



# The Key to Controlling Condensation.

**Keylite Roof Windows** are manufactured to the highest possible standards and are certified by worldwide recognised certification bodies however water may still condense on the surface of Keylite windows as this is a natural phenomenon.

## What is Condensation?

- Condensation occurs where moist air comes into contact with air, or a surface, which is at a lower temperature.
- Air contains water vapour in varying quantities, warm air will hold more moisture than cold air.
- When moist air comes into contact with either a colder surface or colder air, it is unable to retain the same amount of moisture so the water is released to form condensation in the air or on a surface.
- Condensation is most noticeable on non-absorbent surfaces e.g. Glass, but it can form on any type of surface and not become apparent until a mould growth appears or until it is too late and the material has already been damaged.



Due to the position of Roof Windows they are more exposed to the elements. Thus, they are cooled considerably more than vertical windows and due to the fact that warm air rises condensation will form on the glass of a Roof Window before a vertical window in the same environment.



the key to a brighter life

## Conditions For Condensation

- In Ireland and the UK condensation is a seasonal problem and occurs mainly in Winter but can occur at any time of the year depending on the weather conditions.
  - The moisture in the air comes from a number of sources within the home or building.
  - On average it takes a new building a number of months to completely dry out. During this drying out period the moisture in the air can come from a number of different sources within the building.
  - **New builds** - concrete floors, newly plastered walls, ceilings, rainfall into the building wetting timber and blocks before the roof is put on.
  - **Normal living conditions** - cooking, showers and bath, washing and drying clothes.
  - By assessing your lifestyle within the house, you can reduce the amount of moisture being produced by following these simple points below.
1. When you are finished having a bath/shower, ventilate the room to the outside and not to the rest of the building, by opening the window in the bathroom/en-suite and closing the door. This will help!
  2. Dry your washing outside and by doing this less moisture will be held in the air at any one time. If the washing has to be dried inside pick a cool location within the building and ventilate the room well. Any wet clothes/shoes that are being aired in the house should be kept out of the living areas.
  3. In areas of the building which produce a lot more moisture (bathrooms, kitchens) it may be necessary to add in forced ventilation using extra extractor fans. More expensive systems are available which would not only remove the moist air but reuse the thermal energy which would otherwise be wasted making it an efficient method.
- The effect of generating moisture in the air is made a lot worse by keeping the air trapped in the house/building. It is possible to avoid condensation by having adequate ventilation. In bathrooms and kitchens the warm air contains a lot of moisture and when it spreads to cooler parts of the house/building it will condense on any colder surfaces, e.g. glass.

## Measures to Help Control Condensation

Towards the middle/late part of the twentieth century there was a high level of natural ventilation within buildings, e.g. open fires, draughty windows and doors. Today most buildings are highly insulated (some more so than others) and in turn this is greatly reducing natural ventilation which is vital. The installation of draft excluders, carpets and removing open fires and replacing them with central heating are all factors which add to reducing natural ventilation. Due to this buildings have been more effectively sealed which in turn keeps the moisture created trapped in the building, this creates ideal conditions for condensation to occur.

The recommended relative humidity level is between 5%-8%. This range will provide best comfort levels along with helping to protect wooden products within the building from the damaging effects of excessive moisture or dryness.

If there is too much moisture in the air (over 8%) the building needs to be aired out by opening the windows and doors when and where possible for as long as possible. On dull and damp days this will be harder to do but by leaving the vent flap handles on your keylite windows open this will aid natural ventilation. When the vent flap handle is opened the window is still securely locked.

Extreme cases or in drying out a new build this is not a permanent solution.



**Remember the inside of your building can only dry out if the moisture can get out!!**

**It is unlikely that any home in Ireland or the UK can be totally condensation free, but by keeping the property well ventilated and properly maintained, condensation should not cause you too many problems.**

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