

Ask Jon Eakes

# CONFLICT: USE OR DON'T USE BLOWN-IN LOOSE FILL INSULATION INSIDE HOLLOW WALLS.

Last Updated: Sunday, October 21st, 2012, Created: Thursday, October 14th, 1999

Canada Mortgage and Housing Corporation (CMHC) does not recommend the use of any blown-in insulating material inside "enclosed vertical cavities" (that's a fancy way of saying "walls that are not open"). They feel that techniques of installation and verification during installation are not good enough to guarantee the homeowner that the insulation does not leave gaps (like around electrical plugs and windows) and does not settle away from the top. At the same time, they do use blown in cellulose in their own properties! They also are worried about the possible long term effects on the house as often air sealing the inside of the wall is neglected. The holes made for the injection process on the outside of the house often cause problems -- such as making irreparable holes through the sheathing paper. The Canadian General Standards Board (CGSB) teaches people how to insulate residential walls with blown-in loose fill and certifies contractors for this work. The old Federal government energy programs (CHIP) paid for the blowing of loose fill insulation into walls as long as a material carrying a CMHC material acceptance number was used. They ignored the fact that the fine print behind the CMHC acceptance number specified "for horizontal (i.e. attic) use only" and not to be used in walls. Obviously, filling walls with blown in insulation is an unsettled question. One side leans to the maximum energy conservation while the other side worries about possible consequences for houses. Local acceptance of one practice or another varies with geography and time. The critical points of conflict are:-- The wall must be completely filled to the proper density (to avoid settling) with NO gaps (filling around wall blocking and obstructions).-- The injection holes must be properly sealed: air tight if inside the house, rain tight at the sheathing and again at the siding if outside the house.-- The inside wall must be sealed to prevent humidity movement into the newly insulated wall.-- The skill and thoroughness of the contractor is critical. If all of these points are conscientiously taken care of, you can blow insulation into walls without problems. If any of these points are neglected, moisture and rot problems will arrive (sometimes well hidden inside the walls for the first few years). The colder the region you live in, the more critical the moisture problems because there is a longer period of frost accumulation. Rule of thumb One useful rule of thumb is: if there is already a little insulation in the wall, it will be very difficult to get blown-in insulation to fill the uneven empty space -- if the wall is completely empty, blown-in insulation could be successfully installed. Materials The most common material used for blowing into closed wall spaces is cellulose because it tends to flow around wires and pack to a good density without blowing off the drywall. However blown-in glass fibre or mineral wool can also work. There are special low expansion non-hardening foam sprays that can also be "flowed" into wall cavities -- (but never fill in the drainage and air drying gap between brick and the house). Surprisingly enough, Vermiculite, no longer sold as an insulation but still available in gardening stores, is also a valid poured-in wall insulation. Because of the old history of asbestos in Zonolite prior to 1990, keep your receipts to prove you don't have the old stuff when you resell your house. DIY Vermiculite is probably the only real DIY insulation product as you simply open the top of the wall, run a wire down to determine if there are obstructions or blocking (more holes required below any blocking) and then pour it in from the top on a day when static electricity is not a problem. (If you only needed holes in the top of the wall, you can hide them with crown molding and not even have to re-paint the whole wall.)

**Keywords:**

Humidity, Installation, Moisture, Conservation, Walls, Air Sealing, Sealing, Rot, Energy Conservation, Insulation,

