



The  
Property  
Institute

**ADVICE NOTE**

# CONDENSATION

How to control condensation problems in your flat



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## NOTE

As the leading trade body for residential leasehold management, TPI is also an important resource for leaseholders. Our Advice Notes cover a range of topics on the leasehold system to help leaseholders understand their rights and responsibilities and ultimately get the most out of living in their flat.

## SUMMARY

Condensation can cause real problems if left uncontrolled. Apart from running water on the inside of windows and walls, it can also lead to mould forming, decaying window frames and damage to fixtures and fittings.

In this Advice Note, we'll take a look at some of the things you can do to combat condensation in your flat.

### What is condensation?

The air naturally contains water vapour. The amount of moisture it can hold is determined by its temperature — warm air holds more water than cold air.

Condensation occurs when warm, moist air comes into contact with a cooler surface. The drop in temperature means it can no longer hold on to the same amount of moisture it was retaining, and the water is released onto the cooler surface.

Condensation can occur naturally as a result of changes in temperature or artificially by the actions of humans. In Britain it's often a winter problem, usually caused when warm moist air generated in living areas comes into contact with colder parts of the building.

For condensation to form, the air must contain moisture. Water vapour can come from a number of sources within a home and it's produced in relatively large quantities from normal everyday activities. A five-person household for example produces about 10 kg of airborne water each day:

- Breathing (asleep) 0.3 kg
- Breathing (awake) 0.85 kg
- Cooking 3.0 kg
- Personal washing 1.0 kg
- Washing and drying clothes 5.5 kg
- Heating — especially paraffin and flueless gas heaters. For every litre of paraffin burnt, over one litre of moisture vaporises into the air. Even carbon fuel produces some water from combustion (1 kg of vapour 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 and ceilings. Buildings often lack sufficient airbricks to allow adequate ventilation.

Condensation is often made worse by keeping the moist air in the property. In certain areas of a home, usually in bathrooms and kitchens, the warmer air contains a lot more moisture than other parts of the building.

### New homes

The materials used to build a house (mortar and plaster for example) contain a lot of moisture, which gradually dries out as the home is occupied and heated. But this can take some time, which is why newly built houses are especially prone to condensation. It usually takes 9–18 months for them to dry out completely and owners may need to use more heat during that time.

If you have moved into a new home you should take steps to prevent damage during the drying out process.

### Mould

One of the most noticeable effects of condensation, apart from water forming on cooler surfaces, is mould. This often looks like a collection black spots but it will completely cover a surface when conditions are right.

For mould to grow, there needs to be enough clean water available and relatively humid conditions for extended periods of time.

Mould not only causes cosmetic issues by staining surfaces, but it can also lead to health problems, particularly for people with allergies or respiratory conditions.

Mould can be removed by washing the surface with a bleach type solution. Special paints can also be applied to help prevent its growth. But the only permanent solution to mould is to reduce the amount of condensation in a property.

### Ways to control condensation

There are three primary ways to control condensation in your home:

1. **Increase ventilation** to remove moist air from the building so it doesn't come into contact with colder surfaces.
2. **Increase insulation** to prevent cold surfaces from dropping below the 'dew point' (the temperature at which water vapour in the air condenses into liquid water).
3. **Maintain consistent heating** to prevent the structure of the building becoming cold.

### Practical things you can do

Here are some simple steps you can take to help stop condensation forming in your flat:

- Leave some background heat on throughout the day when the weather's cold. Most homes take a long time to warm up and it may cost you more to try and heat your flat quickly in one go in the evening.
- After taking a bath or shower try to ventilate the room to the outside, not to the rest of the property. Simply opening a window or turning on the extractor fan and closing the door will help.

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- Dry your washing outside if you can. If that's not possible, dry it in a cool area of your house or flat. This might take longer but less moisture can be held in colder air so with good ventilation, the risk of condensation will be lower. If people come in with wet coats, hang them outside the living area to dry.
- Try to increase ventilation in rooms that produce a lot of moisture like kitchens and bathrooms. Extractor fans can be installed that operate automatically when moisture in the air hits a certain amount. Heat exchangers, although more expensive, remove moist air and reuse the thermal energy within it. Trickle vents can also be added to double-glazed windows.
- Consider using a dehumidifier – they can remove a surprising amount of water from the air.
- Try not to overfill your cupboards and wardrobes. Always make sure that air can circulate freely by fitting ventilators in doors and leaving a space at the back of the shelves.
- Don't use paraffin or LPG heaters. They're probably not allowed in flats anyway.

#### And if it still doesn't go away...

If you've tried all of the above but still losing your battle with condensation, you could consider taking more drastic action:

- Installing simple secondary glazing to your windows can help. This consists of little more than a sheet of glass (or plastic) screwed to the window frame with a seal in between, and it's relatively cheap. But you shouldn't fix it to all opening windows, as some ventilation is essential. DIY kits are available which allow the secondary glazing to be temporarily removed or opened to allow the original window to be opened for ventilation.
- A more expensive option would be to install full double-glazed windows. This is very effective against condensation.
- Some decorative materials like ceramic tiles and mirrors always have cold surfaces and are well known for allowing condensation to form. There's not much you can do about this other than keeping the room evenly heated throughout the day or improving ventilation.
- Some wall surfaces can also be a problem. Where a wall has been papered many times over it can act like blotting paper making condensation worse. Ideally, all the layers should be stripped and the wall re-papered. You can also improve things

by lining the walls with thin expanded polystyrene (normally available from a wallpaper supplier) before you hang new wallpaper.

- Painted walls can also have a cold surface. If you don't want to paper your walls, consider lining them with wooden panelling or another material such as cork tiles.
- Ceilings under the roof will suffer from condensation unless they're insulated. False ceilings can also be installed. Financial grants may be available from your local authority for such work, so you should check up on that. Additional insulation will not only reduce condensation, but also reduce energy loss and so save money in the long run.
- Where ceilings have a high gloss finish, consider covering them with expanded polystyrene, cork or fibre tiles; alternatively wooden panelling can be installed.
- Solid floors are often cold because of their large thermal mass so they take longer to warm up. Even vinyl floor tiles tend to be cold. However there are warm flooring alternatives available such as cork or cushion tiles.

**Remember:** You may need permission from your managing agent, freeholder, or in some cases your local council (e.g. if the building is listed) to carry out some of the improvements described above. Check with your managing agent first.

#### Final word

It's unlikely that any British home can ever be 100% condensation free. But by keeping your property well maintained and being aware of how your lifestyle can cause condensation, you should be able to live without it putting dampener on things.

#### Further information

- The National House Building Council (NHBC) publishes a guidance note on condensation in the home. They also have advice on dealing with condensation in new homes. Visit: [www.nhbc.co.uk](http://www.nhbc.co.uk)

#### Note:

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