

UPDATE

COMMERCIAL

Major Retailer Shops Dow For Best Insulation Value

When Mervyn's, a retail department store chain, went comparison shopping for insulation, they chose STYROFOAM® brand insulation, the Blue® extruded foam manufactured exclusively by The Dow Chemical Company, as the best value for a new store being built in Dearborn, Michigan.

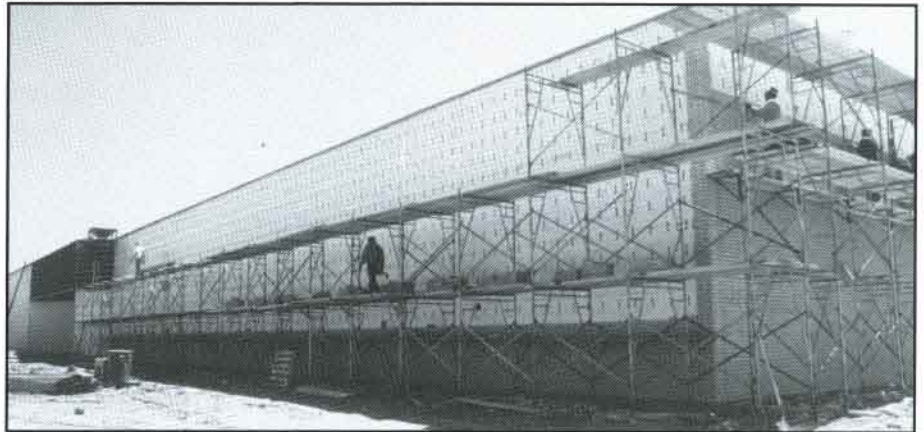
Mervyn's is a family department store specializing in soft goods, and they fill a niche between traditional department stores and upscale discounters. Their product line includes clothes, shoes, accessories, fine jewelry, cosmetics, home fashions, and toys.

Based in the San Francisco bay area, Mervyn's has 198 stores located in 13 states. The Dearborn store is a single-story, 76,857-sq.-ft. building,

Life Cycle Costing Delivers Best Value

To coordinate building efforts in different areas across the country, Mervyn's issues a Scope of Work manual detailing each project. According to Greg Gillis, Director of Construction for Mervyn's, it's up to the architects for each store to develop specifications that achieve the most effective life cycle costing and meet the building codes in their area.

Life cycle costing is important for Mervyn's, and that means selecting durable building materials. "We have a small store staff, and we're looking for low maintenance materials that can last for many years," says Gillis. The average store is expected to last at least 30 years. Mervyn's remodels



The 76,857-sq.-ft. building is sheathed in 3/4-in. STYROFOAM TG brand insulation. Installed on the outside of the frame, the insulation significantly reduces heat loss through the highly-conductive steel studs.

the interior every seven years, but they do not redo the exterior.

Life cycle costing requires energy efficiency. "The more energy efficient you can make a building, the better off you are in the long term," says architect Larry Brashier. "You'll reap the benefits over the life of a building." Brashier is with the Dallas, Texas architectural firm Gordon, Sibeck & Associates, Inc., architects for the Dearborn project.

To meet these high performance requirements, the architects selected metal stud construction. This method is faster and less expensive than block cavity wall construction. Plans called for structural steel metal studs with batt insulation in the stud

cavities. Sandwiched between the studs and the brick veneer is a 3/4-inch layer of STYROFOAM brand insulation which takes the place of an exterior sheathing, such as gypsum board.

"STYROFOAM does everything gypsum board would, and more, because of the insulating value," says Brashier. One inch has 11 times the insulation value of 1/2-inch gypsum board. An extruded polystyrene foam, STYROFOAM brand insulation achieves a high, long-term R-value (5 per inch) due to its closed-cell structure.



The Best Proven Value

This construction method puts the insulation where it's needed most—outside the frame, where it significantly reduces heat loss through the highly conductive metal studs. It also raises the temperature of the cavity area and reduces the potential for water condensation in the walls. STYROFOAM brand Tongue and Groove insulation has convenient tongue-and-groove edges that fit together tightly, reducing air infiltration.

Specifications also called for wrapping the foundation perimeter in 2-inch STYROFOAM brand Square Edge insulation.

Originally, Gordon Sibeck & Associates did not specify STYROFOAM for the Dearborn store. However, Gaynor & Sirmen Inc., mechanical engineers, recommended STYROFOAM brand insulation to meet the thermal energy requirements based on their energy calculations.

The architects were not surprised by the cold weather criteria: "Our engineers have specified STYROFOAM for a lot of our projects in other states where severe weather is a consideration. For life cycle costing, it makes a tremendous amount of difference, especially where it's cold," explains Brashier.

A Multi-Purpose Solution

Thermal efficiency is not the only advantage of STYROFOAM brand

insulation. "STYROFOAM brand insulation solves a number of construction problems at the same time, at a reasonable cost," explains Brashier. "We also use it to cut moisture penetration." Due to its closed-cell structure, it's highly resistant to moisture.

Its low water absorption properties protect the batt insulation from the damaging water that may find its way through the exterior face brick.

Construction Goes Quickly

STYROFOAM brand insulation helped keep the building construction on schedule. "It comes in standard sizes and is readily available. It meets most building codes, and it's easy to install," adds Brashier. A network of production locations and distributors ensures prompt, reliable delivery anywhere in the country.

"It was very easy to work with," agrees Ron Rogers of Berti Company Interiors. "It's lighter in weight and goes up faster and easier than gypsum board." A 1-inch thick, 2' x 8' board weighs less than three pounds, compared to a ½-inch, 2' x 8' gypsum board weighing approximately 32 pounds. The material is easily trimmed with a utility knife.

Using STYROFOAM brand insulation without additional sheathing saved time and labor costs. "Usually, you have to install the insulation onto the stud and then attach the brick ties, but we



The brick veneer goes up right over the STYROFOAM brand insulation. STYROFOAM brand insulation is highly water resistant and exposure to the elements on the job site will not cause damage.

completely eliminated that step by using STYROFOAM. In one operation, the insulation was held in place by the screws which attached the brick ties," says the architect.

According to the architect, "The contractor can wrap the building in STYROFOAM brand insulation before winter, and then work inside during the cold weather before putting up the brick exterior. You can't do this with asphalt-impregnated gypsum board."

"The Dow support people were very good," says Rogers. "When I had any questions, they were always right there to help."

For more information on STYROFOAM brand insulation and steel stud construction, write for our free Technical Note #21, Form No. 179-4231-87.



The Dow Chemical Company
STYROFOAM Brand Products
P.O. Box 1206
Midland, Michigan 48674



The insulation installation is a one-step job, completed at the same time that the brick ties are installed. The tongue-and-groove edges fit together snugly, helping to reduce air infiltration.

CAUTION: STYROFOAM brand insulation is combustible and should be handled and installed properly according to Dow literature available from your supplier or from Dow.