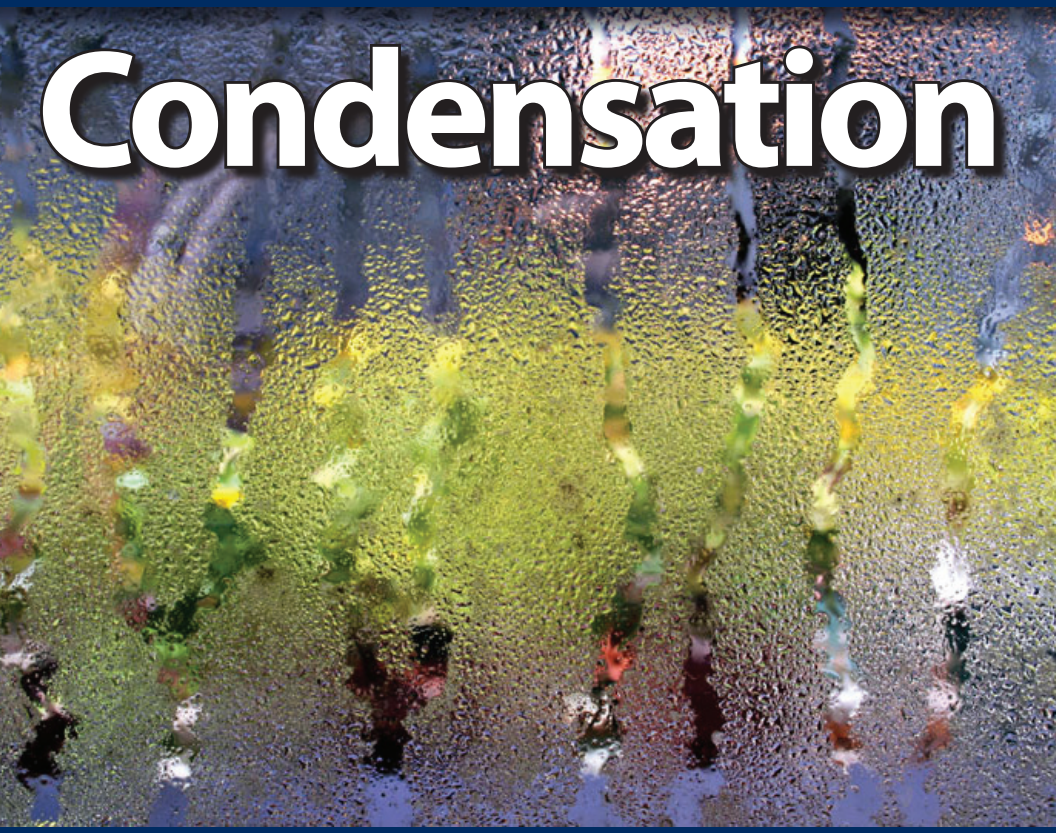
Condensation



It's not your Windows, It's the Humidity.

A comprehensive guide to controlling the humidity inside your home.

THOMPSON CREEK
WINDOW COMPANY®

What is window condensation?

Condensation is the fog that suddenly appears in cold weather on the glass of windows and sliding glass doors. It can block out the view, drip on the floor; freeze on the glass—all annoying. It is natural to blame the windows, but you shouldn't.

What causes window condensation?

Window condensation is the result of excess humidity in your home. The glass only provides a cold surface on which humidity can visibly condense. The fog on your windows is a form of condensation; so is the water that forms on the outside of a glass of iced tea in the summer and on the bathroom mirrors after a hot shower. Condensation usually occurs first on windows because glass surfaces have the lowest temperature of any of the interior surfaces in the house. When the warm moist air comes in contact with the cooler glass surfaces, the moisture condenses.

The important thing is, your foggy windows and sliding glass door are trying to tell you to reduce indoor humidity before it causes hidden, costly problems elsewhere in you home. Problems like peeling paint, rotting wood, buckling floors, insulation deterioration, mildew, even moisture spots on ceilings and walls.

Foggy windows and sliding glass doors are the indicators, the warning signs, that humidity could be damaging your home!

How can my home have indoor humidity?

Humidity is a water vapor, or moisture in the air. All air contains a certain amount of moisture, even indoors.

Where does the moisture come from?

There are many things that generate indoor moisture e.g. humidifiers, heating systems, even plants. Cooking three meals a day adds four to five pints of water to the air. Each shower adds ½ pint. In fact, every activity that uses water (like a dishwasher, mopping floors, doing laundry) adds moisture to the air. More water vapor in the air means a higher indoor humidity. High indoor humidity means condensation.

How much indoor humidity is too much?

The homeowner can use the windows as a guide to the proper humidity level within the home. If objectionable condensation occurs on the inside of the windows, the humidity is too high.

To avoid excessive condensation, the following humidity levels are recommended in the house:

Outside Temperature	Inside Relative Humidity
-20° F	15 to 20%
-10° F	20 to 25%
0° F	25 to 30%
+10° F	30 to 35%
+20° F	35 to 40%

Will reducing the humidity in my home help control condensation?

Eliminate the excessive humidity, and you will eliminate most—possibly all—of the condensation.

How can I reduce the humidity in my home?

Control the sources of moisture and increase ventilation. As a temporary solution to an acute problem, open a window in each room for a short period of time. Opening windows allows the stale, humid air to escape, and fresh air to enter. After showers, open the bathroom window, or turn on the exhaust fan, so steam can go outside instead of remaining in the home.

Vent all gas burners, clothes dryers, etc. to the outdoors. Install kitchen and bathroom exhaust fans. If there are large number of plants in the home, concentrate them in one sunny room and avoid over watering.

Keep basements as dry as possible by waterproofing floors and walls. Run a dehumidifier if necessary. Make sure attic vents are open and unobstructed.

Opening the windows slightly throughout the home for a brief time each day will go far toward allowing humid air to escape and drier air to enter. The heat loss will be minimal.

Does condensation occur more often in particular climates or types of homes?

Absolutely! Condensation is more apt to occur in climates where the average January temperature is 35° F or cooler because there will be greater extremes between indoor and outdoor temperatures affecting the glass surfaces in the home.

During the summer and fall, all parts of a house pick up moisture from damp air. In the fall, when the windows are closed and heat is turned on, this moisture will pass into the air of the house and for a week or two there is likely to be condensation.

During the first year after construction, it is likely a house will have more condensation present because of the massive amounts of moisture in the building materials used. Building materials need about one year to dry out, so excessive condensation can be expected in the first heating season. Even after the first year, if humidity levels are too high, condensation may still be a problem because today's homes are much "tighter" (in the interest of energy efficiency) than older homes.

New materials and techniques in weather-stripping, insulation, vapor barriers, etc., which are intended to keep out cold air, also lock moisture inside. As a result, moisture created by bathrooms, kitchens, laundries and occupants no longer goes to the outside, unless mechanically ventilated.

Can the kind of windows and doors I have help to eliminate condensation?

If you have good prime windows with good storm windows, or double pane insulated glass (both keep the inside glass surface warmer and will markedly

REMEMBER:

- ✓ Troublesome condensation indicates excessive humidity in the home, and that problem ***must be eliminated at the source!***

- ✓ Windows do not cause condensation; therefore, there cannot be a window that will eliminate condensation. However, certain materials used in the manufacture of windows will be more condensation free than others.

- ✓ Condensation tends to be most severe with metal sashes. Wood framed windows (because wood is a good insulator) will reduce the likelihood of condensation on the frame and sash. However, along with wood's positive features the homeowner must be prepared to accept the negative aspects, i.e. ***rotting, swelling*** and costly and time-consuming ***maintenance.***

There is a third option—Solid Vinyl Framed Windows

Vinyl has the same positive insulating values as wood with none of the same problems. Many developments during the past years in energy-efficient areas have literally revolutionized the window and door industry. Windows and sliding doors made of **rigid PVC Vinyl** are regarded, by the building industry, as one of the greatest advances in technology and design within the past forty years.

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