

# Insulating un-insulated outside wall corners

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Often in constructing a house, the sequence of putting up walls, applying outside sheathing and installing insulation batts can leave the outside corner as a hollow spot with no insulation. The carpentry work was done and the hollow corner closed and hidden before the guys with the fiberglass even get to the site. In modern construction we have changed the way we put the studs in the corner so as to provide nailing for the drywall and still leave accessibility from the inside to that hollow corner. But many an existing house finds condensation and even serious mould growth in corners of north-east and north-west bedrooms because of this forgotten insulation. Follow this link to see what this looks like with infra-red photography. What to do?

Start by drilling a 3/8th inch hole about 6 inches off the floor diagonally into the corner. Stop the drill as soon as you get through the wood because if there is fiberglass in there, you don't want to wrap it up on the drill. If the drill has no fiberglass on it, and poking around with a clothes hanger with a little hook on the end doesn't snag any fiberglass -- you have a hollow wall.

The best way to solve this problem with the least patching is to fill up the hollow space with injected foam insulation -- but there are a number of special precautions. If you use regular foam in a can, like Big Gap Filler, you could create such strong expansion pressures that it might push the sheathing and the siding right off the corner of the house. You need to use minimum expansion foam and a certain technique.

First I have to take my hat off to Great Stuff who now make a Window & Door foam that is not only minimum expansion, but it cures soft, kind of like a sponge -- so it has very little tendency to force open a closed space. This is unconditionally my choice for this work. But even at that, we don't want to build up unnecessary pressure inside the wall and we have to deal with the fact that we are working blind.

Drill holes diagonally into the corner space every six inches from the floor to the ceiling.

Put a drinking straw into the hole 6 inches off the floor and inject the foam into the bottom hole. You will see the straw tilt, or feel that it is getting stuck in the foam as the foam rises to the six inch mark. Let it all set for 20 minutes so that it can do whatever expansion it wants to do. You will probably get a little bit of foam coming out of the straw hole.

Now leapfrog up. Put the straw two holes up and the foam can one hole up. Fill until you hit the straw. Wait 20 minutes. Repeat right to the top.

The corner of the wall will now be not only better insulated than if it had been stuffed with fibreglass (the foam is about twice as good an insulation as the fiberglass) but it will be sealed air tight as well.

Cut off the dried excess foam, plaster and paint the corner, or simply run a bead of quarter round right up the corner to hide it all.

**Keywords:**

Condensation, Insulation, Mold, Mould, Problems, Structure, Studs, Techniques, Thermal Bridging

