
CONDENSATION

WHAT IS CONDENSATION?

When water is heated it changes into vapour. Condensation occurs when the vapour cools and changes it back into liquid. When air is humid condensation will occur at the slightest drop in temperature. For water to condense, the air within an apartment has reached a level of humidity where the dew point is above the temperature of a surface on which condensation is occurring. Indoor condensation can cause damage to fabrics, discolour paint and wallpaper but, more importantly, it promotes conditions suitable for the growth of mould.

WHAT CAUSES CONDENSATION?

Condensation with buildings can be caused under a number of factors. Condensation occurs when warm air collides with cold surfaces, or when there's too much humidity in your home. While condensation is rarely a problem in the summer, the amount of water in the air (otherwise known as the humidity) inside our homes is higher during the colder months. When the outside temperature drops, water can start to appear inside your home, especially on windows and walls.

WHAT CONTRIBUTES TO HUMIDITY IN A PROPERTY?

Operations within the property causing the humidity level to become elevated.

These operations include:

- High numbers of people within the apartments (respiration and/or perspiration), or
- High amount of steam escaping from bathrooms (due to exhaust fans not being operated), or
- Washing of clothes using hot / warm water without an exhaust fan, or
- Traditional Dryers being used within apartments (see note below) or clothes drying generally, or
- Cooking equipment, or
- Heavy personal exercise within the apartment, or
- Plants, pets and fish tanks can also increase humidity levels, or
- Poor maintenance of plant and equipment, or
- Building defects such as leaky plumbing, roof defects, covered passive vents and broken seals on doors or windows.
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- Poor apartment ventilation --- apartments are provided with ventilation (as required by the Building Code of Australia).
- Internal room temperature – as this affects the dew point condition and the internal temperatures of the facade.
- Any combination of the above factors.

Moisture generated within the apartment will remain in the space unless a window is opened, the air conditioning system is used in cooling/dry mode or any of the exhaust air systems (range hood or bathroom exhaust fans, dehumidifiers) are used.

WHAT CAN BE DONE TO REDUCE HUMIDITY?

- Ensure that exhaust systems are utilised for bathrooms and cook-tops operations. Allow these to run for a period after use.
- Using lids on cooking equipment and using the kettle near the range hood when boiling water.
- Ventilating apartments can be effective to reduce apartment moisture levels. Even opening a balcony door or external window a small amount can assist.
- The A/C units are effective in dehumidifying the apartment. Run the A/C on cooling/dry mode to dehumidify the apartment.
- Maintain low constant heat when weather is cold or wet. Continuous, even heating is better than short bursts
- Insulate hot and cold surfaces, such as water pipes.
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- The use of portable dehumidification equipment. These systems are commercially available (and are commonly used in humid environments such as Hong Kong or Singapore) and can operate in conjunction with the heating systems within the apartment.