



# Build It Back Green

## *Install High R-Value Insulation*

### **BENEFITS**

According to the Department of Energy, the average family spends \$1900 a year on energy bills, nearly half of which goes towards heating and cooling.

Proper installation of insulation is the key to having an energy efficient home and can result in a **20% reduction in your heating and cooling bills.**

### **DESCRIPTION & CHARACTERISTICS**

Insulation is any material that lowers the transfer of heat between the inside and outside of a building. Insulation allows your house to retain its heat during cold winter months while still keeping it relatively cool inside during hot summer months.

Various types of insulation have different R-values. The R-value measures how well an insulating material can block or *resist* the transfer of heat. **The higher the R-value number, the better the insulation.** Various types of insulation and their R-value are identified in the table below.

INSULATION TYPE	DESCRIPTION	R-VALUE PER INCH OF THICKNESS
<b>Formaldehyde-free fiberglass</b>	Made of spun glass fibers. Very cost effective but not most efficient form of insulation.	2.2 - 4.0
<b>Cellulose</b>	Made of recycled newsprint. Good for retrofitting homes and easy to remove for follow up work.	3.0 - 3.7
<b>Cotton</b>	Made of a variety of recycled textiles such as denim. Less of an irritant to skin than fiberglass.	3.0 - 3.7
<b>Spray-in place soy foam</b>	Made of soybeans. Able to fully fill all gaps and holes.	3.4 - 6.0

Products & Practices Sheets



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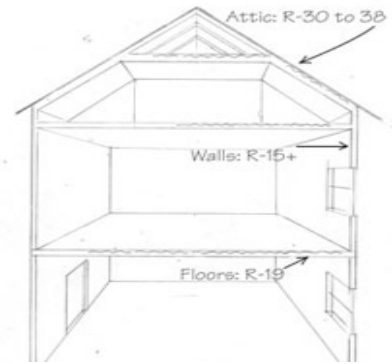
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Building codes require a minimum R-value for homes, with R-value levels varying depending on where the insulation will be installed, such as the attic, walls, or floors.

For the Southeast, most energy experts recommend the following minimum R-value levels displayed in Figure 1.



**Figure 1**

**PERFORMANCE IMPROVEMENT & INSTALLATION TIPS**

Insulation can be installed in a variety of ways depending on the type of material. It is important that insulation be properly installed to be effective at blocking heat transfer. The various types of insulation and their installation methods are described in the table below.

INSULATION TYPE	INSTALLATION METHOD
<b>Formaldehyde-free fiberglass</b>	Available in a roll/batt or as loose-fill. Batts can be installed by a homeowner but loose-fill must be professionally installed. Any air holes or gaps must be filled before installing this type of insulation.
<b>Cellulose</b>	Must be blown in. It can be installed by a homeowner or a professional.
<b>Cotton</b>	Available as a batt and can be installed by a homeowner or a professional.
<b>Spray-in place soy foam</b>	Must be professionally installed.

**PRODUCT TYPES & PRICES**

- The estimated cost of insulation can range from \$0.25 to \$1.50 per square foot. The estimated cost of installing insulation in a typical 1200 square foot shotgun house can range from \$2000 to \$4500.
- Some of these insulation types may be purchased at Home Depot. Other local suppliers are identified on the **Vendors List** available on our website at [globalgreen.org/bibg](http://globalgreen.org/bibg) and in the **New Orleans Green Building Resource Center** at 841 Carondelet Street.