

RESIDENTIAL WEATHERIZATION: INSULATION AND AIR SEALING FACT SHEET



Figures are estimates. Actual heat loss varies by house.

Insulation

Improve the comfort of your home and reduce energy costs with proper insulation

Did you know insulation plays an important role in how your home uses energy? It's also one of the main players in heating and cooling costs. In fact, the Environmental Protection Agency estimates homeowners can save an average of 15% on heating and cooling costs by air sealing their homes and adding insulation to attics, floors above crawl spaces and accessible basement rim joists.*

Most people associate insulation with fuzzy rolls of pink stuff and a recognizable cartoon character, but what is it?

Insulation is a classification of materials that are used to reduce heat transfer from the inside and outside of a building. Most commonly, insulation is used in attics, ceilings, walls, floors and crawl spaces to help maintain more constant, comfortable temperatures in your home.



Batt insulation installation

Types of insulation

- **Batts (or rolls)** are the most common and available form of insulation, and are often referred to as blanket insulation.

Benefits: Flexible fiberglass batts are manufactured in the right size to fit between wall joists, studs and under floors, and can be easily cut by hand and installed.

- **Foam board and rigid foam** insulation sheets are available in various lengths, widths and densities, and can be used almost anywhere in your home.

Benefits: Can perform up to two times greater than other insulation types with the same thickness and can be purchased at your local home improvement store.

- **Loose fill or blow-in** is made of small particles of different materials that can be blown into areas.

Benefits: Can be blown into areas that may be hard to reach or where it is difficult to apply other types of insulation. Commonly used materials for loose-fill or blow-in are:

- Cellulose: recycled newsprint.
- Fiberglass: comprises 40%–60% recycled glass.
- Mineral wool: 75% post-industrial recycled content.

- **Spray foam insulation** is a liquid mixture that can be sprayed, injected or poured into place to insulate and reduce air leakage.

Benefits: Conforms to the space where it is applied and is very effective at sealing small cavities and cracks. Some types can have a higher R-value than traditional batt and roll insulation.

What is R-value?

Insulation resistance value, commonly known as R-value, is the capacity or measure of the insulation materials to resist heat transfer from one side of an object to another. The higher the R-value of the material, the more effective it is at insulating the area. R-value can be dependent on the type of material or the thickness used.

Air sealing

Along with insulation, air sealing is another important and cost-effective way to increase comfort throughout your home. Air leakage and improperly installed insulation can waste 20% or more of the energy used to heat or cool a home.** Properly sealing the gaps and cracks in your home will:

- Reduce indoor pollutants and control moisture.
- Mitigate air leakage through gaps and cracks found in your home.
- Help your heating and cooling equipment work more efficiently.



Spray foam insulation application

Caulk

Caulk can be used to fill cracks, gaps, or joints that are less than a quarter inch wide and allow air to escape from your home. These compounds come in various materials, including silicone, latex and polyurethane foam, and are made for specific areas and purposes.

To seal gaps around working windows and doors, use weather stripping, which is typically made of vinyl, rubber or poly foam. Weather stripping can be attached to existing windows and doors to reduce drafts, increase comfort and reduce noise.



Caulk application

Available rebates

BPA offers rebates to public electric utilities who promote air sealing and insulation as part of a weatherization program. Residential customers of those utilities may also be eligible to receive energy-efficiency rebates for making qualified weatherization improvements. Rebates may be available for owners and renters of single-family homes, multifamily properties and manufactured homes. Contact the local electric utility to learn more.

Rebate amounts and availability may vary and are subject to change.

For more information

Homeowners, contact UTILITY NAME for more information about insulation, air sealing and other weatherization opportunities for your home.



UTILITY NAME
ADDRESS
PHONE
EMAIL
WEBSITE

**https://www.energystar.gov/ia/new_homes/features/AirSealing_062906.pdf?5315-e22b