Suggested Humidity Levels for Maximum Indoor Comfort*

INDOOR AIR TEMP.	OUTDOOR AIR TEMP.	RECOMMENDED MAXIMUM HUMIDITY
70ºF	BELOW -20ºF	15%
70ºF	-20ºF TO -10ºF	20%
70ºF	-10ºF TO 0ºF	25%
70ºF	0ºF TO -0ºF	30%

**Source: University of Minnesota Engineering Experiment Station*

12210 Conway Road, Beltsville, MD 20705
301-937-5500
www.vytexwindows.com

WINDOW CONDENSATION

What you need to know

A practical guide to understanding window condensation and its causes

CONDENSATION

Questions and Answers

Condensation on windows is an alarming signal of excess humidity in a home. Right away most people put the blame on the window. Windows do not cause condensation. On the contrary, the right windows can be a great help in controlling and reducing it. Condensation is becoming more and more of a concern because it is a product caused by progress. True, with newer technology in home insulation and thermal improvements, today s houses are becoming tighter and more energy efficient; excess humidity in the air is now being trapped inside. Windows are usually blamed because they are the first place the condensation can be seen, but what about between the walls and in the insulation in the attic. The moisture is there too. Your windows are actually serving as a warning sign.

The excess moisture is in your home and you may need to do something about it.

What causes this excess humidity?

Nothing more than daily routines of your family are putting this moisture into the air. Cooking, bathing, laundering, house plants, pets, humidifiers, unvented gas heaters, even breathing-all contribute to the moisture in your home.

How much humidity is too much?

Some humidity is necessary for comfort and health. With older houses it was (and still is) a struggle to keep enough moisture inside the house. A little fog on the lower corners of your windows now and then probably doesn't bother you, and it shouldn't. By the time you've thought about it a second time it has usually gone away. But when condensation covers the entire window and drips down along the walls ruining plant, plaster or wall paper, then there definitely is a problem.

How can the excess moisture be eliminated?

There are many steps that may be made to curb the condensation problem. The following is a list of the most effective:

- *Vent cloths dryers, gas burners, etc. to the outdoors.*
- *Check that all ventilation equipment is adjusts properly.*
- *Use kitchen and bathroom exhaust fans.*
- *Air out the kitchen, bathroom and laundry room during and after use by opening a window for a few minutes.*
- *Make sure attic louvers remain open all year round and that crawl spaces are properly ventilated.*
- *Consult a local heating and ventilating contractor to help determine whether ventilation is adequate and whether it can be improved.*
- *Insure humidifiers are correctly set according to the outside temperature.*

Why do I see condensation near the bottom of each sash?

Remember, each window sash is a self contained unit with a sealed atmosphere. The air in this atmosphere becomes layered just as air does in any closed space, i.e. the coldest air settles at the bottom while the warmest goes to the top. This means the glass surface will be cooler near the bottom of each sash, thus condensation will first appear on this cooler surface.

The basic principal of reducing window condensation is extremely simple. When there s too much condensation on your windows it means that humidity is too high in your home. You should take necessary steps to reduce humidity until condensation disappears.

(see back panel for suggested humidity levels)