

SPRAY FOAM: CONTRIBUTING TO SUSTAINABILITY AND REDUCING GREENHOUSE GAS EMISSIONS FROM BUILDINGS

Spray foam is an innovative, multifunctional material for home insulation and air sealing that can increase energy efficiency and comfort while helping combat climate change and greenhouse gas (GHG) emissions.

Why Spray Foam?

With one product, spray foam creates a well-insulated and airtight building envelope where it is applied — preventing unwanted airflow by sealing cracks, gaps, and leaks. This reduces the amount of energy needed to heat and cool your home, thus increasing energy efficiency and reducing GHG emissions.



Spray Foam vs. Other Insulation and Air Sealing Products



Home with Ductwork in Unvented Attic, Insulated and Air Sealed: Exceeding Code with Spray Foam

Minneapolis: A single-family home with ductwork in an unvented attic, insulated and air sealed with spray foam has an additional energy savings of 5,638 kWh per year compared to the same home with ductwork in a vented attic, insulated and air sealed with other products. This converts to a GHG reduction of 1,556 kg of CO₂ per yearⁱ or a 33% reduction in the annual emissions of a car.

Houston: A single-family home with ductwork in an unvented attic, insulated and air sealed with spray foam has an additional energy savings of 2,556 kWh per year compared to the same home with ductwork in a vented attic, insulated and air sealed with other products. This converts to a GHG reduction of 950 kg of CO₂ per year or a 20% reduction in the annual emissions of a car.



Home with Ductwork in Vented Attic, Insulated and Air Sealed: Meeting Code with Other Products

Going Above and Beyond for Climate

Approximately 115 million homes were occupied in the United States at the end of 2020.ⁱⁱ If each home was insulated with spray foam, the potential aggregate energy savings could be as high as 648.37 billion kWh per year, which is a reduction of 178.94 billion kg of CO₂ emissions per year.

Using spray foam in place of other products could reduce total U.S. GHG emissions by 3.5% annually and could reduce emissions related to home heating and cooling by 41%.



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Removing **38.9 million** cars from the road, per year

ⁱ SPF Residential Energy Modeling Analysis
Counting Carbon: Demand a Better Insulation in Your Next Home
ⁱⁱ According to the Census Bureau Residential Vacancies and Homeownership data, there were 141.2 million housing units available for occupancy at the end of 2020. According to Statista Research Department (source unidentified), 81.5% of the housing stock is single-family. Thus, it would seem that 115,000,000 is a reasonable estimate.
[Developed by Martha Moore - American Chemistry Council].