

Cold window frames and window condensation

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Shawn asked why he always has condensation on his windows. Check "condensation" in the database and you will see a lot about high humidity in the house and the need for one sort of ventilation or another. Here I wanted to look closely at another cause of condensation -- extra cold spots on the window frame.

The air that bypasses the window

Windows go into holes in the wall that are about an inch larger than the window itself, and the gap is usually stuffed lightly with fibreglass, although newer installations will be sealed with foam insulation. The problem with the fibreglass is that the wind may blow right through the fibreglass and around cracks in the window trim. If this happens, the moving cold air will chill the window frame and often even cool the glass, causing condensation when normally the house would be dry enough to avoid condensation.

If you have ice on your window frame or the bottom edge of the glass, it is almost certainly either air moving through the insulation or the same cold air movement through worn out weather-stripping. Simply seal the crack between the drywall or plaster and the window frame under the window trim. If the space is less than 3/8th of an inch wide, use caulking. If it is wider use the foam in a can. Be sure to use a non-expanding foam made for windows -- too much expansion of the foam could jam or break the window.

After upgrading windows, you will need ventilation

If you do seal up all your windows, you will warm up the frame, but probably increase the humidity in the house because the moist air is no longer escaping. Remember that any time cold air comes into the house, hot air moist air goes out someplace else. So your windows in general may have more condensation, but less ice, than before. Now you need ventilation.

Keywords:

Condensation, Air Sealing, Frame, Sealing, Windows, Air Barriers, Air Leakage