

Condensation in your Conservatory – Cause and Remedy

What is condensation?

Condensation is moisture that can be evident on the surface of glazing and skeleton of your conservatory. Condensation is actually the result of high humidity levels in your home. The problem is more prevalent on the glass of your windows because the surface condenses more visibly. This means that the glass has the lowest temperature of any visible surface in your home. It needs to be noted that if moisture is visible here, it could be happening elsewhere as well. Problems such as peeling paint, rotting wood, mildew or moisture spots are typical symptoms of condensation.

The new conservatory is not the cause of condensation, it is simply an indicator of a larger problem.

Humidity

Humidity is the amount of moisture in the air. It may come from various sources. Your home needs a certain amount of moisture, but deciding how much you need is a critical decision.

The following chart will help you with the moisture level of your home; reducing humidity while maintaining comfort. The chart is based on the inside relative humidity for a 70° indoor temperature.

Outdoor Temperature	Recommended Humidity Levels
+20 F & Warmer	35-40%
+10 F	30-35%
0 F	25-30%
-10 F	20-25%
-20 F	15-20%

Moisture

Moisture may come from a variety of sources. Various activities and how much moisture a family of four contributes to their living environment are shown below:

- Normal Breathing ---1/2 pints per hour
- Cooking (3 meals a day) --- 4 to 5 pints per day
- Showering --- 1/2 pint each
- Plants --- 1 pint per day/per plant

Average daily living activities can contribute more than 18 gallons of water per week for an average family of four.

It's Cause

The cause of the condensation is extreme moisture in the air. When warm air meets a cooler surface, it condenses. This creates the visible moisture you see on the surface of your conservatory.

Too Much Humidity

If there is moisture on the internal surface of your conservatory, it is important to check your entire home. Problem areas could reveal themselves as damp spots on ceilings and walls.

Location & Time

Some regions are more prevalent to condensation than others. Generally areas that reach 35° Fahrenheit or below in the winter months are more susceptible to condensation.

Interior condensation is more likely in the winter months. This happens when moisture in the air contacts a surface whose temperature is lower than the dew point (the temperature in which air manufactures dew).

Exterior surface condensation usually occurs on sultry, humid summer days. An example would be that moisture forms on the outside of a window in the summer when an air conditioner is being used in the home. This creates a surface temperature of the glass below the dew point.

New Home vs. Old Home

You tend to see less condensation in older homes. People were not so concerned about humidity levels or energy efficiency of a home years ago. Newer homes are manufactured more air tight. This leaves the moisture trapped or locked in the home. This means that newer homes leave no outlet for the humidity to escape unless steps have been taken to vent the moisture during construction.

Measuring Humidity

Although there are scientific measures to determine the humidity levels in your home, most homeowners do not have access to such means. An easier way for the average person to monitor humidity is to watch for the obvious signs in your residence. When you see the start of condensation on your windows, this is a sure sign that your humidity is reaching a level that could be too high.

Reducing Humidity

There are some steps that can be taken to reduce your indoor humidity level. One way is to make sure that all appliances requiring a vent are vented properly. This includes items such as clothes' dryers, gas heaters and exhaust fans. Exhaust fans are an excellent way to increase the air flow and reduce humidity if installed correctly. Areas that would profit most would be bathrooms and kitchens.

Another option is to make sure that your home is properly vented. There are a couple of ways to achieve this desired effect. One solution for more severe cases would be to open a window in each room for a short period of time. This is a very temporary solution.

A more permanent solution would be to install an air conditioning unit in the conservatory, this unit can help control the humidity level of the air inside the room whilst offering temperature and ventilation control.

Blinds and Curtains

Restricting the air flow to your windows can contribute to a possible condensation problem. The condensation is more likely to occur when window coverings are too tight to the windows- constricting the flow of warmer air.

Temporary

Your condensation problem may be only a temporary situation, three examples of this are:

The first is when a new home and/or conservatory are built. A great deal of moisture is released from the building materials such as wood or plaster. During the winter months, the moisture will be discharged in to your home. This circumstance usually occurs only during the initial heating season.

The second is during the initial heating months of the winter. This is simply humidity stored in your home. This symptom should gradually dissipate during the season.

The third is a severe, rapid change in the temperature over a short period of time during the winter.

New Construction

When planning your conservatory, here are some helpful suggestions that should be considered;

- Choose a pvc-u clad system instead of aluminium. Metal is a much poorer insulator than plastic.
- Choose glazing that helps reduce heat loss, low emissivity glass units or 25mm multi-wall polycarbonate offer good insulation values.
- Make sure that all appliances (such as dryers or exhaust fans) are properly ducted, sealed and vented to the exterior of the home (and not into the conservatory which may now cover ducts and kitchen windows). Gas appliances should be a major concern. Water vapor is one of the by-products of gas combustion.
- Make sure that your builder has considered the most appropriate way to keep soil moisture from permeating the base or foundation. A suitable damp proof membrane correctly lapped into new and existing damp proof courses is essential.
- Make sure that your builder has installed sufficient insulation in the new floor and walls of the conservatory.

Summary

This is a general overview of the condensation problem and may not apply to every person or situation. The main thing to remember is that condensation is not due to the new conservatory but due to the high humidity in your home with insufficient thought to ventilation and heating.