

THE ICYNENE® ADVANTAGE

A Closer Look at Air Superiority in Action



Vol. 11, Issue 01

The Icynene Insulation System®

Icynene® is a low density soft foam insulation which is sprayed into/onto walls, crawlspaces, attics and ceilings by Icynene Licensed Dealers. Sprayed as a liquid, it expands to 100 times its volume in seconds to create a superior insulation and air barrier. Every crevice, crack, electrical box, duct, and exterior penetration is effortlessly sealed to reduce energy robbing random air leakage. The Icynene Insulation System® adheres to all surfaces and remains flexible so that the integrity of the building envelope seal remains intact over time.

Icynene® is ideal for residential, commercial, industrial, and institutional indoor applications.

The product is:

- Healthier:** Water based. No CFCs, HCFCs, formaldehyde, or volatile organic chemicals. Seals out dust, pollen, and other allergens from entering the structure. Air sealing minimizes the potential for condensation, molds, mildews.
- Quieter:** Air sealing blocks out air borne noise from entering the structure. Minimizes noise in plumbing run walls.
- More Energy Efficient:** Up to 50 % energy savings versus traditional insulation.

Information about The Icynene Insulation System® can be obtained by calling Icynene Inc. (800-758-7325), visiting the web site www.icynene.com, or contacting your local Icynene Licensed Dealer.

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COMMERCIAL BUILDING INSULATION: CONDENSATION CONTROL WITH ICYNENE®

Synopsis:

- ✓ Icynene® solved the condensation and moisture problem
- ✓ Icynene® was the most cost effective and least disruptive solution
- ✓ Icynene® eliminated the need to clean the application surface

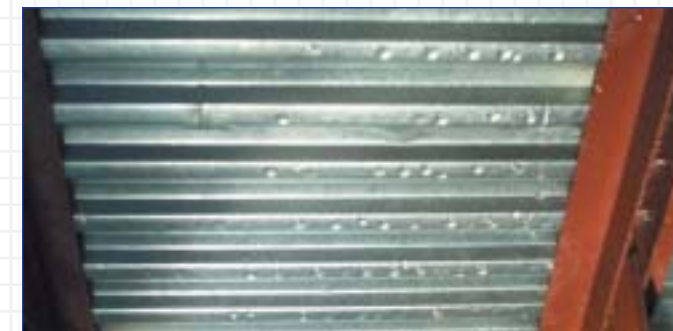
The Problem

Boulineau's is a quality grocery and department store located in the resort area of North Myrtle Beach, South Carolina. In this hot, humid climate, the design cooling temperature is 92 degrees and summertime relative humidity levels often reach 90% and higher.



Boulineau's Grocery & Department store, Myrtle Beach, South Carolina.

The walk-in freezers and chillers for Boulineau's are located on the second floor of the store, directly above the shopping area. The second story floor area under the chillers and walk-in freezers was not insulated, thereby causing the first floor ceiling area under the chillers and walk-in freezers to be extremely cold. Condensation then formed as the ambient air came into contact with the cold area located under the chillers and walk-in freezers.



Condensation on the ceiling area below the chillers on the second floor and above the first floor drop ceiling.



Discolored ceiling tiles were constantly being replaced by Boulineau's who pride themselves on a neat and clean retail environment.

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The Problem (cont.)

The condensation would then drip down onto the suspended ceiling tiles located below, causing stains and discoloration. The management of the store were also concerned about the possibility that water could eventually end up on the floor, causing one of their customers to slip and fall.

The Solution – Insulate with Icynene®

The local Icynene Licensed Dealer, Sprayseal Insulation, was contacted to review the situation and design an insulation solution that would correct the problem.

Sprayseal concluded that to prevent the formation of condensation on the metal ceiling deck, 3 inches of The Icynene Insulation System® would be applied directly to the affected area. One ceiling tile at a time was removed to provide access to the area between the dropped ceiling and the metal decking. Icynene® insulation was then applied directly to the metal decking, with the area below protected from over-spray by the remaining ceiling tiles. This spraying process was repeated until the entire area that had been producing condensation was covered.



Icynene® insulation applied directly to the metal ceiling area below the chillers and walk-in freezers.



Area of application for Icynene® included the footprint of the chillers and walk-in freezers plus a perimeter area extending 10 feet beyond.

Why The Icynene Insulation System®?:

1. The key to preventing the formation of condensation in the affected area was to stop the warm moist ambient air from coming into contact with the cold ceiling surface. Icynene® was selected because it is both a conductive insulator and air barrier.
2. The limited access through the single ceiling tile would make it difficult and time consuming to dry and clean the surface of the metal decking. Because of its tenacious adhesion characteristics, The Icynene Insulation System® could be applied directly to the untreated and wet metal surface.
3. The movement of store inventory would cause the second level floor / first floor ceiling deck to vibrate and move. The flexible characteristic of Icynene® allows for movement in the roof deck and eliminates any concerns of de-lamination that is usually associated with other types of insulation.

The Solution (cont.)

4. The Icynene Insulation System® will not wick water or exhibit any capillary action. If there were a leak in the chillers or walk-in freezers that infiltrated through the second floor, gravity will eventually pull the water directly through the Icynene® foam. Icynene® would remain attached to the metal ceiling deck throughout the duration of the leak and return to peak performance once it had dried.
5. Application of The Icynene Insulation System® provided the management of Boulineau's with an effective solution to their problem and minimized the disruption to store operations.

The Results

There has been no condensation in the area under the chillers and walk-in freezers where The Icynene Insulation System® had been applied.



One year after the Icynene® insulation had been installed above these ceiling tiles – no more water damage.

"We are very pleased and want to say that this product really works"

-Mark Clemons
Store Manager

Icynene® in a Commercial Application:

- ✓ Solved a condensation and moisture problem
- ✓ Did not require cleaning of the metal decking prior to installation
- ✓ Minimized disruption to on-going operations