



Michigan Winter vs Spray Foam Insulation

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One of the more recent advances in insulation technology since the 1970s has been the widespread use of spray foam insulation (SPF). What is spray foam insulation and why should it matter to a homeowner?

Spray foam insulation is a spray applied plastic that can form a continuous barrier on roofs, walls and any contoured surface. It's made by mixing unique liquid components to create foam. The components react quickly when mixed, creating an expanding foam that insulates incredibly well, seals up gaps and can form great vapor and moisture barriers.

SPF resists heat transfer very well, and when combined with the benefits listed below, makes for a great home insulation system.

Remember that fiberglass and cellulose are great insulation alternatives to SPF and are important products used for all types of projects, however, in this post, we'll be discussing some of the pros and cons of both.

There are several different types of spray foam. Open Cell and Closed Cell. Open Cell is often used in acoustical applications and does not perform nearly as well as a closed cell product. Closed cell is made of different materials, different colors and available in different pound

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ratings. In general, the denser the spray foam the higher the pound rating and the better the performance. We recommend a good quality 2lb, closed cell spray foam.

R-value is one way of measuring the performance of insulation. This is a reliable measure for fiberglass, loose fill, cellulose, etc. Since insulating a home is all about air control, a more reliable measure for the superior performance of SPF is efficiency (i.e. how much air molecules can travel through the insulation product). You can add 10"-20" of a fiberglass or loose fill insulation and you will stop upwards of 1/2-2/3 of the air from traveling throughout the material. Just 1" of Closed Cell spray foam seals everything up 87%. 2" bumps it up to 93%. 3" gets you all the way up to 97%. There is no real benefit above 3" of closed cell spray foam.

A great example of how great closed cell foam works is to consider how the freezer door performs. If you have a newer fridge/freezer the 1" or 1 1/2" thick door has rigid foam which keeps the cold in very well. Usually the outside of the freezer door feels warm like the inside of the home although 1" away its below freezing.

High R-value

Spray Foam Insulation can outperform most other types of insulation in the realm of R-value. R-value demonstrates how much heat transfers through each inch of insulation – the higher the value the less heat travels through. SPF can have an R-value of up to 7.4R per inch. Other loose fill or batt insulation will top out at 3.5 to 3.7 (up to 3.8), meaning SPF can almost double the insulation value with the same amount of space.

Built-in Vapor Barrier

Due to the closed cell nature of SPF, air and water are prevented from passing through, like wearing a windbreaker on a windy day. Other insulation comes with a vapor barrier, but they tend to allow more air to pass through, which can be likened to a sweater rather than a windbreaker. Preventing air and water to pass through keeps your house warmer in the winter, cooler in the summer, resistant to mold growth and helps improve air quality in your home. Fewer allergens and pollutants in your home is always a good thing.

Fills in Gaps

Spray foam expands to 100 times its original volume (spray foam expands to successfully seal all crevices) which helps it get into every last nook and cranny in your walls, roof and crawl

Pro Advice - Michigan Winter vs Spray Foam Insulation

space. When you don't fill in those tiny gaps, they can add up to something about the size of a basketball, which can allow a lot of air to pass through every day.

No Settling

SPF, once it's dry, does not settle or lose performance over the years. This can account for a lot of performance lost homes with older insulation, as loose fill or batt insulation can settle with age, moisture and other factors. Once you install SPF, you are set for life!

Pest Control

Spray foam insulation does not provide any room or food source for rodents, termites or other insects to create a home in your walls or attic. This can be a great deterrent to these pests that you definitely do not want taking up residence inside your walls.

Energy Savings

SPF can help you potentially downsize your heating and cooling equipment so you can purchase smaller equipment or let your existing equipment run less often, now that you have an air-tight well-insulated home. SPF can be a great way to save money on your utility budget every month.

With the weather turning colder and the upcoming Michigan winter just around the corner, you should be inspecting your insulation levels and considering upgrades. One quick insulation project can benefit your bottom line, prevent pests and improve your air quality for years to come. It will add resale value to your home since it does such a great job of maintaining it's benefits for years.

If you have insulation questions and need some help, be sure to call the Pros at Pro Home Improvement (888) 776-1998 today!



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