

# *Condensation*

Where does condensation come from? How do I get rid of the condensation? How much humidity is the right amount? I bet these are some of the questions that are running through your mind, or maybe, you have some other questions. This letter will explain these questions and more and it will help you understand condensation and how it works. It was really helpful for me.

## **Where does condensation come from?**

In today's energy-efficient homes; they are built more airtight than ever. But in addition to sealing in warmth and air conditioning, they also tend to hold in too much moisture filled air. If your home contains excessive moisture and it's cold outside, the first place you'll see it is on your windows. You may think this means there's a problem with your windows, but there's not. In fact, the vast majority of window condensation problems are not the result of faulty windows. The windows are just indicating that your home needs added ventilation to lower the amount of moisture in the air.

## **Can condensation damage your windows?**

An occasional bead of moisture on the glass of your windows usually isn't a problem. For example, it's likely your bathroom mirror and windows will steam up after a hot shower. Or your kitchen window may fog up when you're boiling food on the stove. But in both these cases, the moisture clears in a matter of minutes.

However, if your windows are "sweating" at other times – or stay that way for any length of time – you probably do have a problem.

Although the glass itself may not be affected, dripping condensation and excess moisture can not only damage your windows but potentially your entire home.

- Wood frames and sash can warp and become difficult to operate.
- Paint can peel and other finishes become mottled or stained.
- Insulation can become damp, damaging ceilings and walls
- Exterior siding and finishes can become blistered and warped.
- Interior surfaces can become breeding grounds for mold and mildews.

This is why it's so important to take steps to control and eliminate excess moisture.

## **Where does all the moisture come from?**

In one word, everywhere.

- In the kitchen, moisture is generated by cooking food, using the sink, running the dishwasher.
- In the bathroom, from showers, hot tubs and spas.
- Washers and indoor-vented dryers contribute as well.
- Basements and crawl spaces can channel dampness from the ground into your home.
- Even breathing and perspiration adds moisture to indoor air.

Collectively, a family of four can easily generate up to 18 gallons of water a week in the form of humidity inside your home.

### How can you get rid of excessive moisture?

To lower your home’s humidity levels, you need to increase ventilation and decrease the source of moisture.

- Make sure you have good ventilation in high-humidity areas: bathrooms, the kitchen, laundry areas and in the basement.
- If you already have adequate exhaust fans and dehumidifiers in these areas, try running them for longer periods of time.
- Take shorter showers and install water-restricting faucets – you’ll lower the humidity and your energy bills as well.
- Cook a little differently; keep pots and pans covered to hold in moisture. Use your microwave instead of boiling on the stove. Slow-cooking crock pots are energy-efficient and moisture-efficient too.
- Check and reroute drainage away from your home, to minimize the moisture in and around your basement and foundation.

### How much humidity is the right amount?

You’ve probably heard that your home will feel warmer in the winter if the humidity is higher. That’s true, and why many people use humidifiers to counteract dry, static-filled air during the heating season.

In older homes excess moisture usually isn’t a problem because the structure “breathes” through unsealed cracks and crannies in the construction, creating a regular exchange of outdoor and indoor air. That’s why it is often a struggle to keep enough moisture inside older homes.

But with today’s modern construction techniques, homes are much tighter and energy-efficient. As a result, newer homes don’t usually need a way to add moisture – they’re more likely to have trouble getting rid of it.

So how much humidity is enough to keep us comfortable without dampening our surroundings? Refer to the following guide for temperature and humidity levels that are generally considered comfortable.

Not sure what the humidity level is inside your home? Ask a HVAC (heating, ventilation and air conditioning) contractor to measure it for you.

### Suggested relative humidity levels for maximum indoor comfort\*

Indoor Air Temp.	Outdoor Air Temp.	Relative Humidity Indoors
70 Degrees (F)	-30 Degrees (F)	Not over 15%
70 Degrees (F)	-20 Degrees (F)	Not over 20%
70 Degrees (F)	-10 Degrees (F)	Not over 25%
70 Degrees (F)	0 to 10 Degrees (F)	Not over 30%
70 Degrees (F)	10 to 20 Degrees (F)	Not over 35%
70 Degrees (F)	20 to 40 Degrees (F)	Not over 40%

\*Source: University of Minnesota

### What is relative humidity?

Relative humidity is a measure of the amount of water vapor in the air compared to the maximum amount possible at a given temperature.

### **What else can you do to lower excessive indoor moisture levels?**

The basic principle of reducing window condensation is simple. When there's too much condensation on your windows it means the humidity is too high in your home for the current conditions outside.

Here are some additional actions that may help reduce excessive humidity levels:

- Open your windows occasionally to vent excess moisture
- If the condensation is on the storm window, open it periodically to vent excess moisture.
- Open drapes and blinds to allow warm house air to circulate against the window.
- Turn off your furnace humidifier or other home humidifiers.
- Make sure dehumidifiers are working properly and well drained.
- Be sure the louvers in the attic or basement crawl space are open and are of adequate size.
- Run ventilating fans in the kitchen and bathroom longer and more often.
- Air out your house by opening a door or window for a few minutes after the bathroom , kitchen or laundry has steamed up.

If moisture problems still persist, talk to a HVAC professional or your gas or electric company. They may have additional suggestions for reducing humidity, including venting gas-burning heaters and appliances, adding ventilation fans or getting an air-makeup unit for your furnace which takes outside air and warms it up.

### **Is there any condensation that's temporary?**

There are two causes of temporary window condensation, and they normally disappear after a few weeks.

First, there is moisture that comes from new construction or remodeling. There's moisture in new wood, plaster and other building materials. When the heating season starts, this moisture gradually flows into the air of the home. After a few weeks, or at most, a season of heating, this moisture will disappear.

Second, this same type of moisture can accumulate in a milder form at the beginning of each heating season. During the summer, your house absorbs moisture. After a few weeks of heating, your home will "dry out" and you'll have less trouble with window condensation.

### **What if there's condensation between the two panes of glass?**

As building experts often point out, windows should not be blamed for condensation. They merely are an indicator of too much moisture in the air.

In the unlikely event you see condensation between the panes of glass in an insulating window, contact the H Window Company LLC. Moisture between the two panes of glass means that the seals in your glass have failed.