

TECHNICAL SALES BULLETIN 005

EXPLANATION OF GLASS PERFORMANCE FIGURES

Visible Transmission

This figure indicates the amount of light that passes through the pane of glass e.g. if the pane of glass has a visible transmission of 32 it means that if a light source is placed in front of the glass, 32% of that light will pass through the pane.

Visible Reflection

This figure indicates the amount of light that is reflected away from the glass surface e.g. if the pane of glass has a visible reflection of 9 it means that 9% of the 100% light striking the surface of the glass is reflected back towards the light source. As a guide, clear glass has a Visible Reflection of 8%.

Solar Energy (Heat)

Solar energy striking the glass reacts in 3 ways:-

- i) a portion is transmitted through the glass.
- ii) a portion is reflected away from the glass.
- iii) a portion is absorbed within the glass.

Direct Solar Transmission

This figure indicates the amount of solar energy that is directly transmitted through the pane of glass e.g. if the pane of glass has a direct solar transmission of 29 it means that, of the 100% of solar energy striking the surface of the glass, 29% is transmitted directly through that pane of glass.

Solar Reflection

This figure indicates the amount of solar energy that is reflected away from the glass surface e.g. if the pane of glass has a solar reflection of 8 it means that, of the 100% solar energy striking the surface of the glass, 8% is reflected away.

Total Solar Transmission

The amount of solar energy adsorbed within the pane of glass is re-

radiated through both the interior & exterior glass surfaces.
The total solar transmission is the sum of the direct solar transmission plus a portion of the absorbed energy re-radiated to the inside e.g. if the pane of glass has a total solar transmission of 41 it means that, of the 100% solar energy striking the glass surface, 41% is transmitted through the glass, either directly or by re-radiation.

Solar Heat Gain Coefficient (S. H. G. C.)

This figure is obtained by dividing the total solar transmission by 100, to factorise it e.g. a glass having a total solar transmission of 50% will have an S.H.G.C. of 0, 50 ($50 / 100 = 0, 50$)

Total Solar Elimination

This figure is a function of the Total Solar Transmission figure referred to above e.g. a glass having a total solar transmission of 41% will result in a total solar elimination of 59% ($100 - 41 = 59$)

Shading co-efficient

This figure compares the total solar transmission of the glass under consideration to that of a "generic" 3mm Clear float glass, which has a total solar transmission of 87% e.g. if the glass has a shading co-efficient of 0.48 it means that it will only allow 48% of the total energy transmission expected to pass through 3mm clear float glass

U-Value

This figure indicates the amount of energy (measured in Watts/m²/degC) that is lost through 1m² of the glass for every degree of temperature difference between the outside and inside ambient air.



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