



Push the Thermal Envelope with STYROFOAM™ Brand SPF Insulation

Quality builders looking for a differentiated offering will appreciate the added comfort and durability they can give their customers with STYROFOAM™ Brand Spray Polyurethane Foam (SPF) Insulation (MX Series).



Expand the Comfort Zone.

STYROFOAM™ Brand SPF Insulation is a professionally applied two-component polyurethane foam insulation that, when properly applied, creates a seamless, monolithic barrier for protection against water and air. The SPF blend successfully incorporates a zero ozone-depleting blowing agent in the manufacturing process.

Available in two formulas (MX 2030 and MX 2045) for both new and retrofit applications, STYROFOAM™ Brand SPF Insulation is created from a unique polyol technology, which offers high foam yield and wide processing latitude. The closed-cell, 2 pcf foam expands during application to fill cavities, cracks and crevices, blocking the uncontrolled air leakage that can threaten consistent, comfortable indoor temperatures (not to mention drive up energy bills).

STYROFOAM™ Brand SPF Insulation serves as both an insulation and air sealant, plus resists moisture and provides structural reinforcement.*

Expand the comfort zone and watch customer satisfaction grow with STYROFOAM™ Brand SPF Insulation.

The Benefits of STYROFOAM™ Brand SPF Insulation

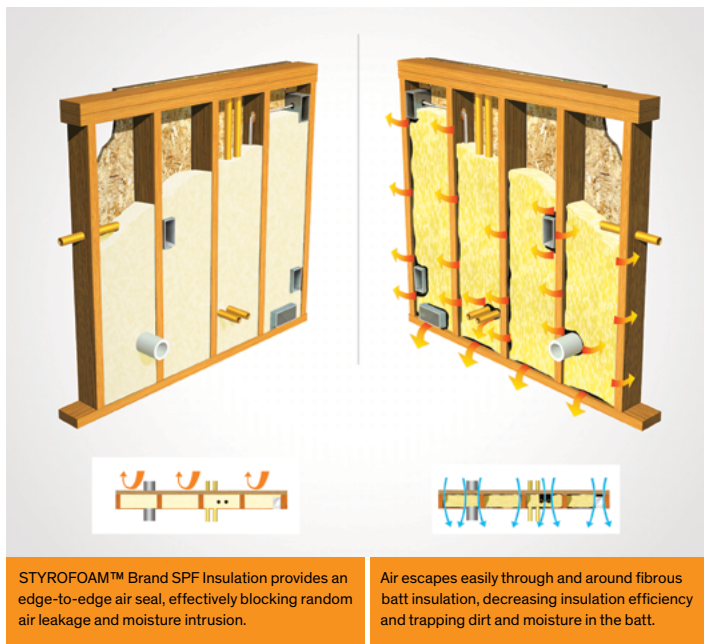
- Closed-cell, 2 pcf foam
- Maximum insulation performance (aged R-value 6.0 at 1" for MX 2030 and 6.5 at 1" for MX 2045)
- Two formulas for wide processing latitude
- Resists moisture and minimizes condensation potential
- Allows installation of air barrier and insulation in one step, reducing construction time
- Eliminates extra steps for flashing and vapor barrier installation (depending on local code requirements)
- Provides structural reinforcement for improved racking strength*
- Can offer upsell opportunities based on energy savings and enhanced home performance

Call your local Dow sales representative to learn more about STYROFOAM™ Brand SPF Insulation.

*STYROFOAM™ Brand SPF Insulation provides structural enhancement only. Use in conjunction with approved structural components and framing members consistent with local building code requirements.

Stop the Great Escape

Uncontrolled air leakage is an enemy of energy efficiency in a home, responsible for 25 to 40 percent of energy loss.** While fibrous batts provide minimal resistance to air infiltration and exfiltration, STYROFOAM™ Brand SPF Insulation fills cracks, crevices and penetrations in the building envelope, when properly applied, creating an airtight seal. STYROFOAM™ Brand SPF Insulation also helps contribute to a quieter home by minimizing vibrations and noises that transmit through gaps and cracks in the building envelope.

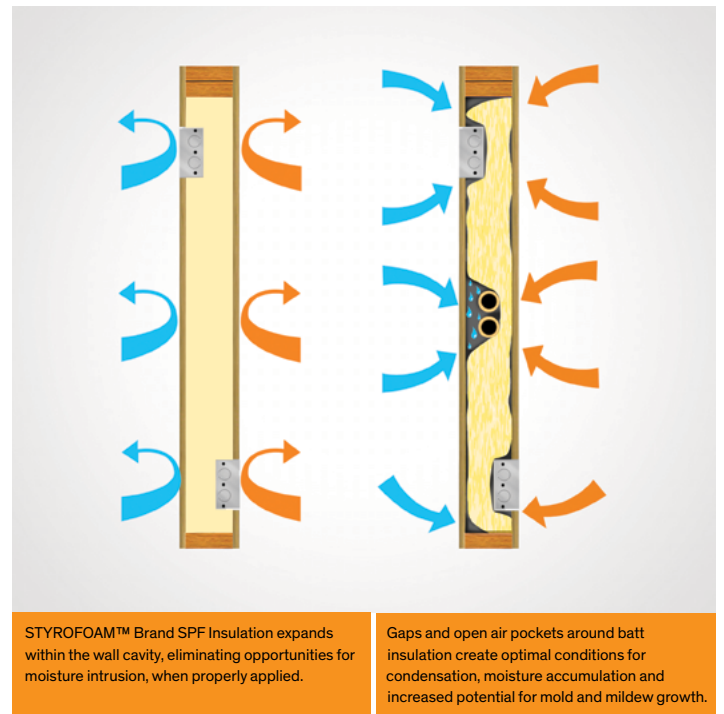


Manage Moisture

Many building failures are related to moisture. Moisture accumulation can result from uncontrolled air movement.

Fiberglass batts can have gaps within the cavity. And the air-permeable nature of fiberglass allows air to move right through – just like in a furnace filter. Condensation can occur inside attics, ceilings, walls and floors when warm, humid air passes through or around the insulation and contacts a cold surface.

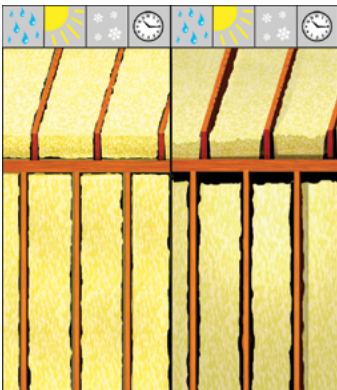
STYROFOAM™ Brand SPF Insulation fills gaps and cracks, halting the majority of airborne moisture movement. In addition, the closed-cell, uniform structure of STYROFOAM™ Brand SPF Insulation forms an effective air seal to minimize air movement and accompanying moisture. In this way, it helps prevent moisture accumulation and reduces the potential for mold and mildew growth. The rigid foam is also semi-permeable to vapor transmission, allowing for cavity drying in both directions when necessary.



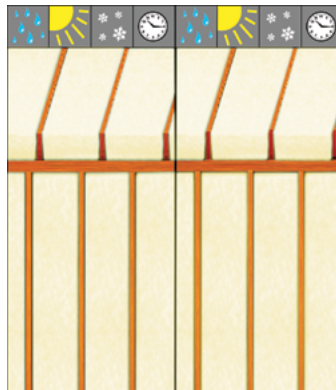
Achieve Maximum R-Value

When comparing rated R-values of different insulation options, be sure you have all the facts. In order to achieve the ratings claimed by fiberglass batt manufacturers in their literature and on their packaging, batt insulation must maintain its full loft. And that's not easily achieved.

**Source: www.energystar.gov



Over time, batt insulation sags and settles, losing insulation value and increasing opportunities for air and moisture movement.



Spray polyurethane foam, such as STYROFOAM™ Brand SPF Insulation, does not shrink, sag or settle, and maintains its insulating and air barrier properties over time.

Table 1: Why Choose STYROFOAM™ Brand SPF Insulation Over Fiberglass Batt?

Fiberglass Batt	STYROFOAM™ brand SPF Insulation (when properly applied)
Allows air to pass easily through	Creates an airtight, moisture-resistant seal (when properly applied)
Does not expand; allows gaps for air and moisture intrusion	Expands to seal and insulate cavities, cracks and crevices, (when properly applied)
Can hold and allow moisture entry	Repels/deflects water
Rated R-value dependent on "perfect" application; compresses easily, losing insulating value	Will not compress, settle, shrink or sag; delivers an aged R-value 6.0 at 1" for MX 2030 and 6.5 at 1" for MX 2045
Does not provide structural reinforcement	Adds strength and rigidity to the wall assembly

STYROFOAM™ Brand SPF Insulation, when properly applied, expands to fill every nook and cranny during application, providing consistent R-value. But when compressed, the effective R-value of batt insulation can be reduced by as much as 50 percent from the maximum rating on the product. Batt insulation also leaves gaps, allowing energy-robbing air and moisture intrusion.

STYROFOAM™ Brand SPF Insulation is such an efficient insulator it enables the potential use of smaller, less-expensive HVAC equipment. At the same time, it can help reduce the amount of ozone-depleting fossil fuels needed for heating and cooling.

Add Structural Reinforcement

STYROFOAM™ Brand SPF Insulation provides structural reinforcement to the homes you build in two important ways:

- Reduces fluctuating temperatures and moisture changes in wood structural components
- Bonds to studs and sheathing, adding strength and rigidity

Temperature and moisture changes of wood are one of the biggest contributors to building movement. By effectively blocking air leakage, STYROFOAM™ Brand SPF Insulation helps keep temperature and moisture levels constant, minimizing expansion and contraction of wood frame walls.

In two independent tests conducted by the National Association of Home Builders' (NAHB) research center, SPF insulation between wood- and steel-stud wall panels increased rack and shear by a factor of two to three when sprayed onto gypsum wallboard or vinyl siding.† When sprayed onto oriented strand board (OSB), SPF insulation increased racking strength by approximately 25 percent (Figures 1 and 2). The NAHB concluded that during a design racking event like a hurricane, there would be less permanent deformation of wall elements and possibly less damage to a structure braced with SPF-filled walls.

FIGURE 1:

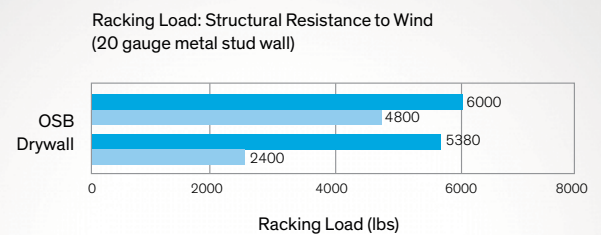
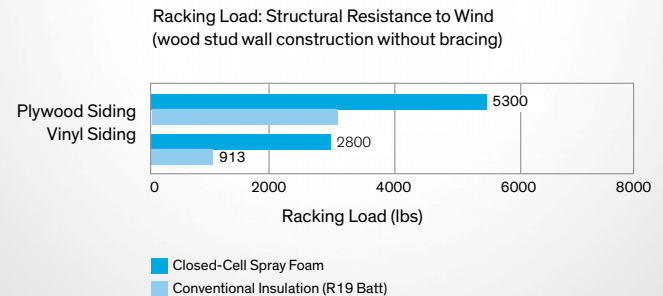


FIGURE 2:



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 †National Association of Home Builders, Testing and Adoption of Spray Polyurethane Insulation for Wood Frame Building Construction, May 25, 1992, and Racking Tests on Conventional (R19/Batt) and Spray Polyurethane Foam-Filled Wall Panels, November 18, 1996.

Sealing the Envelope

Incorporating STYROFOAM™ Brand SPF Insulation into your construction process is not difficult with proper training. The spray-applied liquid expands on contact and cures to a rigid foam, sealing and insulating all of the hard-to-reach places fiberglass cannot.

STYROFOAM™ Brand SPF Insulation can be installed in new construction after the rough plumbing, electrical wiring, and heating and air conditioning ductwork are installed. In retrofit situations, the foam is sprayed between rafters and floor joists to increase airtightness in the attic and/or crawl space.†† When re-siding, a layer of STYROFOAM™ Brand SPF Insulation can be sprayed in wall cavities and over wood studs before new sheathing and siding are installed, helping to improve comfort and energy efficiency.

Dow requires that trained SPF applicators install STYROFOAM™ Brand SPF Insulation, and recommends SPF installation certifications. Contact your Dow representative for a list of qualified insulation contractors in your area.

Spray foam insulation is an energy-efficient upgrade that offers tremendous upsell potential for builders. With STYROFOAM™ Brand SPF Insulation, homeowners will appreciate the premium performance and may qualify for an energy-efficient mortgage.

STYROFOAM™ Brand SPF Insulation meets IBC/IRC requirements for foam plastic insulation and is UL Classified Class I at 4 inches (UL 723). Also see ICC ESR-2670, ASTM C 1029 and ASTM E84.



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Dow Polyurethane Foam Insulation and Sealants

CAUTION: When cured, these products are combustible and will burn if exposed to open flame or sparks from high-energy sources. Do not expose to temperatures above 240°F (116°C). For more information, consult (Material) Safety Data Sheet ((M)SDS) call Dow at 1-866-583-BLUE (2583) or contact your local building inspector. In an emergency, call 1-989-636-4400 in the U.S. or 1-519-339-3711 in Canada. When air sealing buildings, ensure that combustion appliances, such as furnaces, water heaters, wood burning stoves, gas stoves and gas dryers are properly vented to the outside. See website: <http://www.epa.gov/iaq/homes/hip-ventilation.html>. In Canada visit: <http://archive.nrc-cnrc.gc.ca/eng/ibp/irc/bsi/83-house-ventilation.html>.

STYROFOAM™ Brand Spray Polyurethane Foam contains isocyanate, hydrofluorocarbon blowing agent and polyol. Read all the instructions and (M)SDS carefully before use. Wear protective clothing (including long sleeves), gloves, goggles and proper respiratory protection. Supplied air or an approved air-purifying respirator equipped with an organic vapor sorbent and a P100 particulate filter is required to maintain exposure levels below ACGIH, OSHA, WEEL or other applicable limits. Provide adequate ventilation. Contents under pressure. STYROFOAM™ Brand SPF should be installed by a trained SPF applicator.

Building and/or construction practices unrelated to building materials could greatly affect moisture and the potential for mold formation. No material supplier including Dow can give assurance that mold will not develop in any specific system.