Environmental Impact of Insulated Vinyl Siding
from Progressive Foam Technologies, Inc.

Progressive Foam Technologies, Inc. has been actively pursuing strategies to reduce our environmental impact and increase the sustainability of our products and operations.

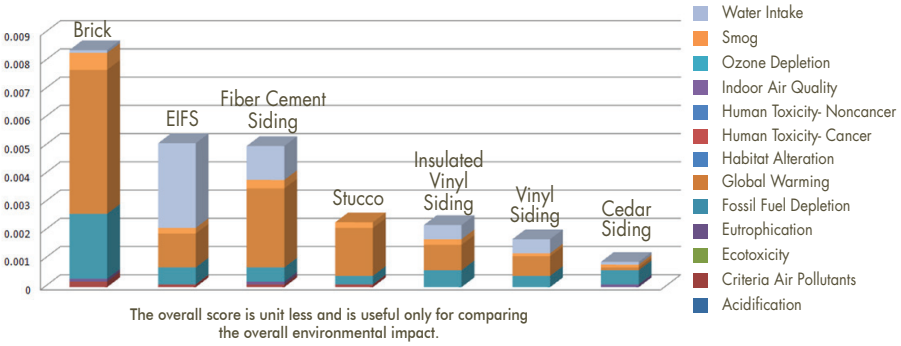
We have conducted a Life Cycle Assessment (LCA) in order to better understand how to improve our products. An LCA is a method for identifying the environmental impacts of a product, process or activity over its entire lifespan, including extraction and processing of raw materials, manufacturing, transportation and distribution, use, reuse, maintenance, recycling and final disposal.

To provide full transparency, we have submitted this data to the Building for Economic and Environmental Sustainability (BEES) software, a program designed by the National Institute of Standards and Technology (NIST) to compare building products on a life cycle basis.

In addition, we have conducted energy modeling with the National Association of Home Builder's (NAHB) Research Center to determine the effect our product has on energy savings. The information and graphics contained in this document are based on the data from BEES and our energy modeling.

FUN FACT: If every U.S. home built before 1960 installed insulated vinyl siding, we would save over 1 million barrels of oil, 5 million tons of coal, and 800 million Mcf of natural gas EVERY YEAR!

Overall Environmental Impact



The overall score is unit less and is useful only for comparing the overall environmental impact.

From 2007-2009, we achieved a 19% overall reduction in the environmental impact of Fullback Insulated Siding, due to a reduction in waste, energy use, and water use.

This graph displays the overall environmental impact of siding products based on a combination of many categories of impact. The overall score is unitless and is useful only for comparing products. The lower the graph bars the better. As illustrated in the graphic Progressive Foam has lower impacts across all life cycle stages compared to other cladding options.

Fiber cement, another cladding option, has not submitted a Life Cycle Assessment to BEES at this point in time. However, due to the fact that it is a cement based product like brick, stucco and dryvit outsulation, it is reasonable to assume that fiber cement would have results similar to those products.

Energy Savings

Reducing energy consumption during the life of a building not only saves the building owner money but also reduces the life cycle impacts of the building throughout its lifetime. Reducing energy consumption reduces fossil fuel use and greenhouse gas emissions as well as the impacts of extracting, processing and distributing the fossil fuels.

R-2.5 Insulated Vinyl Siding (Progressive Foam):

- Saves 9x more energy in the first year than replacing an old refrigerator with an ENERGY STAR refrigerator.
- Saves up to 4x more energy in the first year as was required to produce the foam when installed on a home with no wall insulation, and 2x more energy when installed on a brand new home.

R-3.5 Insulated Vinyl Siding (Progressive Foam):

- Saves 17x more energy in the first year than replacing an old refrigerator with an ENERGY STAR refrigerator.
- Saves up to 20x more energy in the first year as was required to produce the foam when installed on a home with no wall insulation, and 5x more energy when installed on a brand new home.

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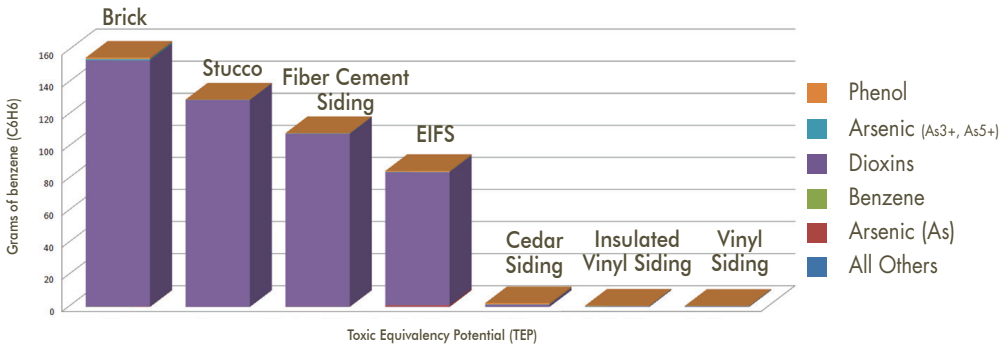
Environmental Impact (continued)

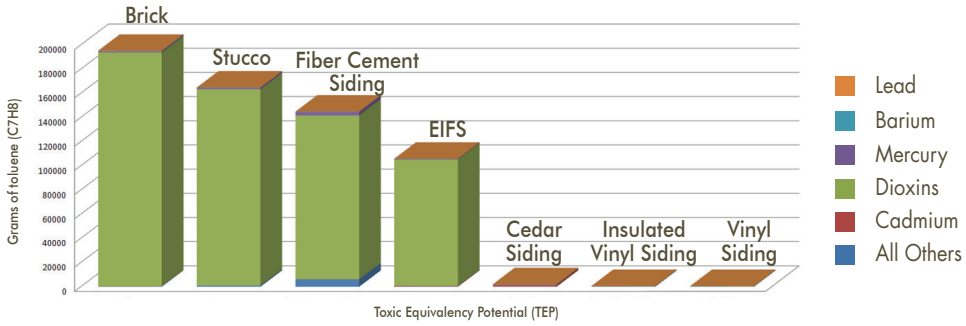
Human Health - Cancer



This graph displays the effects of chemicals emitted over the life cycle of the selected products. For measuring the potential contribution to cancer, the Toxic Equivalency Potential (TEP) for each chemical is determined and is displayed in terms of benzene equivalents.

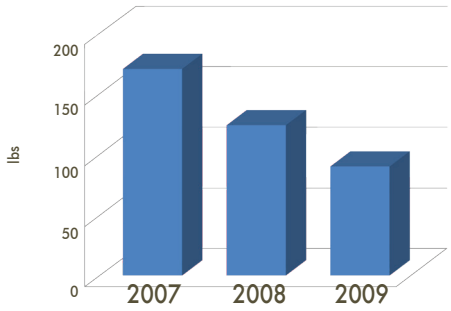
The life cycle impacts of Insulated Vinyl Siding on human health are very low compared to other products.

Human Health - Noncancer



This graph displays the effects of chemicals emitted over the life cycle of the selected products. The life cycle impacts of insulated vinyl siding on human health are very low compared to other products.

Progressive Foam Landfill Waste per Ton Produced



From 2007 to 2009, Progressive Foam has reduced our landfill waste per ton produced by 47%. We are continually working to improve of manufacturing processes, with an emphasis on reduction of waste, energy use and water use.

BEES Impact Categories

In order to develop a system for determining overall environmental impact, NIST assembled a panel of experts to set relative weights for each impact category, which are listed in parenthesis. The expert panel included producers (e.g., building product manufacturers), users (e.g., green building designers), and LCA experts. Nineteen individuals participated in the panel: seven producers, seven users, and five LCA experts.

Acidification (3%): Sulfur dioxide (SO2), released into the atmosphere from the burning of coal, leads to the creation of acid rain, which can kill trees and increase the acidity of lakes and soil, making them uninhabitable.

Criteria Air Pollutants (9%): This impact measures the amounts of criteria air pollutants: nitrogen oxides, sulfur oxides, and particulate matter.

Ecological Toxicity (7%): The ecological toxicity impact measures the potential of a chemical released into the environment to harm terrestrial and aquatic ecosystems.

Endangered Species. In BEES, habitat alteration is assessed based on the amount of waste sent to the landfill through the life of the product and at the point of final disposal.

Eutrophication (6%): Eutrophication results from excess nutrients being added to surface waters. These nutrients cause a rapid growth of algae, which can absorb the oxygen from the water, killing fish and other wildlife. Fertilizer runoff from farms is a major contributor to eutrophication.

Fossil Fuel Depletion (10%): This impact measures the extraction of fossil fuels.

Global Warming (29%): Carbon dioxide and other greenhouse gasses are emitted at every stage in the manufacturing process. These gasses can trap heat close to the Earth, contributing to global warming.

Habitat Alteration (6%): This impact measures the potential for land use by humans to lead to damage of Threatened and

Human Health: This impact assesses the potential health impacts of more than 200 chemicals. These health impacts are general, based on emissions from the various life cycle stages and do not take into account increased exposure that may take place in manufacturing facilities.

> **Cancer** (8%): For measuring the potential contribution to cancer, the Toxic Equivalency Potential for each chemical is determined and is displayed in terms of benzene equivalents.
>
> **Noncancer** (5%): For measuring contribution to health impacts other than cancer, the Toxic Equivalency Potential for each chemical is determined and is displayed in terms of toluene equivalents.

Indoor Air Quality (3%): Insulated Vinyl Siding has no effect on this impact. It measures the effects of products on the air quality inside buildings, primarily through the measurement of volatile organic compound (VOC) emissions.

Ozone Depletion (2%): Certain chemicals, when released into the atmosphere, can cause depletion of the ozone layer, which protects the Earth and its inhabitants from certain types of harmful radiation. This impact measures the releases of those chemicals.

Smog (4%): Nitrogen oxides (NOX) and other volatile organic compounds (VOCs) are released into the air from manufacturing and transportation. These chemicals, in the presence of sunlight, produce photochemical smog, which can cause respiratory and other health problems. This impact is measured in Nitrogen Oxide (NOX) equivalents.

Water Intake (8%): This impact measures water withdrawn from the groundwater or municipal system.