

Condensation Explained

Condensation occurs where humid air comes into contact with air, or a surface, which is at a lower temperature.

Air contains water vapour. The warmer the air, the greater is its capacity for carrying water vapour. When warm, moist air comes into contact with a cooler surface, or cooler air, it drops in temperature, and loses some of its capacity for storing moisture, so some of it is released to form condensation in the air, as steam, or on the surface, as water droplets.

We usually observe condensation on surfaces that cannot absorb liquid, e.g. windows, ceramic tiles etc, but it can form on any surface, and it may not be noticeable until mould appears, or the material starts to rot.

Where Does The Moisture Come From

Day-to-day human activities generate warm, moist air. An average family can generate as much as 10 litres of moisture without really trying:

- * Breathing,
- * Cooking,
- * Personal Hygiene,
- * Laundry

In winter, the moisture content can be increased because of heating, which can also generate moisture, as well as increase the capacity of the air to carry water vapour.

Moisture can also be drawn from the fabric of the building itself, where faults have developed because of, for example, a failed or missing damp proof course, or damaged drainage systems.

Reducing Condensation

The most effective ways to reduce condensation are:

1. Check and repair the structure of the building,
2. Reduce the moisture content of the air, by:
 - * After a bath or shower, open a window to the outside, and close the bathroom door.
 - * Where possible, dry washing outside, where not possible, ensure a window is open to provide ventilation to the outside.
 - * Add powered ventilation/extraction to areas which generate high levels of moisture e.g. kitchen, bathroom etc.
3. Provide good ventilation, to increase the circulation of air.
4. Replacing old single-glazed windows with modern double or triple glazed-units will reduce the appearance of condensation on the glass. However, the moisture in the air is likely to condense somewhere else, quite often behind furniture, or in cupboards.

It is highly unlikely that a house will ever become condensation-free, but by ensuring the building is maintained in good condition, and by adopting relatively minor changes to lifestyle then it can be reduced.