



# The Basics of Insulating Your Home





How often do you think about the insulation in your home?

Unless you have to go up into your attic for something, probably little to never. Or unless you notice your heating and cooling system having to work overtime to keep your house comfortable, because that's what insulation does. It helps

regulate your home's temperature by keeping the hot air out and the cold air in during summer and vice versa in winter.

“Insulation works by trapping small pockets of air that is moving through the walls of your home,” says Dennis Celsor of Texas-based Built Green Custom Homes and a National Association of Home Builders (NAHB) Graduate Master Builder.

The more efficiently your insulation can do this, the lower your utility bills will be. So what do you need to know (<https://www.newhomesource.com/learn/metal-siding/>). about insulating your home to ensure it's doing its job

properly?

# Types of Insulation

One of the most common forms of insulation (and the one most people are familiar with) is fiberglass batt (pre-cut sheets) or rolls. Fiberglass insulation is commonly used in

most areas of the home, from the attic and crawlspaces to walls and floors.

“Large production builders typically use fiberglass

insulation,” says Stacy Fitzgerald-Redd, communications director for the North American Insulation Manufacturers Association, which represents fiberglass and rock wool insulation manufacturers.

Advantages to fiberglass batt insulation include affordability, easy installation, a long history of safety testing and fire resistance. It also typically lasts the lifetime of the building and doesn't need to be replaced.

Another option is blown-in or loose-fill fiberglass, which is typically used in unfinished attic floors but can also be used in

finished walls or other hard-to-reach places.

Cellulose is also a blown-in insulation, but consists of fibers from recycled newspaper, paperboard stock or wood. It is treated chemically, such as with boric acid, to make it fire resistant.

Rock wool or mineral wool insulation has been around since the 1920s and '30s and is made from melted rocks spun into fibers. Like fiberglass, it comes in batt, roll and loose-fill forms and can be used throughout the house and has good fire

resistance.

The other major type of insulation is spray foam. A chemical-based insulation, it is mixed on site and sprayed into walls and attics, where it should be sprayed thoroughly between and over the rafters for the best coverage.

“The most common misconception about insulation is that there’s a single best product, but that’s just not true,” Fitzgerald-Redd says. “All products perform essentially the same.”

# How Much Insulation?

The amount of insulation required in a home is based on the Department of Energy and the International Energy Conservation Code (IECC) climate zone map, which recommends levels of insulation needed for homes located in eight U.S. climate zones.

“Climate is very important,” Celsor says, in determining how much insulation is needed, particularly if you live in a place with extreme temperatures (hot or cold). According to Fitzgerald-Redd, local jurisdictions ultimately adopt IECC



codes. “So it’s fair to say building codes have significant commonality, but also local differences. These are minimum requirements,” she adds.

One way consumers can make sure the proper insulation for their climate zone is being installed is to check the product’s R-value, or resistance to heat flow, which is printed on the

product’s label. The higher a product’s R-value is, the greater its insulating power.

Fitzgerald-Redd says that for older homes built under earlier

codes, the amount of insulation may need to be increased to meet current standards. If you build or buy new, then your home will be built to the latest codes regarding insulation; however, depending on your builder, you may have options to increase the amount, choose a different type and so on.

Homeowners concerned about whether their home insulation is sufficient or performing as well as it should can have a home energy audit performed.

But even in newer homes, adding more insulation can improve, to a point, the thermal performance of your home. Additional insulation is common in energy-efficient or high-performance building models, says Fitzgerald-Redd.

But to see those benefits, the insulation must be properly installed, regardless of type, says Celsor. “If the insulation is not trapping air, it’s not working. That air leakage can cost homeowners money.”

In addition to making your home comfortable temperature-wise, insulation can also act as a sound barrier. Certain

insulation products may be better designed for this than others, so you should discuss which type to use with your builder if improved soundproofing in your home is a major goal.

“We don’t think about insulation much unless we go into the attic,” Fitzgerald-Redd says. “But that doesn’t mean it’s not an important part of the home.”

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Judy Marchman is an Austin, Texas-based freelance writer and editor who, during her 20+-year career, has written on a diverse number of topics, from horses to lawyers to home building and design, including for NewHomeSource.com. Judy is the proud owner of a new construction home and has gained plenty of story inspiration from her home ownership experiences.

A horse racing aficionado, she also has written on lifestyle, personality, and business topics for Keeneland magazine and Kentucky Monthly, as well as sports features for BloodHorse, a weekly Thoroughbred racing publication, and the Official Kentucky Derby Souvenir Magazine. When she's not in front of her laptop, Judy can usually be found enjoying a good book and a cup of tea, or baking something to go with said cuppa.

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