



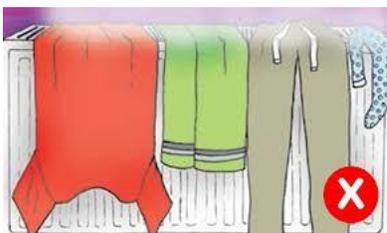
Revision	1.2
Date	Mar-16
Author	CR

Condensation Control

Condensation is caused when the water vapour generated through the day is no longer held in the air by the heating and forms as condensation on windows, walls, and cold surfaces within the property.

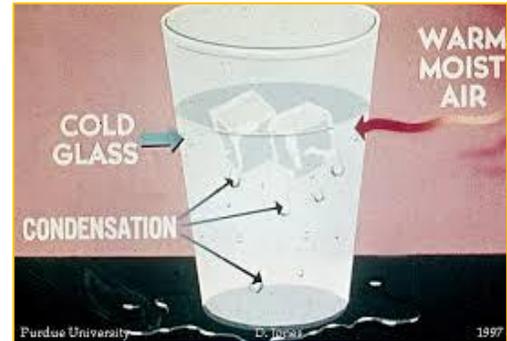
The internal temperature at which water vapour turns to condensation is called Dew Point temperature. This is not a specific temperature. It is a temperature that varies property by property and even room by room.

Water vapour is built up through the day in a household in various ways. In a household of just two people up to **15 pints of water** are held in the air from the following activities:





A useful example to help explain this process is one that we all get to enjoy from time to time. Think of when you take a cold can of drink out of the fridge and pour it into a glass and add some ice. In a short time, the glass has formed condensation on the outside and we sometimes need to use a napkin to wipe it down.



This mostly occurs in the summer months but it is exactly the same principal of what occurs in our properties during the cold winter months on the cold glass in windows, window frames, cold external walls, cold ceilings, etc.

Therefore, in a household of 5 or 6 people, a couple of pets, a fish tank, all carrying out the normal daily activities shown above the volume of water vapour generated can easily reach 25 – 30 pints of water or 17 litres.

That would be enough to fill a drum that looks like this:

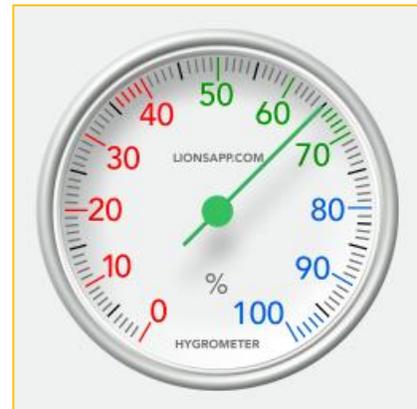


Imagine the effect of simply pouring this drum full of water on walls and windows not once but several times a week!

Mould spores, which are present in our lives every day but normally in such small levels they are unable to do any harm, only require water as their food source to thrive and develop. Condensation provides their food source!

So how do you stop this much water vapour being generated or ending up as condensation turning to black mould!?

Quite often the advice provided is to turn the heating up and keep it on for longer. It is true that warm air holds water as vapour content provided the temperature does not drop down to below dew point temperature but of course, not everyone has the funds available to run their heating system for long periods of time.



The best solution is to control the internal levels of humidity. Humidity is the measurement of water vapour held in the air. If humidity exceeds 70% on a consistent basis condensation forms on a regular basis leading to black mould growth.

Maintain humidity between 40 – 60% and this will not be a problem.

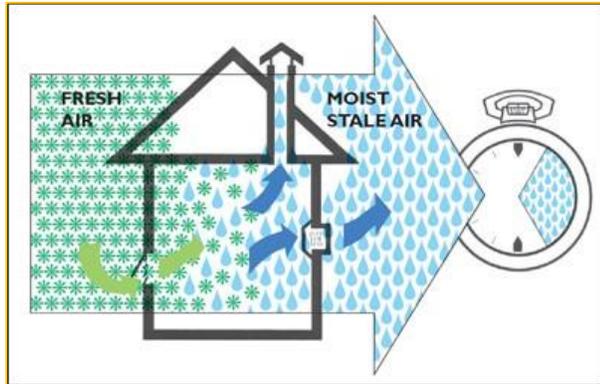


How do we control humidity within this range?

Well it is a balance of measures. The first and most important measure which provides the best results is to ventilate the property using window openings from front to back, side to side and on all floor levels. What we need to achieve is a change of internal air quality on a regular basis.

Ideally, a residential property should achieve a complete air change once every hour. This is the process whereby the existing internal air conditions are refreshed one time every hour. Rather like a conveyor belt process of new, fresh air coming in through the front of the house and pushing the stale air out through a window at the back thereby keeping the change of air going on.

This image helps to demonstrate this important process:



However, we don't always want to do this in the winter months as we don't want to lose out heat by letting in cold air which is akin to a waste of money:



This is where the balance comes in.

When it's cold outside, the idea of changing the air every hour by opening windows doesn't appeal to us. It can sometimes be more humid outside than inside which would also not make sense to open windows. In this case we should, where possible, maintain an ambient heating level and be thoughtful about controlling and limiting the water vapour being generated through the day.



If you have extract fans in the bathroom and kitchen, (ideally you should have), then use them and make sure they run for at least 15 minutes after you have finished cooking, showering or bathing.

Keep doors to Kitchens, Bathrooms and Utility rooms closed. Ensure tumble dryers do not ventilate inside of the property. Keep the lids on fish tanks, lids on saucepans. Do not dry towels and cloths directly on radiators and if at all possible, do not run paraffin fuel burners.

If you can apply a balance of background heating, being careful to reduce vapour content and where possible, have windows on a small opening for as much as possible you should be able to maintain the internal humidity between 40 – 60% and you will not have a condensation issue.

It is a very useful investment to purchase a LCD display hygrometer. Place it in a central part of the property or badly affected rooms to provide you with a current reading of the level of humidity inside. For just a few pounds this product helps to focus on keeping the humidity down with a balance of heating, ventilating and mindful not to generate too much vapour content ensuring you do not get condensation and black mould growth.



Other measures to make cold, external walls less cold by way of insulating can be considered but ultimately, the cure to end all condensation issues is to ventilate as much as possible.

If you have ongoing condensation damp issues and suffer from black mould, Alliance Remedial Supplies have advised and supplied materials to hundreds of Landlords, Homeowners, Damp Proofing companies and property maintenance contractors and are happy to advice on solutions for condensation and black mould.