

# Condensation

## Trouble with Condensation?

Each person has his or her own preference regarding the humidity level in his or her home. If the occupants insist on a high level of humidity within the house, surface condensation must be expected when outside temperatures are low. Because windows are often the coldest component of a building enclosure they can be an indicator of humidity problems. Because condensation occurs on inside window surfaces whenever the surface temperature falls below the dew point temperature of the room air, window condensation may signal a need to reduce the humidity level in your home.

## Maximum Humidity Level to Prevent Condensation

(Inside Relative humidity of 21°C with Double Glazing)  
Outside Air Temperature\* Indoor Relative Humidity

4.5°C (40°F) 45%

-1°C (30°F) 40%

-6.5°C (20°F) 35%

-12°C (10°F) 30%

-17.5°C(0°F) 25%

-23°C (-10°F) 20%

-29°C (-20°F) 15%

\*Including Wind Chill

## Controlling Humidity

Varying Humidity Levels: remember that the humidity in some rooms, kitchens and bathrooms in particular, can be higher than in other areas of the home, thus encouraging condensation to form on the windows in these rooms.

Exposure: some windows in the home may be protected by other buildings, trees, etc., which form a windbreak while others are totally exposed to the wind and, therefore, colder.

Ventilation is the most effective means to remove moisture from your home. By exchanging some of the drier outdoor winter air for warm humid interior air, the moisture level inside the house will be reduced.

- Open a door or window for short periods to allow moisture to escape.
- Gas appliances produce moisture from combustion. Cooking adds even more moisture so be sure to run your kitchen fan while cooking. Vent the kitchen fan directly to the outside to achieve the desired effect.
- Showers are a high source of moisture. Keep bathroom doors shut and run the exhaust fan to eliminate moisture.
- Clothes dryers should be vented to the outside. Hanging up wet clothes to dry inside your home can add significant moisture to your home.
- Shut off the furnace humidifier and any other humidifying device in the home.
- If you have a fireplace, open the damper occasionally to allow moisture to escape.
- Free air circulation is important. Do not cover hot or cold air registers with furniture or appliances. Leave bedroom and bathroom doors open.
- Keep the temperature of all rooms at a minimum of 10 C (50 F), even if unoccupied. Condensation will occur in an unheated room.
- Wipe up any tracked in snow before it melts and evaporates.

Floors wet from mopping can add large amounts of moisture. Run exhaust fans (bathroom and kitchens) while floors are wet. Avoid washing floors on extremely cold days.

Most builders install a fresh air intake into the cold air return duct of the

heating system. Make sure that the intake damper is open and that there are no obstructions to prevent airflow. If you do not have a fresh air intake, have one installed.

Drapes and blinds should be left open during the daytime. At night, raise blinds at least 100mm (4") up off the frame to allow air to flow against the glass.

Fabric blinds that are designed to fit from jamb to jamb must be left partially open to ventilate the window cavity. Failure to do this can cause extreme temperatures between the blinds and the glass. Glass breakage or warping of PVC can occur, which can void warranties.