

Adding Blown-in Insulation To Your Attic

Most heat loss happens through the ceiling not the walls. A typical room needs 12” or more of ceiling insulation in nearly any climate you can imagine. It takes this thickness of insulation to keep heat in the room and even any conditioned air in the room as well. Obviously heated air want to climb to the area higher than where it is located because warm air weighs less than cold air. To trap this heated air in the room, one must set up an environment where it cannot transfer itself through objects.

That's where insulation comes in. There are several different types of insulation used today, however, one of the most common is fiberglass insulation which is typically pink or yellow in color and if you touch it, can make you itch. Fiberglass insulation works well because it does not transfer temperature or in this case, heated or cooled air at all.

Fiberglass Insulation Material

Fiberglass (or fiber glass)—which consists of extremely fine glass fibers—is one of the most commonly used insulation materials. It's used in two different insulation forms: blanket (batts and rolls) and loose-fill.

Fiberglass Blanket (Batts and Rolls) Insulation

Manufacturers now produce medium- and high-density fiberglass batt insulation products that have slightly higher R-values than previous varieties. The denser products are intended for insulating areas with limited cavity space, such as cathedral ceilings.

High-density fiberglass batts for a 2 × 4 inch (51 × 102 millimeter [mm]) stud-framed wall has an R-15 value, compared to R-11 for "low density" types. A medium-density batt offers R-13 for the same space. High-density batts for a 2 × 6 inch (51 × 152 mm) frame wall offer R-21. High-density batts for an 8.5 inch (216 mm) spaces offer about an R-30 value. R-38 for 12 inch (304 mm) spaces is also available.

One unconventional fibrous insulation product combines two types of glass, which are fused together. As the two materials cool during manufacturing, they form random curls of material. This material is less irritating and possibly safer to work with. It also requires no chemical binder to hold the batts together, and the material even comes in a perforated plastic sleeve to assist in handling.

Fiberglass Loose-Fill Insulation

Fiberglass loose-fill insulation is made from molten glass that is spun or blown into fibers. Most manufacturers use 20%–30% recycled glass content. Loose-fill insulation must be applied using an insulation blowing machine; it is designed for *open-blow* applications (such as attic spaces) or *closed-cavity* applications (such as those found inside walls or covered attic floors).