



Spray Foam
Coalition



Plastics Division

The Benefits of Foam Plastic Insulation



Who is the American Chemistry Council?

The American Chemistry Council (ACC) is a national trade association representing the leading companies in business of chemistry within the United States. ACC's Plastics Division represents America's Plastic MakersSM. This important sector of the U.S. economy includes half million+ scientists, engineers, technicians, and other innovators who make plastics for many essential and lifesaving products that are vital to modern life.

This includes energy-efficient insulation and air sealing materials to help make our homes comfortable, innovative components that increase the fuel efficiency of our cars and trucks, lightweight turbine blades and protective panels that deliver wind and solar energy more efficiently, and electronic devices that keep us connected.

[America's Plastic Makers](#) continue to embrace change. We're linking innovation with sustainability, deploying next generation technologies to make plastics lighter, stronger, more efficient... and more recyclable.

What are the benefits of using foam plastic insulation and air sealing materials?

These products are commonly used in new and existing home upgrades to save energy and associated costs for the life of the building.

There are several different types of foam plastic insulation. They include spray polyurethane foam (SPF), extruded polystyrene (XPS), expanded polystyrene (EPS), and polyisocyanurate (PolyISO).

Although their benefits vary, they are all highly regarded for their thermal and air sealing properties.

Other benefits can include:

- Lowering homeowners' heating and cooling needs and associated utility bills
- Greater occupant comfort
- Condensation/vapor management which helps protect against mold growth

Why is it important to be able to choose the appropriate material including foam plastic insulation and air sealing materials?

Foam plastic insulation and air sealing materials play an important role in increasing the energy efficiency of buildings, thus minimizing heating and cooling needs, utility costs and greenhouse gas emissions associated with energy production.

Disallowing foam plastic insulation and air sealing materials in favor of other insulating materials could lead to negative impacts on the environment. Many common alternatives have been found to provide lower R-values and do not manage air leakage or moisture intrusion like foam plastic insulation and sealants. This can result in more wasted energy, the potential for more exposure to asthma producing contaminants from the outdoors, and higher greenhouse gas emissions resulting from increased heating/cooling needs.

Why is product choice important to builders and homeowners?

Product choice is critical for builders and homeowners so they can choose the right insulation and air sealing material for their specific needs and budgets. Foam plastic insulation and air sealing materials are multifunctional. Using a 3-in-1 product can improve the quality of construction and save labor time and costs. These are key attributes when working to weatherize and retrofit existing buildings efficiently.

How does energy efficiency enable affordable housing?

Energy efficiency is critical to affordable housing. The more energy efficient a residential building is, the less energy it uses to heat and cool to comfortable temperatures. When consumers are using less energy, they're paying less in energy costs.

How does the use of these products benefit the environment and reduce carbon emissions?

By reducing energy consumption, foam plastic insulation reduces the greenhouse gas emissions associated with the generation of energy needed for heating and cooling.

What type of safeguards are in place to promote the appropriate use of foam plastic insulation?

Foam plastic insulation and air sealing materials are subject to rigorous safety testing and building code requirements for their intended use.

The use of PPE is required for contractors installing foam plastic insulation and air sealing materials. ACC's Foam Sheathing Committee (FSC) and Spray Foam Coalition (SFC) have numerous guidance documents on practices for installing foam plastic insulation.

Additionally, SFC has free online health and safety training for the application of high- and low-pressure spray foam application. This includes guidance on ventilation requirements and reentry safeguards after high-pressure foam is applied, allowing time for off gassing to ventilate the enclosed space.

Are the EEFA/NRDC claims accurate?

EEFA Guidance for Specifying Healthier Insulation and Air Sealing Materials and Blue Green Alliance Building Clean Guide both include numerous technical and scientific errors. The guidance mischaracterizes valuable plastic products and relies on poor science that undermines energy saving goals of the Clean and Renewable Energy and Energy Waste Reduction Act.

Deficiencies include, but are not limited to:

- A failure to acknowledge that during the curing process, the diisocyanates in spray foam react out of the final product, so diisocyanates are no longer present after the spray foam is fully cured.
- A failure to consider potential exposure to a chemical in the development of a risk-based finding.
- The authors incorrectly rely on voluntary third-party certifications that manufacturers may not choose to participate in because the certification is not relevant to them or their customers' needs.
- A failure to recognize the use of new flame retardants that the EPA has deemed "Safer by Design."

