

# CONDENSATION

## WHAT IS CONDENSATION?

Condensation is where moisture is deposited on cooler surfaces, such as internal surfaces of external walls of a building and frequently gives rise to the growth of mould (especially where sustained high humidity is present).

## WHAT CAUSES CONDENSATION?

Condensation can occur naturally as a result of changes in temperature or artificially by the actions of people themselves.

Air naturally contains water vapour (often referred to as “humidity”) in varying quantities and its capacity to do so is related to its temperature, warm air holds more moisture than cold air.

Condensation in flats and houses is often a winter problem particularly where warm moist air is generated in living areas and then penetrates to the cooler parts of the building. As long as the air is cooled sufficiently below its “Dew Point” by the colder surface it comes into contact with, moisture will be released.

In order to have condensation, moisture must be present in the air and this can come from a number of sources within a house. Water vapour is produced in relatively large quantities from normal day to day activities; a 5 person household puts about 10 kg of water into the air every day (without taking into account any heating).

Heating – especially paraffin and flue-less gas heaters. For every litre of paraffin burnt over one litre of moisture vaporises into air. Even carbon fuel produces some amount of water from combustion (1 kg of water equates to about 1 litre).

Moisture can also be drawn from the structure of the building into the internal air; from below the floor or through the walls/ceilings. Buildings can often lack or have insufficient airbricks to allow adequate ventilation of the accommodation and structure.

The effect of moisture “generation” is made worse by keeping the moist air in the property. Usually in certain areas of a property (such as bathrooms and kitchens) the warmer air contains a lot more moisture than other parts of the building.

## MOULD

One of the most common visual effects of condensation, apart from water being deposited on cooler surfaces, is that of mould growth. This will often look like black spots (although it will completely cover a surface when conditions are right).

For mould growth to occur there needs to be a sufficient amount of clean water available (in relatively humid conditions) for extended periods of time.

Mould can be removed from surfaces with an antiseptic solution such as Dettol or other suitable solution. Special paints can be applied which may help prevent growth of mould but the only permanent cure is to reduce the amount of condensation in a property.

## ***WAYS TO CONTROL CONDENSATION***

There are three primary measures that can be taken to prevent condensation. These are to:

- Increase ventilation – to remove moist air from the building and not allow it to come into contact with cold surfaces.
- Increase insulation – to prevent a cold surface reaching below “Dew Point”.
- Maintain consistent heating – to prevent the structure to become cold.

## ***PRACTICAL THINGS YOU CAN DO***

- Leave some background heat on through the day in cold weather. Most dwellings take quite a long time to warm up and it may cost you more if you try to heat it up quickly in the evening.
- After a bath or shower, try to ventilate the room to the outside, not to the rest of the property – just opening a window or the extractor fan (and closing the door) will help.
- Ideally dry clothes out of doors. Where this is not possible, dry them in a cool area of the house or flat. Whilst this will take longer, less moisture can be held in colder air and with good ventilation, the risk of condensation is lower.
- When people come in with wet coats, hang them outside the living area to dry.
- Try to increase the change of air in the premises – increase ventilation. Trickle vents can be added to double glazed units.
- Add forced ventilation/extraction to areas which produce a lot of moisture (kitchens and bathrooms). Extractor fans are available with an air-moisture switch so that they operate automatically while the moisture in the air is above a set amount.
- Consider using a dehumidifier.
- Don't overfill cupboards and wardrobes, always make sure that some air can circulate freely by fitting ventilators in doors and leaving a space at the back of shelves.