

Condensation

You may find condensation on your home's window panes under certain circumstances. Contrary to what you might think, this may be evidence of good construction quality. Indeed, a well-designed and -constructed building envelope will retain humidity indoors and, when the humidity gets too high and comes in contact with a colder surface, such as windowpanes, condensation will form.

Condensation is a phenomenon that occurs in many places. A simple example that most of us have experienced is water droplets forming on a glass containing a cold beverage on a hot summer's day. See the info sheet, *Controlling Indoor Humidity*, page 104, for an explanation on relative humidity and how to control indoor humidity.

When moisture-laden air comes in contact with materials inside your home that are colder than others due to their insulation value or composition, this water vapour transforms into liquid water, which is called "condensation".

Excessive condensation can lead to the deterioration of these materials and the growth of mold over time. Such wet areas must therefore be dried when there is excess condensation.

Condensation on Windows

Although it is normal to find condensation on your windows on a very cold winter's day or during certain activities inside your home (meal preparation, several showers taken in a row, a large gathering, etc.), it should be a temporary phenomenon.



If you regularly find condensation, it is likely that your home does not have sufficient ventilation. Increase the ventilation, but don't overdo it. Excessively dry air can lead to a lot of problems, and drastic changes should be avoided. Refer to the info sheet, *Primary Ventilation*, page 85, to finetune your management of the ventilation system.

Condensation on Cold Walls



During the summer, the relative humidity is very high and the soil along the edge of your foundation is cool. Condensation may form on your basement walls or even basement floor. For example, on a hot summer day when humidity is 70% and the temperature 30°C, the dew point (when condensation forms) would be 23°C. This means that, when air comes in contact with a surface the temperature of which is below 23°C, the water vapour will transform into water droplets.

You might also see condensation on other surfaces such as toilet bowls or some plumbing pipes. This is normal on hot, humid days but should not occur on a regular basis. If this is the case, you should insulate these components or take the necessary corrective action. Refer to the *Plumbing* section, page 65.

You can reduce and control humidity by following the recommendations on the info sheet, *Controlling Indoor Humidity*, page 100.



To prevent condensation problems on your walls or windows, here are some precautions you can take:

In winter (and on cold days in spring and fall):

- *Keep your curtains open during the day. This will allow the air to circulate and condensation to dissipate.*
- *Removing your window screens is also recommended.*
- *To prevent air from being trapped in colder areas, do not place large furniture and boxes against walls; leave adequate clearance.*
- *Also do not overfill closets installed against outside walls.*

In summer:

- *Do not open basement windows on humid days.*
- *To prevent air from being trapped in cooler areas, do not place large furniture along the basement walls; leave some clearance.*
- *Also do not overfill your closets.*
- *Refer to the Ventilation section, page 81, for recommendations concerning the use of your ventilation system in summer.*