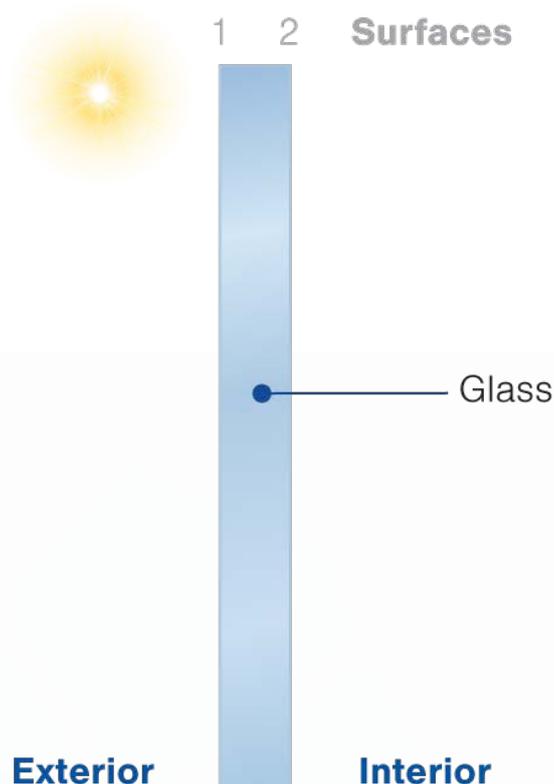
This Technical Bulletin has been produced to assist in understanding glass surface numbering, and on which surface to specify different types of glass coatings.

Glass surface numbering

In all glass types, the outermost surface is referred to surface 1. This is the surface that is exposed to weather.

Leading on from this, the next surface towards the inside of the structure is surface 2. For monolithic glass, it is the inside surface. For a laminate pane, surface 2 is the innermost surface of the outer pane, and is in contact with the interlayer. For a double glazed unit, the same numbering convention is in place.

Single Monolithic Glass



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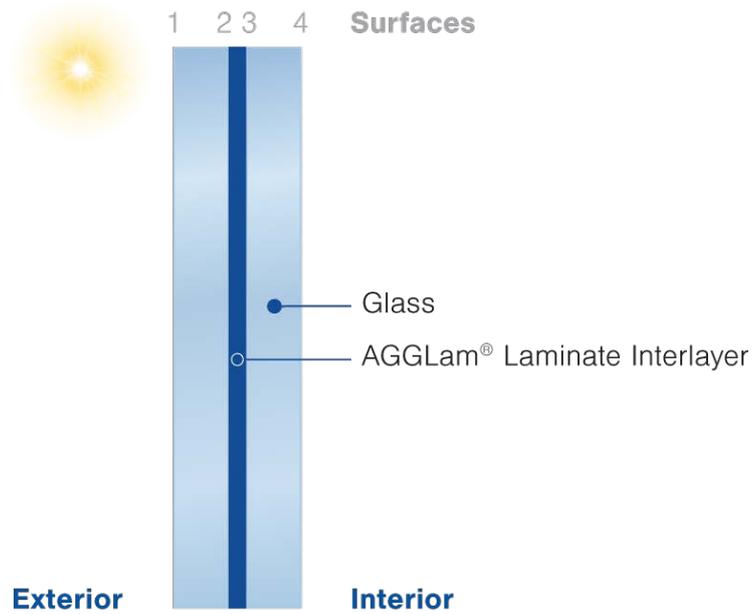
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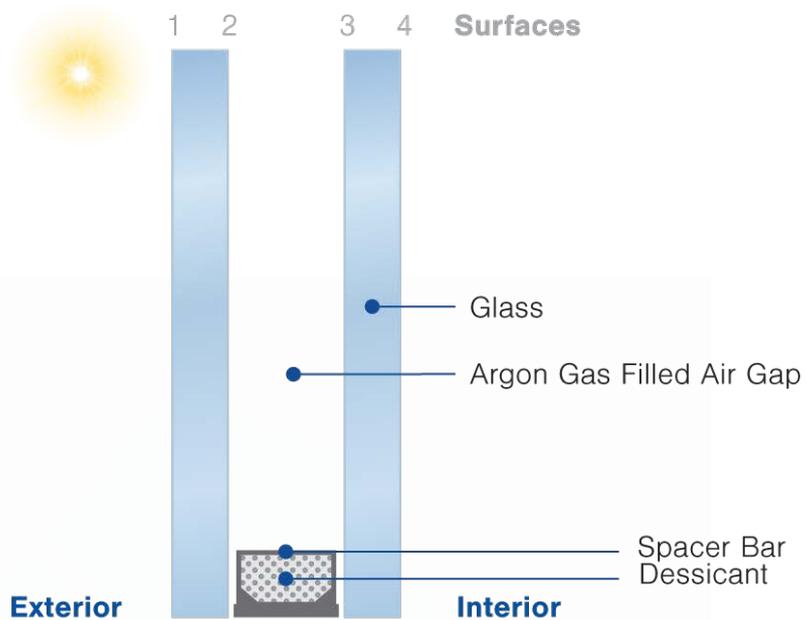
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Single Laminate Glass



Double Glazed Unit



A double glazed unit can also have 1 or two laminate panes, where all surfaces are numbered starting from surface one on the exterior side of the unit as always.

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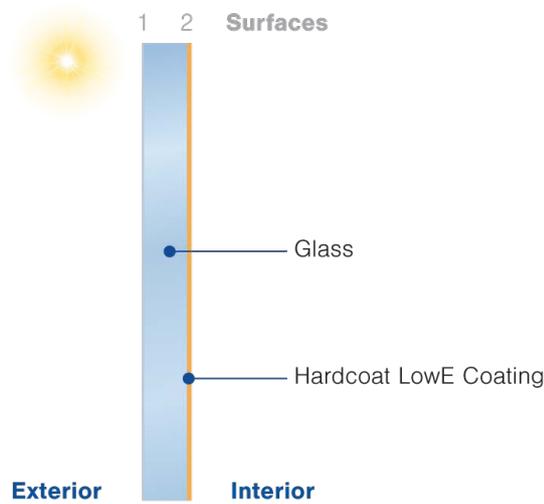
Coating Surface Selection

LowE coatings can be Hardcoats or Softcoats and come in a variety of configurations monolithic, laminated and within an Insulated Glass Unit (IGU).

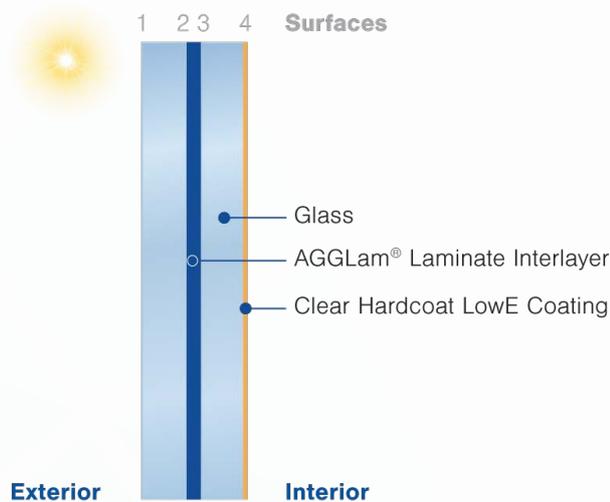
Each coating has a different energy performance. Some are designed for colder climates and therefore passive solar heat gain (higher SHGC) and also heat retention inside (lower U-Value), while others are designed for greater solar control by blocking more solar heat (lower SHGC) from coming inside the building.

Hardcoat LowE glass (Pyrolytic) is an older technology but significantly more durable than Softcoat LowE. Hard coat glass can be used monolithic or single glazed laminated with its coating exposed. The coating should then be on the inside of the building, protected from the outside elements. Monolithically, this would be surface #2 while as a single glazed laminate, this would be surface #4:

Monolithic Hardcoat LowE



Laminated Hardcoat LowE



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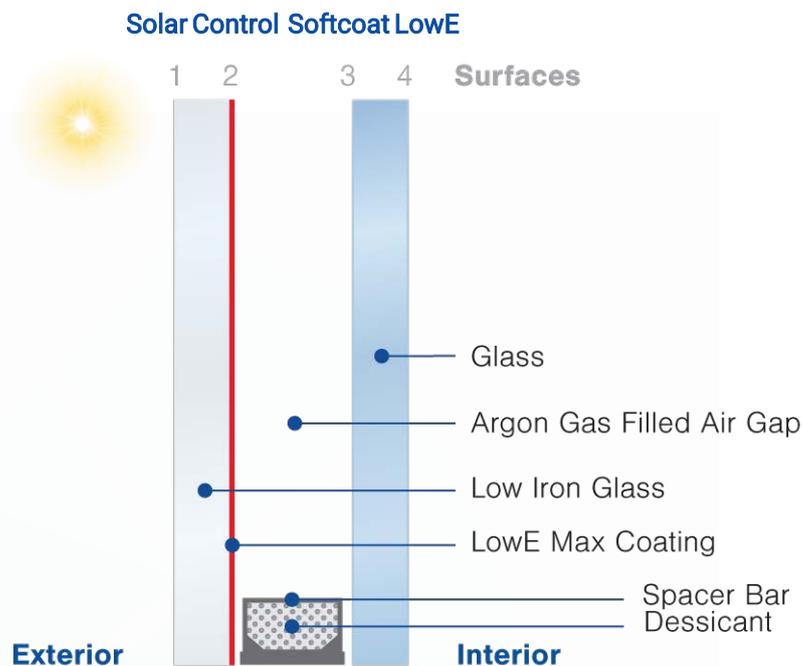
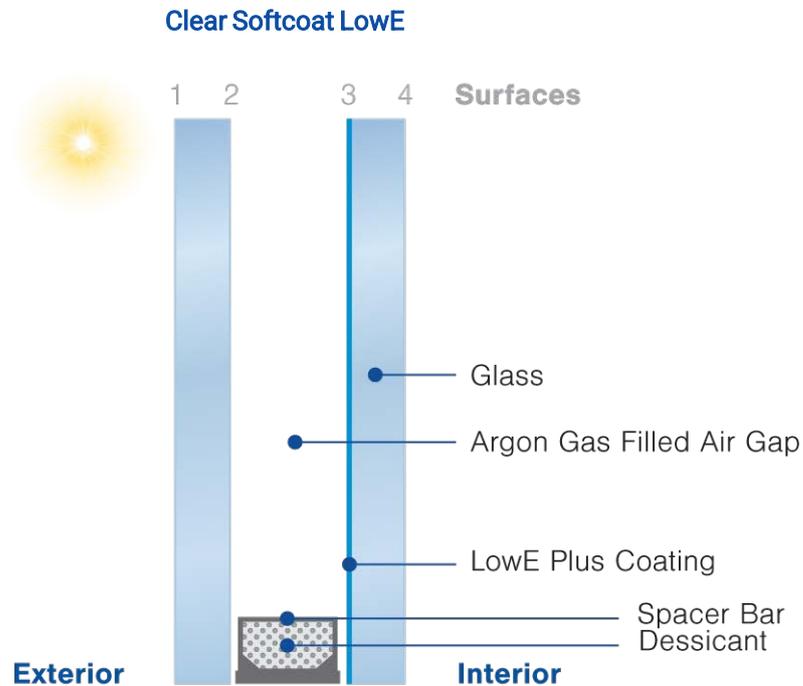
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Softcoat LowE is the latest technology in glass coating, and the performance of a Softcoat is significantly better than that of a Hardcoat. However, Softcoats are sensitive and not offered as monolithic or laminated. They must be used in conjunction with an IGU with the coating on the inside of the air gap to protect it from both the outside elements and also from touch and cleaning products from the inside of buildings.

Typically, a Clear Softcoat LowE (eg. Insulglass LowE Plus®) is designed for colder climates and so suitable for surface #3 of a Double Glazed Unit (DGU), while a solar control Softcoat (eg. Insulglass LowE Max®) is suitable for surface # 2:



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Important note when ordering Insulating Glass Units

It is important for window and façade fabricators to be aware of how glazing surfaces can affect the energy rating of their product and best suit the environment where they are installed. On top of this there is also the risk of unwanted aesthetic factors if some solar control coatings are installed on surface #3 compared to their designed surface #2

It is highly recommended the outer pane is stated first on customers order, reading from left to right - outer to inner.

For example:

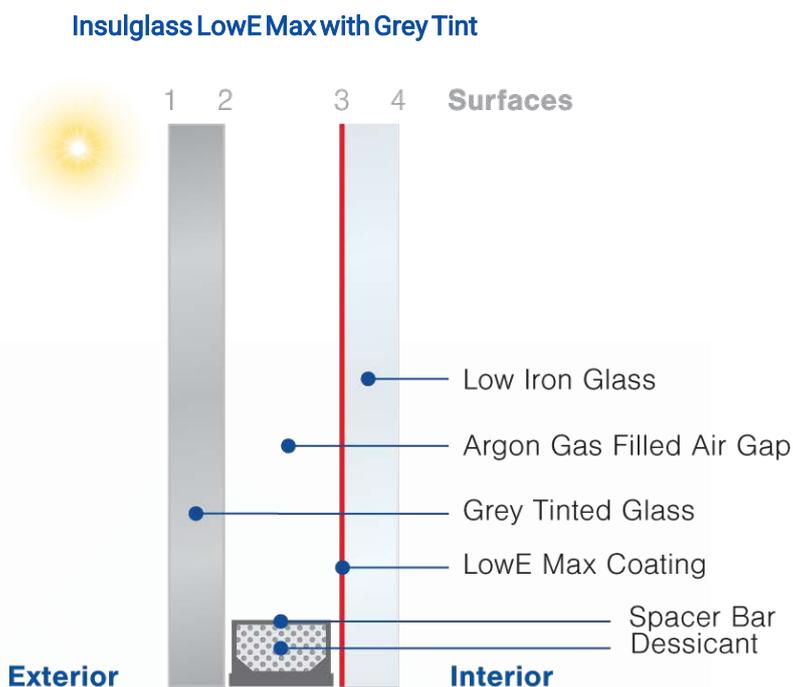
24mm Insulglass LowE Plus®

- 6mm Clear Toughened / 12mm argon / 6mm LowE Plus Toughened (#3)

24mm Insulglass LowE Max®

- 6mm LowE Max Toughened (#2) / 12mm argon / 6mm Clear Toughened

Also note that Tinted glass (eg. 6mm Grey) is designed for the outer pane to absorb direct sun heat. This means that whenever Tinted glass and LowE is used in a DGU, the Tint always dictates any LowE coating to surface #3:



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