

Introducing

# Engineered Thermal Performance™



## NCFI Introduces a Method Based on Full Scale Testing for Calculating the True Performance of Insulation: Engineered Thermal Performance™ with InsulStar® Closed-Cell SPF

Comparing the true performance of fiber insulation with spray foam insulation takes a new way of thinking. R-value, the historical method to rate insulation, only measures one of the many mechanisms of insulation effectiveness. We, along with other industry leaders, believe testing real-world insulation performance requires a more rigorous testing regime: using real world conditions in large-scale wall assemblies with air and moisture penetration just like all homes and buildings. The results would realistically show relative insulation performance under those conditions, and how to maximize the insulation investment to meet the building code requirements. We call it Engineered Thermal Performance™.

We participated with Architectural Testing, Inc. (ATI), a nationally-recognized, fully accredited independent laboratory, to evaluate different insulations under a variety of conditions. ATI studied the true performance of spray foam insulation versus fiber insulation products in whole-wall assemblies. The results of this extensive test program prove that code-compliant thicknesses of SPF insulation can be designed into wall assemblies based on Engineered Thermal Performance™ (ETP™) that perform at the same levels of labeled insulation R-values.

According to Craig DeWitt, Ph.D., P.E., "the data show 1.5 inches of InsulStar® closed-cell SPF insulation in a wall will meet the thermal performance requirements of a similar wall with code-required R-13 insulation. A wall containing 2 inches of InsulStar® insulation will meet the thermal performance requirement of code-required R-19 insulation. In addition, 2 inches or more of InsulStar® will meet the insulation requirements for R-21 insulation." NCFI is proud to pioneer the process of Engineered Thermal Performance™ and products that best represent it.

### CODE COMPLIANCE

ETP™ is an ideal way to provide for the International Energy Conservation Code's performance path to compliance. The ATI data unequivocally demonstrates the greater insulation effectiveness of InsulStar® over fibrous insulations. Through the use of Engineered Thermal Performance™, builders can meet code-required energy efficiency with less foam insulation thickness.

IRC Requirement*	InsulStar® ETP™
R-13	1.5"
R-21	2"

\*IRC - the International Residential Code published by the International Code Council



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