

We receive a lot of enquiries about the appearance of external condensation particularly in the spring and autumn. Whilst we state in our literature that fitting modern low e glazing increases the chances of external condensation, it does seem to surprise many customers. Firstly we need to say that the appearance of external condensation is not a fault in the glass or the windows. The phenomenon is a natural and predictable event caused by the outer pane of the glazing being colder than the glass that it replaced.

With single glazing and older style double glazing a larger proportion of heat was lost to the outside through the glass. With modern low e glass products more of the heat is kept inside and the outer pane is not heated as much. Moisture condenses out of the air onto a cold surface that is said to be below the dew point. The dew point varies with the air temperature and the amount of moisture it contains. In spring and autumn in particular the glass temperature can fall to a low level during the night and the dew point can be comparatively high in these seasons. The glass is more often likely to be below the dew point in these conditions and the moisture condenses onto the surface.

We are all obliged to fit more thermally efficient windows in our homes to comply with the building regulations. There are only a few exceptions to the regulations and they tend to apply to unheated spaces that would suffer external condensation to the same extent anyway. The trend is to use glass that has lower U values over time and the lower the U value the lower the outer pane temperature is likely to be and the bigger the risk of condensation on the external surface. In northern European countries where they use triple glazing with very low U values the phenomenon is understood and accepted. The householders are focused on saving energy and maintaining a comfortable internal environment.

There is not much that can be done to avoid the risk of condensation to the outside. Heating the room more would have an effect but this understandably is not a good option. In many cases the condensation does not last long. A little heat from the sun warms the outer glass enough to evaporate the moisture and a gentle breeze or wind will do the same job.

Self cleaning glass is as prone to condensation as any other glass but the properties of this product means it doesn't allow the water to form beads on the surface of the glass and so you don't see the effect to the same degree.

You may notice that not all of the panes are affected by early morning condensation even in the same window. Even subtle differences in orientation and the position of objects outside the window can change the surface temperature of the glass to the point that one pane suffers and another does not. Any object (be it an overhang, canopy, tree etc.) blocking off the window to a clear night sky will also have the effect reduced or eliminated.

A plus point is the knowledge that your windows are keeping the heat in as they are designed to do thus proving that you have a superior insulating glass product.

If you are experiencing condensation to the inside of the room or there is condensation between the panes of glass then there may be a different problem. Misting between the panes indicates a seal failure and the glass should be replaced. Misting inside the room may be as a result of a failed unit seal but is more likely to be the humidity or moisture content of the air in the room being very high, E.g. from a bathroom or kitchen. Bottled gas heaters produce a lot of moisture and even breathing expels enough moisture in an unventilated space to cause the formation of condensation. Increasing the ventilation to such spaces helps control the problem.

The presence of external condensation in a particular season does not mean that the glass will suffer the same throughout the year. Any occurrence is beyond the control of the window supplier and is a natural result of the environmental conditions.

Article from Pilkington Glass