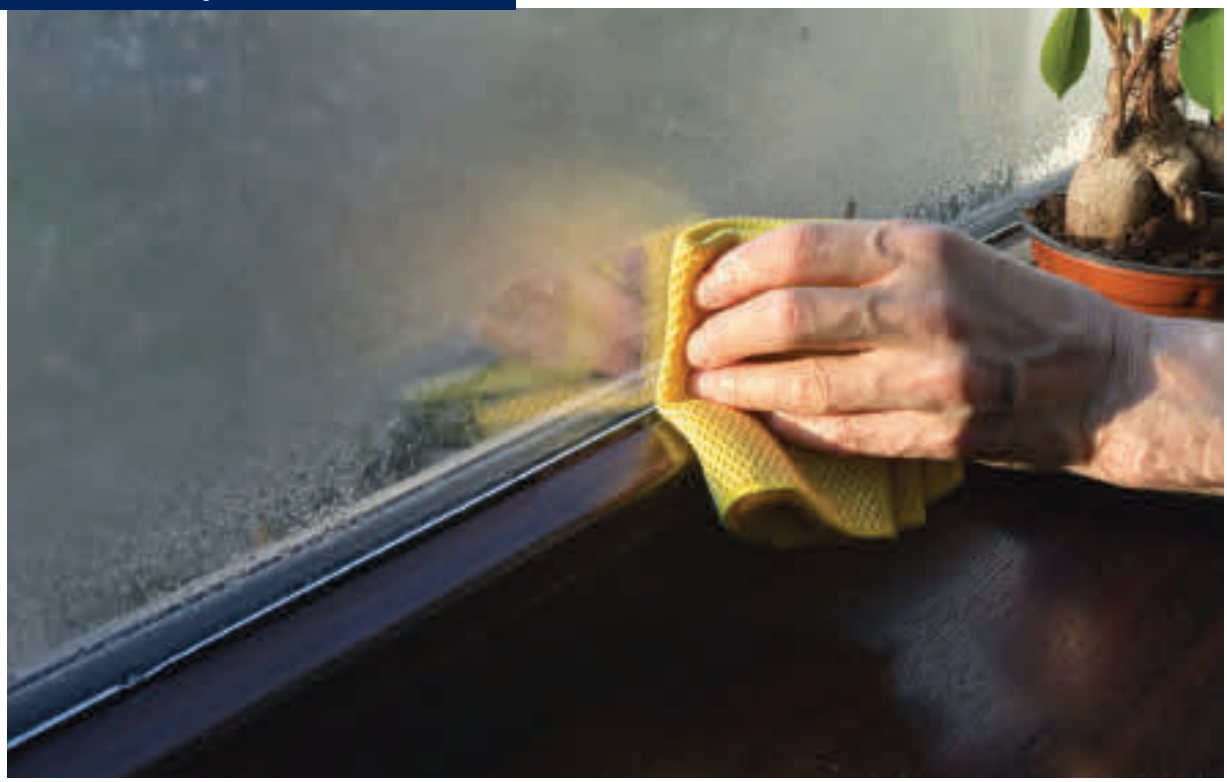
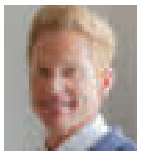


Let's Talk Condensation!

By Nathan EF Atkin

"I can't see out of the windows!" is a familiar complaint managers and board members receive from angry residents because their windows are dripping with condensation. Water vapour drips down the glass and pools on the sill, paint peels, and the casement is damaged. On occasion, it may even cause the formation of the dreaded "M" word — mould!



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What is Window Condensation?

Simply stated, condensation is the process that turns vapour or moisture that is present in the air into water, or in other words, the transition of H2O from a gas state to a liquid state. One of the biggest misconceptions homeowners have about condensation, however, is that it is caused by a problem with the window or window surface. At first glance, we cannot blame homeowners for thinking this way.

In reality, the cause of the window condensation is simple science, but explaining that to an angry owner can be a challenge!

How does Condensation Form?

Condensation on windows typically forms when the temperature outside drops quickly, such as in the fall when the days are warm and evenings cold, creating a contrast in temperature between the inside and outside air. The warm, moist air molecules inside the unit come into contact with the cold glass pane and condensation forms on the window.

Why is There More Condensation on my New Windows?

Another common complaint that often dominates AGM meetings, management reports and office hours is owner correspondence related to excessive condensation on new windows.

Why would you experience higher levels of condensation on new windows compared to older ones? Older windows are often poorly insulated and have a great deal of air leakage around operable sashes and framing. This means that a great deal of the moisture in the air that is caused by lifestyle (for example cooking, drying clothes, humidifiers, etc.) has a means to escape. New windows, however, are airtight and energy-efficient with tight seals that prevent any air, moisture and humidity from pass-

ing through. This moisture touches the glass pane and condenses into water droplets.

How Can We Prevent Window Condensation?

Here are some very useful tips that can be posted or distributed to residents to help them reduce their window condensation:

1. Turn off humidifiers (you may also connect a de-humidifier).
2. Have the ducts cleaned (dryer ducts are particularly important; kitchen vents & bathroom vents can be cleaned as well).
3. Turn on exhaust fans when: showering, drying clothes, cooking, etc.
4. Open operable windows when cooking & showering.
5. Remove plants from the home.
6. Circulate the air (use fans, especially near windows)
7. Always keep window coverings open during the day (curtains, blinds, drapes, etc.). This is particularly important because the space between the window glass and closed drapes acts like a sauna and produces a great deal of moisture and water vapour on the inside of the windows.
8. Raise the interior temperature by ensuring the heating systems are turned on.

For monitoring and managing humidity and condensation, it is recommended to have a hygrometer onsite. A hygrometer is a relatively inexpensive measurement device to read the humidity levels in the air. This can help a great deal when showing residents what their humidity levels are and why they are experiencing window condensation. The ideal relative humidity for both health and comfort indoors varies with the outdoor temperature, as follows:

Outside Temperature	Maximum Interior Humdity
Warmer than -5°C	35% - 40%
-11°C to -5°C	30%
-17°C to -12°C	25%
-22°C to -16°C	20%
Colder than -22°C	15%

Window Condensation can be a very challenging topic for managers to address with their boards and residents. However, when you are equipped with the best science and the most accurate information, you can provide confident responses that are as clear as glass! ■

Nathan EF Atkin, BA, RCM, is the President of AlumaPrime Inc. and has been a proud member of ACMO for 15 years. AlumaPrime Inc. (formerly Lucid Window Solutions Inc.) is a fabricator, supplier and installer of architectural aluminum building products specializing in aluminum windows and doors for multi-residential properties providing services for Condominiums and REIT companies across Canada.
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