

COLUMN FOR MARCH 12, 2005.

HEADLINE; EXCESS MOISTURE ON OUR NEW WINDOWS

Q; I noticed that we seem to have a lot of moisture on our windows some days. Any suggestions as to why this is happening to our home?

A; I called the reader to inquire as to the age of the home and he told me it was about 35 years old, they had all new windows installed last summer. The issue of the condensation on the windows is a concern as this is the first time they have ever had this happen. An average family in the wintertime can add anywhere from 2-10 gallons of moisture daily into your home. Showers, cooking, cleaning and general use inside a closed up Canadian home make moisture one of the largest air quality issues we have today. Use of humidifiers, a large number of plants, poor insulation, and a damp basement are some additional contributing factors that add up the moisture issue. It is a known fact that interior humidity levels should not be any higher than around 45-50% during the winter. The dampness on the reader's windows is telling us this home has excessive moisture. This can lead to poor air quality, allergies, mould and in some extreme conditions rot in the wood assembly of the building.

Why did this happen after some years of living in the home? Those new windows are likely one of the major contributing factors. The old windows leaked air around the frames and were cold, so the reader told me. These new windows, coupled with additional insulation that was added to the attic and walls a couple of years ago have tripped the balance of air exchange inside this home. The first thing you will need is a hygrometer or some call it a humidiguide. Check your local building supply store where the thermometers are sold. In most cases a reasonably priced mechanical model is fine. They make electronic models if you wish to go high tech. Follow the manufacturers instructions as to setting your unit and remember it will take some time for it to adjust to your home, a couple of days should give it enough time and then monitor it for the humidity levels. Once you know how far over the recommended levels you are you can begin to work on the moisture problem. The first place to start is the basement. Is the dryer properly vented? Caulk the joint at the concrete floor and wall and if you have a humidifier on the furnace, turn it off for a few days. If the basement walls are not finished, insulate them and install a proper air barrier. This is a major step and I would only do this if the rest of the suggestions don't work. Heat loss thru block walls contributes up to 25% of your heat loss so this may be a step worth considering. Upstairs, leave the doors in the rooms open, make sure everyone uses the fan in the bathroom if you have one or open the window a crack during a shower. Cut down on the plants if you have a large number, cover any fish aquariums and check your heating system to make sure you have heat going to every area. Make sure the heat registers are open not covered with furniture or storage. Pass on the pine smell air filters that go in the floor grills, your furnace has one filter and generally its all the system is designed to use. I often see where people close off the heat ducts in the basement thinking this will save heat. In fact this only makes the furnace run longer as the system tries to counteract the imbalance of cool areas. If you store firewood inside, it should be moved outside. On average a cord of green wood stored inside will add over 250 L of excess moisture to a home. As you are making these changes, monitor the hygrometer and see how it is reacting. If you have done all of the items suggested and it has made little or no impact then your next move is some form of ventilation system. Opening a window for a short time will help but it is not generally effective or balanced. If you lack bathroom fans, install them and tie them to the light switch so they come on simultaneously. If this still does not work then the installation of a heat recovery ventilation unit should be considered and here your local professional TSSA heating contractor should be called for his opinion. Consideration for combustion air needed for your furnace, hot water heater if it is gas or oil and proper discharge of vent gases will be one issue they will discuss along with the ventilation system. Most of the studies that I have seen recommend a full house air exchange every 3-5 hours depending upon occupancy and age or design of the home. In my own home we have an HRV unit and it is set to exchange our air every 3-½ hours. We keep our humidity level at 35 % and we rarely get moisture on our windows. It makes for a very comfortable home and I know we have good air quality.

Now the answer to last week's question. What is a ledger strip? The answer was C) a strip of wood attached

to the centre beam where the joists rest. Now this week's question. What does the term "matched lumber" mean? Is it A) dimensioned kiln dried lumber for furniture B) lumber that is edged dressed to make a tongue and groove joint C) lumber that is from the same tree and used for veneer stock in cabinets. The answer in next week's column.

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