



INJECTION FOAM INSULATION FOR EXISTING HOMES

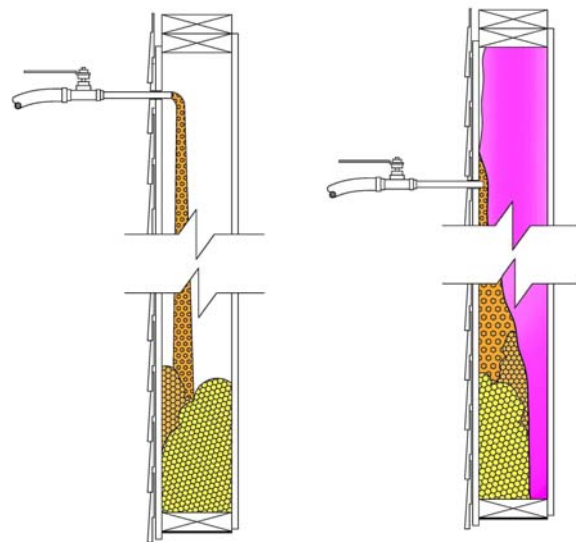
Source: Gerald Hash

The new pre-expanded foam products offer a solution to the challenges of insulating an existing home. The installer mixes, on site, a kiln dried, water-based, powder resin with a foaming agent catalyst, resulting in a foam having 50% less water content than other similar foam products. This characteristic allows it to be an acceptable product for use in enclosed existing inter-stud and inter-joist cavities. It slowly migrates into all parts of the cavity, encasing and sealing all contents. No expansion forces, detrimental to the structure and interior veneers, are created. The new pre-expanded foam products also infiltrate and diminish old fiberglass batt volume. Homeowners now have a worthy method of increasing thermal value of an old fiberglass batt filled cavity without exposing the cavity. This makes injection foam insulation ideal for existing walls and cathedral (vaulted) ceilings, particularly those with existing batts.

The typical installation in the empty cavity involves drilling a 2-inch hole just below the top wall plate from inside or outside. The injection hose is extended to the base plate and withdrawn as the foam is pumped. When the cavity contains a fiberglass batt, drill at the vertical midpoint and work downward; then, drill just below the top plate and insulate the upper half. Use the same approach with cathedral ceilings. In all cases, kill the electrical circuits before foaming, then allow a 72-hour curing time before re-energizing circuits and patching/painting drywall. In new construction, netting is stapled to the inside facing of wall studs and the foam is pumped in behind the netting, once again accessing from beneath the upper wall plate. Another optimum application is filling the inter-joist cavities beneath storage flooring in the existing attic. Existing hollow core concrete block walls obviously supply another opportunity. The cement seams are drilled for intermittent entry points. Considerable thermal improvement is gained.

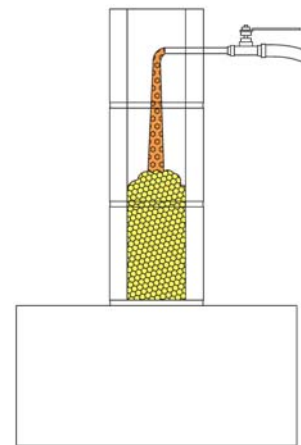
An advantage of injection foam insulation, in addition to the typical sealing property of foam (nearly eliminating air infiltration), is that the R-value runs

4.6 per inch. It also carries a 10.6 Perm rating, making it comparable to other open cell foams in its ability to pass moisture, thus allowing moisture to escape the structure.



Uninsulated Wall

Insulated Wall



Block Wall