ADVANTAGES OF AIRTIGHT SPRAYFOAM

AIRTIGHT SPRAYFOAM® INSULATION CAN LOWER ENERGY CONSUMPTION.

The importance of proper home insulation usually becomes apparent when it's too late to correct the problem. Homeowners quickly learn that undesirable air and moisture infiltration in a finished house increases energy consumption, which in turn leads to high utility bills and steadily declining home resale value. This costly scenario, however, can be avoided entirely by choosing an insulation system that guarantees efficient and long-term protection against energy loss caused by air infiltration.

We completely seal the envelopes around windows and doors to prevent air leaks.

REDUCES AIR INFILTRATION

It has been estimated that FORTY PERCENT (40%) of a home's heating or cooling loss results from air flow through cracks beneath the sill plate, around wall outlets and windows, along duct runs and other leak sources throughout the building envelope. Insulation materials that are not self-sealing and monolithic fail to stop this waste of energy through cracks and openings between the studs and openings between the studs and the insulating material.

Using a combination of SPF and caulking, a tight seal can be made for a well-sealed envelope.

Airtight SprayFoam® adheres to most materials. It forms a seal eliminating leaks around studs, window and door framing, and filling in voids where air leaks allow the conditioned air in the home to escape. Failure to stop this air-flow through the building envelope requires constant reheating or re-cooling. Minimizing areas where air can infiltrate helps to keep energy use and costs down.

Airtight SprayFoam's versatility makes it a good choice to totally seal the envelope for a comfortable living environment. Here the underside of the roof sheathing is being sprayed.

Insulation Type	R-Value per inch	Air Barrier	Structural Stability	Moisture Barrier
Airtight SprayFoam	7.0	✓	✓	✓
Open Cell (Soft Foam)	3.5	✓	✗	✗
Cellulose	3.5	✓	✗	✗
Cotton	3.2	✗	✗	✗
Fiber Glass	3.2	✗	✗	✗

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WHY USE CLOSED CELL FOAM?

Open celled products are susceptible to moisture intrusion, air movement and the thermal degradation related to those two items. Any imperfections in the building envelope (holes, cracks or gaps in the insulation materials) will definitely contribute to poor performance or worse, moisture accumulation, allergen and pathogen growth and very possibly structural failure. You can do the building envelope only once, do it right with AirTight!

Below: Airtight SprayFoam® is being installed over concrete to serve as a moisture retarder and insulation in one.

The solid nature and sealability of cured foam, which is moisture resistant itself, inhibit moisture-driven elements, providing for dry, comfortable interiors. There are many other advantages inherent to Airtight SprayFoam®: it helps reduce exterior noise, creates a barrier against gas and odor, retards insect and rodent penetration, and the strong, rigid, lightweight envelope of cured foam adds to the structural integrity of the house.

The initial application cost of the system is offset by constant yearly paybacks through lower heating and cooling bills.

A one-inch sample of polyurethane foam insulation consists of millions of tiny closed plastic cells filled with an inert gas. Much like argon in double and triple pane windows, our insulation performance is not dependent on uncontrollable factors like trapping still air.

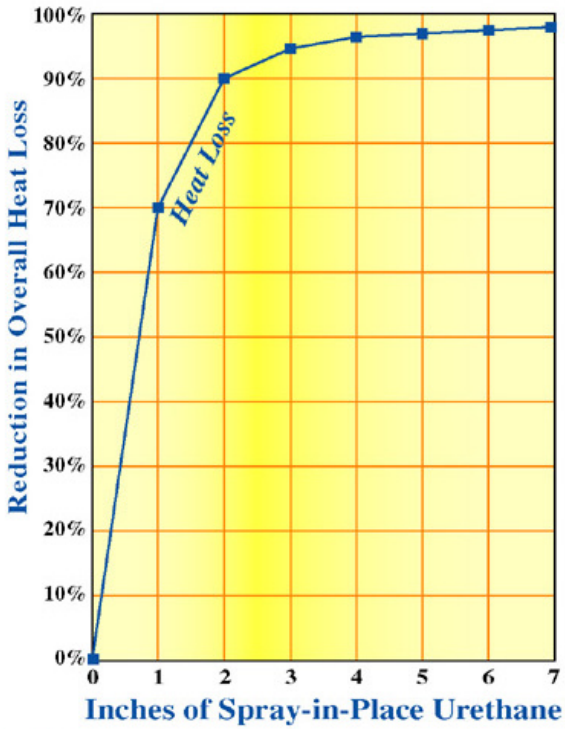
Two inches of our product has a perm of less than one. That is a good thing. Two inches of polyurethane foam insulation will do the most effective job of stopping air infiltration, exfiltration, convection, and solar driven moisture into the stud cavity.

ADVANTAGES OF AIRTIGHT SPRAYFOAM®

Reduces energy use in buildings beyond its stated R-value because Airtight SprayFoam®:

- provides a continuous air barrier.
- prevents moisture infiltration through air leakage.
- minimizes dew point problems and condensation.
- avoids thermal bridging & resists heat movement in all directions.
- provides reliable performance under varying conditions.

AirTight SprayFoam® prevents most heat loss with only a couple of inches. As this chart indicates, application thickness over 2" gain very little in overall performance.



The graph shows that 70% of heat loss from conductance is stopped by a one-inch thickness of AirTight SprayFoam®. Remember we are going to stop nearly 100% of the heat loss from air infiltration with the first one-fourth of an inch of AirTight SprayFoam®. The second inch of AirTight SprayFoam® stops about 90% of the heat loss and the third inch 95%. Applications over 3" aren't sensible because of the diminishing return on investment.

THE R-VALUE MYTH

"R" refers to resistance to heat flow. These measurements are taken in a laboratory environment. But heat flow resistance is only part of the formula for effective insulation. R-value doesn't measure the amount of air infiltration or moisture that penetrates through an insulated wall. In short, the measurement doesn't factor in real-world weather conditions. The only way to eliminate air infiltration and moisture is to completely seal the building tight and use mechanical ventilation equipment to regulate moisture and balance indoor air pressures.