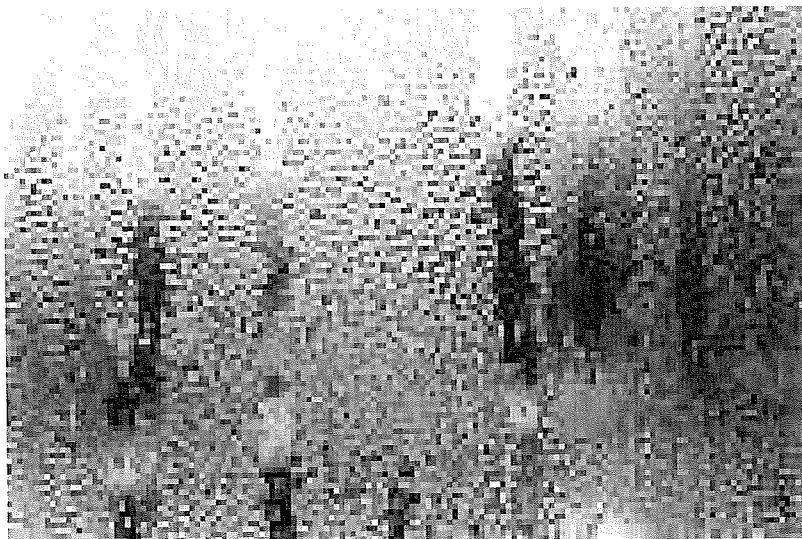


WHAT IS CONDENSATION?

Condensation is defined as the physical process by which a gas or vapour changes into a liquid. If the temperature of an object (e.g. grass, metal, glass) falls below what is known as the "dew point" temperature for a given relative humidity of the surrounding air, water vapour from the atmosphere condenses into water droplets on its surface. This "dew point" varies according to the amount of water in the atmosphere (known as humidity). In humid conditions condensation occurs at higher temperatures. In cold conditions condensation occurs despite relatively low humidity.

When does condensation occur?

Condensation on the external surfaces of an insulating glass unit can form in a wide variety of circumstances and on either the inside or the outside of a building.



Indoor condensation

Causes:

The principal cause of condensation on glass on the inside of a building is a high internal humidity level coupled with a low outside temperature which cools the inside surface to below the dew point. Bathrooms, kitchens and other areas where humidity levels are high are particularly susceptible to this problem.

In order to control this form of condensation, consideration should be given to improving the heating and ventilation in these areas. However, another way to reduce the problem is to use high performance windows containing an enhanced thermally insulating glass.

Thermally insulating glass

Windows manufactured using insulating glass units containing an energy efficient "low-emissivity (low-E) coating" such as, SGG PLANITHERM TOTAL+ actually restricts heat exchange across the airspace between the two panes of glass keeping the inner pane of glass warmer and so reducing the instances when condensation can form.

Outdoor condensation

Causes:

Condensation forms on the outdoor surface of glass when its temperature drops below the outdoor dew point temperature.

Insulating units containing an energy efficient, low-emissivity glass such as SGG PLANITHERM TOTAL, have enhanced thermal insulation properties thanks to a high performance transparent coating that reflects heat back into the room. As a result the outer pane of glass does not get warmed by heat escaping from inside the building through the glass and remains cooler in comparison to less thermally efficient windows.

External condensation only occurs in certain climatic conditions with high humidity levels and/or particularly cold weather. It is possible that, external condensation will appear on some windows but not on others. This is due to

localised atmospheric conditions such as shelter from nearby trees or buildings, variable air currents and wind speeds and varying levels of nearby vegetation.

Please note:

Condensation on the outdoor surface of such high performance windows is in no way an indication of a defective unit. Indeed, this can be seen as a positive indication that the enhanced thermally insulating units are actively reducing heat loss through the glass.

Find out more about the benefits of Saint-Gobain double glazing.