

## NCFI – An Innovative Leader for Five Decades.

Since 1964, NCFI has been an industry leader and innovator of spray foam insulation and roofing systems solutions. NCFI's superior insulation and roofing technologies not only help families and commercial businesses save on heating and cooling costs, they have helped secure homes and commercial facilities against some of nature's harshest forces such as hurricanes. Additionally, we sell and service the equipment that enables these applications, assuring end users of 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 for you. All systems are quality control tested for conformity to NCFI specifications. Our spray polyurethane foam is shipped from our manufacturing facilities to meet your special project requirements.

## The Best Trained Applicators In The Business.

Before becoming an applicator, NCFI provides a comprehensive training program so contractors can meet and exceed the customer's needs. Our hands-on training covers all technical aspects of accurately applying spray polyurethane foam and how to properly operate spraying equipment with step-by-step procedures, parts information, and troubleshooting guides. NCFI's experienced staff can show contractors the most efficient way to apply our high-quality spray polyurethane foam and premium coatings to provide a high performance solution. Beyond product and equipment training, NCFI offers on-site technical representatives to help explore the best approach to solving your unique construction problems.

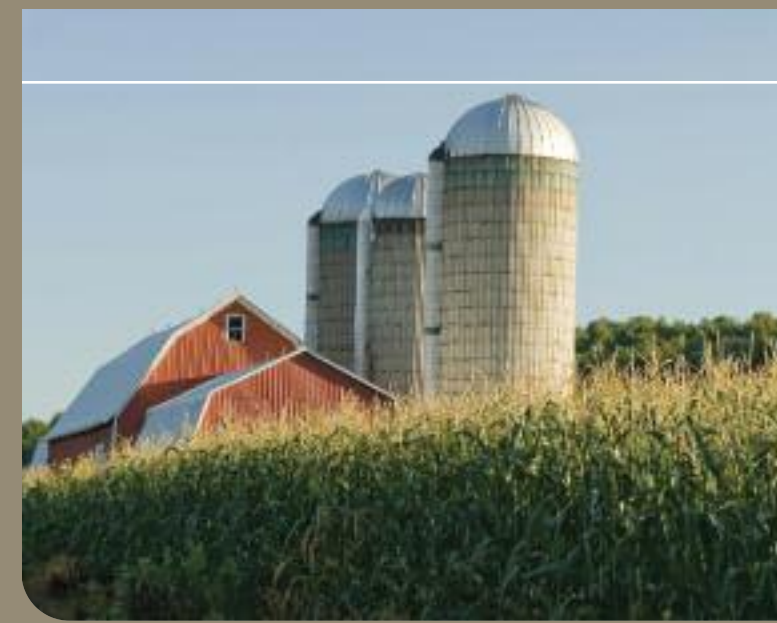


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A whole new comfort level, for you and for the world.



## AgriThane® Advanced Agricultural Insulation

An Environmentally-Friendly Spray Foam Insulation System  
Designed to Control Moisture and Eliminate Air Infiltration  
While Reducing Energy Consumption for Lower Operating Costs.

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## AgriThane® Advanced Agricultural Insulation

An Environmentally-Friendly Spray Foam Insulation System Designed to Control Moisture and Eliminate Air Infiltration While Reducing Energy Consumption for Lower Operating Costs.

Agri-Thane® is the most energy-efficient, environmentally friendly, closed-cell spray foam insulation system available for agricultural applications. Renewable resources are a part of our formulation. It can save the agricultural business owner a considerable amount on energy costs, compared to other conventional types of insulation and will eliminate air infiltration, allowing for a more consistent and controlled environment for poultry and livestock. It can also be used for insulating liquid storage tanks, freezers and cold storage facilities for storing perishable items such as potatoes, onions, tomatoes, and nuts, among others.

(Please consult NCFI Polyurethanes for proper cooler and freezer applications and design.)



^ Virtually any structure can be insulated with AgriThane®.



< AgriThane® can provide blackout conditions for poultry.



### The Problem

More and more, rising energy costs are cutting into the bottom line of agricultural business owners and operators. The costs of heating and cooling poultry houses, swine barns, farrowing houses, equine barns, cold storage facilities and so on is becoming a larger and larger operating expense. And those costs will only increase in the future.

### The Solution

AgriThane® is a 2.0 lb/ft<sup>3</sup> density, closed-cell foam insulation that goes on as a liquid, filling the cracks and crevices prior to expansion, adhering to virtually any clean and dry substrate and forming a fully-adhered, seamless insulating system. Agri-Thane® offers exceptional insulating performance that can reduce energy costs considerably. It forms a water barrier, sealing the structure to prevent moisture penetration. It also blocks air movement and has a low water vapor permeance, which controls moisture vapor movement. It can be used to completely seal bottoms or tops of grain storage silos, either concrete or galvanized steel, and livestock or poultry feed storage bins. AgriThane® also adds structural rigidity, and can help “tighten” older buildings made of metal or wood.

### The End Result

**A Superior Agricultural Insulation System Which Increases Energy Efficiency, Reduces Operating Costs, and Assists in Achieving Increased Farm Production.** By investing in AgriThane®, a highly energy-efficient, high performance insulation system that also acts as an air barrier, moisture barrier and, in some cases, a structural complement to older metal or wood structures, additional long term savings can be achieved.

**EnduraTech Premium Coatings give long lasting protection when used on metal roofs, tanks, silos, and other agricultural projects.**

< Using AgriThane® can reduce energy cost considerably

## How AgriThane® Spray Foam Insulation Works

AgriThane® spray foam insulation is a two-part system formulated from renewable agricultural resources that is applied by highly trained applicators. 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 and moisture barrier. AgriThane® is available in natural or black if required for poultry house blackout conditions.

### BENEFITS

AgriThane® Advanced Agricultural Spray Foam Insulation Systems can save agricultural business owners and operators money by making their structures much more energy efficient.

- **Saves considerably** on monthly energy bills.
- **Provides superior R-value** per inch, reducing both heating and cooling costs.
- **Creates an air barrier** that eliminates leaks and energy loss.
- **Controls moisture** to help prevent mold and mildew.
- **Reduces your energy consumption**, lessening your environmental impact.
- **Provides consistent temperatures** – no drafts, no cold or hot spots – for better production by poultry and livestock and less loss of stored harvests.
- **Provides blackout** – available in black to provide blackout conditions that have been shown to improve growth rates in poultry.
- **Contains renewable agricultural resources**, so it's environmentally and grower friendly.
- **Never settles, shrinks, compresses or sags**, maintaining its insulation efficiency for the life of the structure.
- **Strengthens walls and increases overall structural integrity** by adhering and bonding to the wall surface.
- **Dampproofs** by creating a seamless membrane between the inner and outer walls.
- **Has proven insulating power** – spray polyurethane foam systems have been used successfully in agricultural applications for over 35 years.

### The Many Uses of AgriThane®

Because of AgriThane®'s superior insulating power, airtight closed-cell formulation, and simple spray-on application, its uses in an agricultural setting are virtually limitless. Here are a few ways AgriThane® can be used to cut your costs:

#### Liquid Storage Tanks\*

AgriThane® can be sprayed directly on vertical or horizontal tanks of any shape, making it an excellent choice for insulating tanks and storage vessels for liquid materials such as water, fats and oils, and slurries. It can also be applied for insulating processing tanks used in the beverage and spirit processing industries.

#### Cold Storage and Freezer Applications\*

AgriThane® can be used in the design and construction of cold storage and freezer facilities used to store fruits and vegetables, nuts and other perishable food items. It helps assure constant temperatures and the closed-cell design means much lower water vapor perm values per inch. It's also an excellent insulation for processing plants, refrigerated warehouses and distribution centers.

#### Metal Buildings, Pole Barns, Sheds and Structures\*

AgriThane® is an excellent choice for the farm or ranch to insulate various types of out buildings such as workshops, equipment storage, bagged or bulk feed storage and general use type structures. It will help keep work areas comfortable in winter or summer, and will actually “tighten” a building constructed of metal panels and add to its structural integrity. It also reduces interior noise levels.

#### Grain Storage and Silos\*

AgriThane® can be used to help control dust and moisture problems experienced around grain and animal feed storage by sealing cracks and seams along exterior and interior bin bottoms or tops. It also helps reduce insect migration and can conserve heat during drying. It provides an airtight seal that reduces waste during fumigation of grain storage facilities. When used with NCFI Polyurethanes EnduraTech™ line of premium roof coatings, AgriThane® can also be used to refurbish old or weathered silo tops, eliminating the need for any costly replacements or repairs.

#### Livestock Housing\*

AgriThane® can be used to insulate dairy barns or milk houses, swine holding or farrowing houses, horse barns, and cattle barns. It provides consistent temperature control to reduce stress levels in livestock caused by temperature extremes during summer or winter months. It can also be used to reduce radiant heat under sheds and covers during summer months.

#### Poultry Houses\*

AgriThane® can be used in existing houses, new houses or for retro-fit projects. It is a superior choice for solid or curtain wall designs. By eliminating air infiltration, it can increase tunnel fan operation. It can also improve the structural integrity of older style houses. AgriThane can be formulated and applied in “Black” for providing blackout conditions.

**\*EnduraTech™ Premium Coatings give long lasting protection when used on metal roofs, tanks, silos, and other agricultural projects.**

### AgriThane Spray Foam Typical Insulation Physical Properties\*

Description:	Closed-cell spray polyurethane foam
Closed-cell content:	Greater than 90%
Density:	~1.90 to 2.1 lb./ft. nominal (ASTM D 1622)
R-Value:	>6.8 @ 1" (ASTM C 518)
Compressive strength:	>25 psi (ASTM D 1621)
Moisture vapor permanence:	1.3 perms
Water penetration:	No Failure @ 56 ft. Head Pressure (AATCC 127)
Air permeance:	0.000 scfm/ft <sup>2</sup> @ scfm/ft <sup>2</sup> @ 1.57 psf (ASTM E 283)
Resistance to solvents:	Excellent
Max service temperature:	180°F

\* Physical properties may change based on job specifications.