

## About NCFI

### An Innovative Leader for Five Decades

NCFI has been an industry leader and innovator of spray foam insulation and roofing systems solutions since 1964. NCFI's superior insulation and roofing technologies not only help families and commercial businesses save on heating and cooling costs, they help secure homes and commercial facilities against some of nature's harshest forces. We also sell and service the equipment to facilitate these applications, assuring end users a single, reliable support resource for their foam-in-place operations.

## Highest Product Quality Available

We start with the finest raw materials from proven, reliable sources to develop our high-quality, advanced spray polyurethane foam and premium acrylic coatings. Our high-performance products must pass an array of quality control measures before ever reaching the job site. All ingredients are accurately weighed and blended for optimum performance. All systems are quality control tested for conformity to NCFI specifications. Our spray polyurethane foam is shipped from our manufacturing facilities to meet your specific project requirements.

## The Best Trained Applicators in the Business

Certification as a GoldStar<sup>SM</sup> Applicator requires contractors to successfully complete a comprehensive NCFI-led training program, ensuring they are properly equipped to meet and exceed each customer's needs. Our hands-on training covers all technical aspects of accurate spray polyurethane foam application and proper equipment operation, including step-by-step procedures, parts information, and troubleshooting guides. Contractors learn the most effective ways to apply NCFI's high-quality spray polyurethane foam and premium coatings to achieve a high-performance solution. Our technical representatives can join you on-site to help explore the best approach to solving your unique construction problems.

Using less energy helps the environment. InsulStar<sup>®</sup> can help cut your energy use and reduce your carbon footprint. NCFI, maker of InsulStar<sup>®</sup>, is an Energy Star partner, member of the US Green Building Council, and winner of a prestigious award from the Environmental Protection Agency for protecting the ozone. See inside to learn why InsulStar<sup>®</sup> is among the most sustainable of all insulations.

## The most important building product you'll never see!<sup>™</sup>

- + Contains renewable agricultural products, including sugar cane, sugar beets and corn. NCFI has formulated spray polyurethane foam containing sucrose-based, agriculturally derived ingredients since the 1960s.
- + Provides a higher R-value than conventional insulation, lowering monthly energy bills.
- + Reduces energy consumption, lessening your environmental impact and carbon footprint.
- + Helps improve indoor air quality, because it aids in blocking dust and pollutants, and is naturally able to inhibit the growth of bacteria and fungus (mold) per the ASTM G-21 and E-1428 tests.
- + Requires less lumber, because InsulStar<sup>®</sup> requires only 2" x 4" studs, not the 2" x 6" studs needed to fit batt insulation. Building a typical house in the US with 2" x 4" studs instead of 2" x 6"s saves an average of two to three trees.
- + Promotes a sustainable design, because it never settles, shrinks, compresses or sags, maintaining its insulation efficiency for the life of the structure.
- + Contains no ozone-depleting chemicals. NCFI is the winner of an EPA Stratospheric Ozone Protection Award for extraordinary accomplishments and significant contributions to protect the environment.
- + Reduces the amount of waste and debris that go into landfills. It strengthens walls and increases overall structural integrity by adhering and bonding to the wall surface, so buildings last longer and don't need to be replaced as often.

## The most important building product you'll never see!<sup>™</sup>



**INSULSTAR<sup>®</sup>**

HIGH PERFORMANCE RESIDENTIAL SPRAY FOAM INSULATION



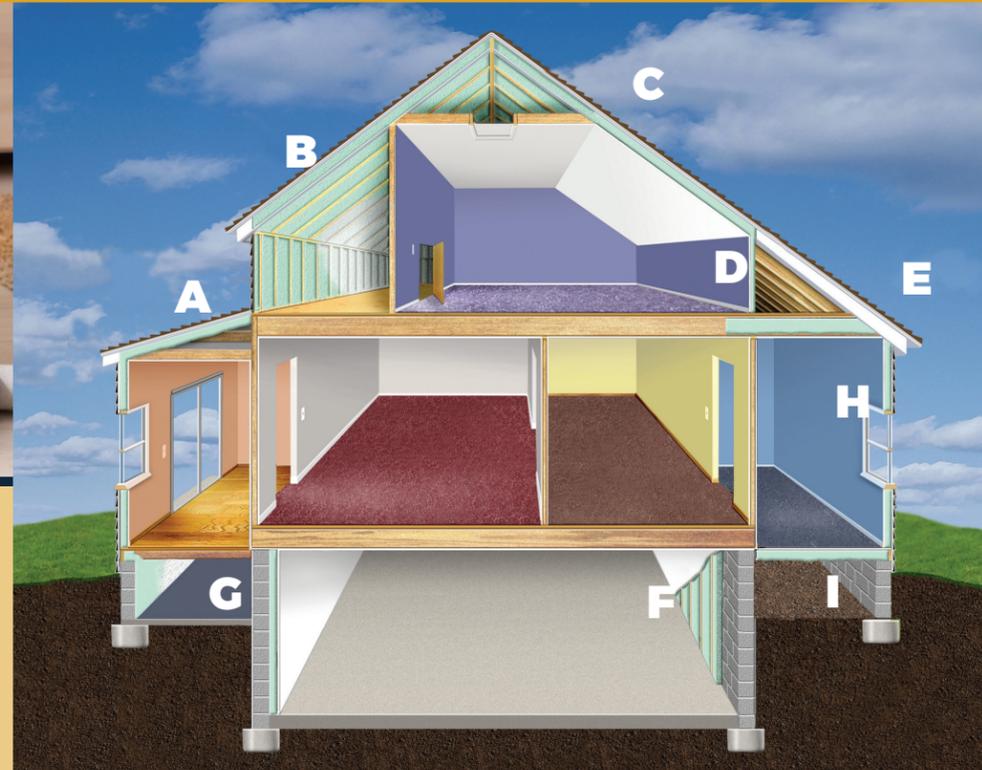
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# How InsulStar® Closed-Cell Insulation Works

A High-Performance Closed-Cell Spray Foam Insulation that Delivers Exceptional R-Value, Great Energy Savings, Water and Air Barriers, and Added Strength Against High Wind Events.



InsulStar® foam insulation is a two-part liquid, formulated from renewable agricultural resources, that is sprayed in place by specially trained GoldStar<sup>SM</sup> contractors. This liquid quickly expands, filling all gaps and voids, and cures to form a fully adhered, solid, monolithic insulation envelope that is a highly effective air barrier and moisture vapor retarder. InsulStar's® high R-value allows designers to reduce the depth of exterior walls and still obtain high energy efficiency. This means more living space in your home. By simply changing the exterior walls from 2" x 6" studs to 2" x 4" studs, a 2,500 sq. ft house gains almost six square feet of living space – reducing the wood required and saving two trees.

## The Problem

More and more, builders and homeowners are coming to understand that without an effective air and moisture barrier, a home is subject to water damage and air leaks that cause condensation and mold growth. The results can damage the structure and reduce the life of a building, in addition to making the occupants uncomfortable and costing them money in higher energy bills.

## The Solution

InsulStar® is a 2lb/ft<sup>3</sup> density, closed-cell polyurethane foam insulation applied as a liquid to the wall, ceiling, attic or floors. The liquid reacts, expands, and cures in place, forming a fully adhered, seamless insulating and air-blocking membrane that helps seal walls to prevent air penetration and block outside noise pollution. The results are a quieter home and lower energy costs. The closed-cell structure of InsulStar® blocks air movement and has a low permeance, which controls moisture vapor movement, eliminating the need for an additional vapor retarder. When moisture vapor is controlled, condensation will not occur, thus eliminating the water to support mold growth. InsulStar® is naturally able to inhibit the growth of bacteria, and fungus (mold) per the ASTM G-21 and E-1428 tests. The anti-microbial properties do not protect occupants of spaces insulated with InsulStar® from the effects of molds, mold spores, or disease organisms that may be present in the environment.

- A. Under Roof Deck (unvented)
- B. Unvented Attic w/ storage space
- C. Unvented Attic - limited access
- D. Vented Attic Knee Wall - no access
- E. Vented Attic Floor
- F. Basement Walls
- G. Unvented Crawlspace Walls
- H. House Walls
- I. Vented Crawlspace Ceilings



## The End Result

Superior Home Insulation Offering High Performance and Exceptional Value. By designing and building a highly energy-efficient, low-maintenance home, the reduction in energy used for heating and cooling will lower demand on utility companies for the life of the house. With InsulStar®, you can insulate directly to the roof deck, putting all of the space under the roof to use. By putting HVAC duct work in conditioned space, energy waste from leakage is eliminated. This additional conditioned space can then be utilized for computer rooms, bonus rooms, playrooms, or closet space. Previously wasted attic areas become valuable living space for very little cost, while adding tremendous retail market value to the house. Add up the benefits and it's easy to see why InsulStar® is the high-performance insulation you've been looking for.



## Homeowner Benefits

- + Significant savings on your monthly energy bills.
- + Provides superior R-value of 6.8 at one inch, reducing both heating and cooling costs.
- + Creates an air barrier that aids in eliminating leaks and energy loss.
- + Provides a vapor retarder that controls moisture problems.
- + Specially formulated to inhibit mold, mildew and bacterial growth.\*
- + Improves indoor air quality by helping block dust and pollutants.
- + Reduces your energy consumption, lessening your environmental impact.
- + Reduces outside noise by helping create a seamless, airtight, insulated barrier.
- + Strengthens roof deck attachment against high wind. Has Florida product approval (#9975) and Miami Dade NOA approval (#12-0810.09) to reinforce roof deck attachment against hurricane-force winds.
- + Strengthens walls and increases overall structural integrity by adhering and bonding to the wall surface.
- + Provides secondary water barrier.
- + FEMA Class 5 Flood-Resistant Material.

## Builder Benefits

- + Adaptable to uniquely shaped, hard-to-insulate designs.
- + Easy to install so you finish a job under budget and ahead of schedule.
- + Creates a fully adhered and monolithic membrane for a seamless insulation envelope.
- + Watertight within seconds of being applied.
- + Can be applied to the underside of roof decks to form conditioned or cathedralized attic areas.
- + Normally unusable attic area can be "harvested" by converting it into usable living space.
- + Crawl space insulation can be installed in a non-vented configuration for greater energy savings.
- + Building code compliant ESR #1615.
- + Installed by trained and highly experienced GoldStar<sup>SM</sup> contractors.
- + Damp-proofs by creating a seamless membrane between the inner and outer walls.
- + Proven insulating power – spray polyurethane foam systems have been applied successfully for more than 50 years.

\*The anti-microbial properties do not protect occupants of spaces insulated with InsulStar® insulation from potential deleterious effects of molds, mold spores, or disease organisms that may be present in the environment.