

Technical Data - Condensation & Visible Marks

We receive a lot of enquiries about the appearance of external condensation particularly in the spring and autumn. This is a natural phenomenon which confirms that your new double or triple glazed windows are working to their optimum performance.



CONDENSATION:

Condensation forms on an object when that object's surface temperature goes below the dew point.

The dew point is defined as the temperature where the air is 100% saturated with moisture - or where the air is at 100% relative humidity.

This window probably has condensation because the surface of the window is below the dew point.

This is not considered a defect. What is happening on this window with the condensation is that the window is performing exactly as designed. It is blocking heat from one side of the IGU from reaching the other side.

Exterior condensation on energy efficient windows is quite common, and it is perfectly normal.

It does not affect either the performance or the longevity of the IGU. The limited warranty is still applicable. Whether a window develops exterior condensation or not is actually a rather complex subject that involves environmental and performance issues. For example, condensation is much less likely to form on a cloudy night.

Trees or other obstructions close to the windows, bushes under the windows, and even the length and angle of the soffit or other overhangs can affect the formation of condensation.

A tiny change in either temperature or humidity from one room to the next might raise or lower the dew point just a little bit and you might see a whole different level of condensation.



SUCTION CUP/LABEL MARKS:

These marks can become visible on the glass face when condensation occurs.

They may appear on the glass surface as a result of the manufacturing or installation process. During these processes, identification labels are applied to the clean surface of the glass as it exits the glass washer, and suction cups are sometimes used to move the glass around the factory.

What causes them is this: If you examine the glass surface under a microscope, you will see the glass has peaks and valleys in it.

Very small, minute particles on the suction cup/label may be deposited on the glass surface and settle into these valleys. The particles are typically not visible, but change the surface composition of the glass surface enough that it affects how water droplets adhere to the glass.

This explains why suction cup/label marks are more visible on wet glass than on dry glass. Over time, with normal exposure to the elements, the suction cup/label marks will diminish or disappear.

In the meantime, they can sometimes be minimized or removed with the use of an acidic cleaning agent (i.e. white vinegar) and brown paper.

