



PERFORMANCE



BUILD BETTER HOMES WITH *STYROFOAM* BRAND INSULATION



**STYROFOAM
BRAND INSULATION
HAS BEEN PROVEN
IN THE FIELD FOR
DECADES**

In over 50 years of use more than 21 billion board feet of STYROFOAM* brand insulation have been installed in millions of homes nationwide. Major builders nationwide know they can depend on it, and home buyers know it, too. In fact, STYROFOAM brand insulation helps to differentiate you as a quality builder from economy builders.



**DOW EXCELLENCE:
TEAM UP WITH THE LEADER**

Dow leadership sets the pace in foam technology. We're the expert in foam technology with a singular focus in insulation: STYROFOAM brand insulation. Our nine North American manufacturing plants assure reliable supply and consistent product quality, and we fully back you with expert technical support.



**STYROFOAM BRAND INSULATION
STANDS OUT FROM THE REST**

No one else can offer you the strength of the Dow brand and reputation that goes with our trademarked Blue* color. In fact, STYROFOAM brand insulation has been recognized as a Top 100 Brand of the Century.

**STYROFOAM BRAND INSULATION
RATES FIRST IN THE MAGAZINES
BUILDERS RELY ON**



- Pro Builder* #1 Usage/Preference 1997-2000
- #1 Highest Quality 1999-2001
- Builder* #1 Highest Perceived Value 1998
- #1 Usage in Foundations 1998
- #1 Local Dealer/Distribution

**STYROFOAM BRAND INSULATION HAS
BUILDING CODE ACCEPTANCE**

- BOCA National Building Code
- ICBO Uniform Building Code
- SBCCI Standard Building Code

Dow is also affiliated with, participates in, or is a credited member of numerous professional construction industry associations.

*STYROFOAM and the color Blue are trademarks of The Dow Chemical Company



ARE YOU GETTING ALL YOU COULD?

You know which builders are really successful. The ones who have greater profitability, fewer callbacks and a reputation for quality. The homes they build offer higher energy efficiency. They get more home sales, easier closings, and more satisfied customers. The fact is, if you're not as successful as you think you should be, OSB and plywood may be getting in your way.

HERE'S HOW OSB AND PLYWOOD CAN BE BARRIERS TO YOUR SUCCESS

More costly 2 x 6 construction

With 2 x 6 walls, your material costs are higher, and that's just the start. Those 2 x 6 walls add to heat loss and moisture problems because they have lower effective R-values. Without insulated sheathing, the batts are the only insulation. But 6½" R-19 batts are R-17.8 at best when compressed into a 5½" thick cavity. Inset stapling compresses them even more, reducing R-value and permitting more convective air movement. Finally, a home you build with 2 x 6 walls has 40 sq. ft. less space in a 2,000 sq. ft. home than one built with 2 x 4 walls.

More complex construction

Cost isn't the only problem. A 2 x 6 wall is heavier to work with – and if the sheathing isn't covered on the jobsite, it's even heavier when wet. During installation, improperly spaced sheathing may create a non-level surface for siding. And, don't forget added cost and time to install housewrap.

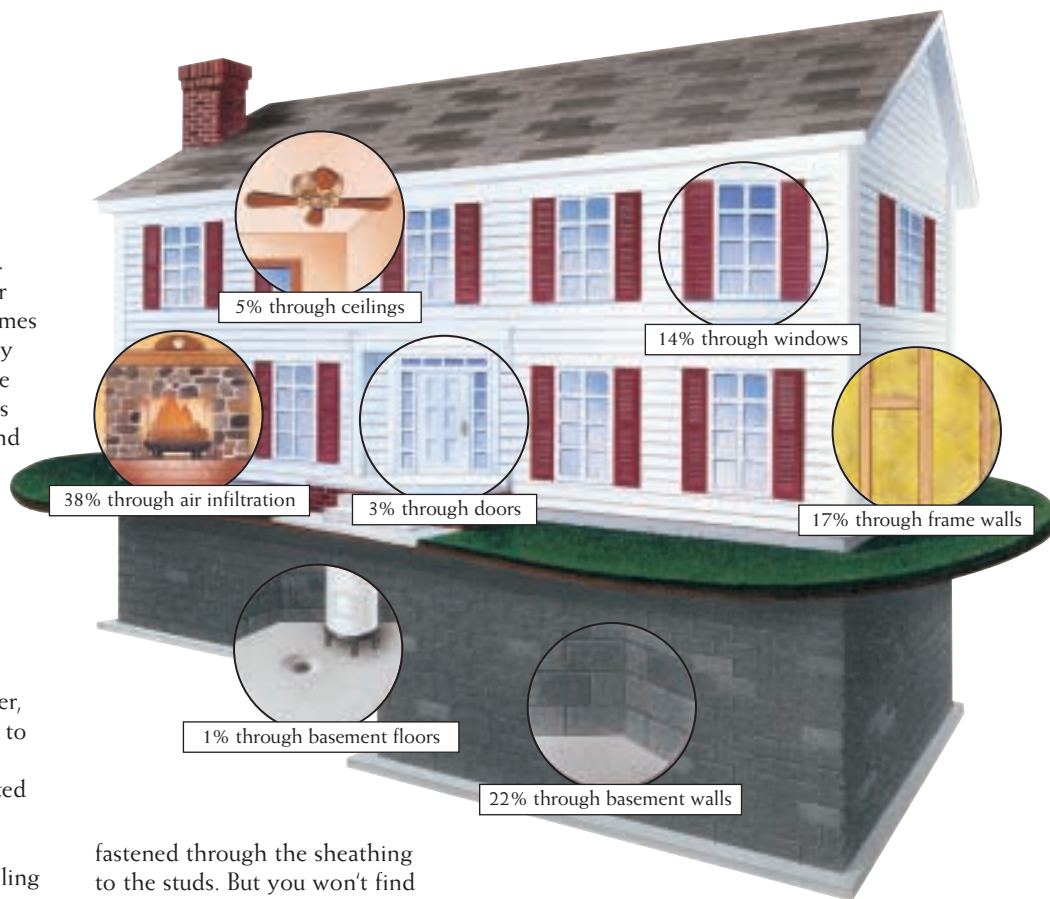
Price instability frustrates cost forecasting

Wood fluctuates in price and availability, throwing off your plans. You don't need that hassle.

Construction liabilities

Both the Engineered Wood Association (APA) and the Structural Board Association (SBA) recommend ½" spacing between sheets of OSB or plywood. But gaps let air and moisture infiltrate and raise risks of a non-level surface if installation isn't proper. Plus, trimming can cause mistakes. And cut 4 x 8 sheets can't be used elsewhere.

In addition, the Vinyl Siding Institute (VSI) and NHC Vinyl recommend that fasteners for vinyl siding penetrate at least ¾" into solid wood. This means that 7/16" OSB would not be an adequate nail base for siding. Therefore, vinyl siding, wood siding and brick ties should all be



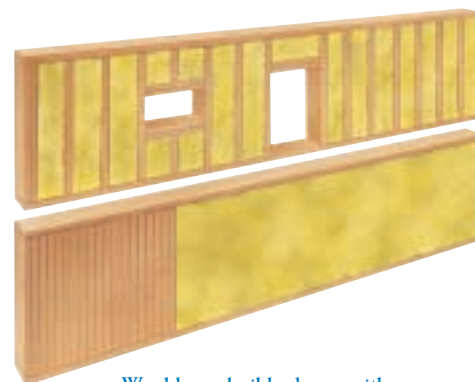
fastened through the sheathing to the studs. But you won't find stud finders printed on wood sheathing.

Higher energy costs

OSB and plywood have minimal R-values, causing heating and cooling loss on outside walls through studs and other areas where batts don't cover. That's why 55% of the energy loss in a typical home comes from air infiltration (38%) and wood frame walls (17%).

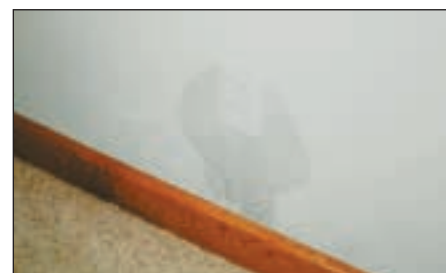
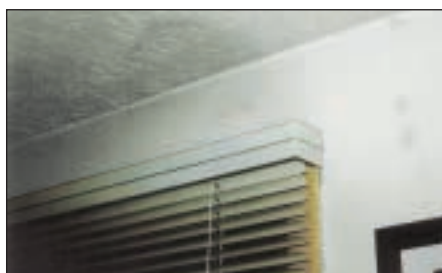
Greater risk of moisture damage

Wood sheathing contributes to convective looping currents which steal energy. The sheathing's glue acts as a vapor retarder, but provides little insulating value. Moisture gets trapped in the cold wall cavity where it can condense and cause deterioration of wood studs and sheathing, mold and mildew, air problems, and loss of thermal efficiency.



Would you build a home with one wall uninsulated?

In a typical house, 25% of the wall is uninsulated, due to uninsulated studs.



Moisture condensing in walls can cause problems such as "nail pops" and discoloration. A 2 x 4 wall with STYROFOAM brand insulation helps prevent these problems better than 2 x 6 OSB or plywood walls.

**STYROFOAM
BRAND INSULATION
GIVES YOU MORE
ADVANTAGES**

**HELPS YOU BUILD MORE
ENERGY-EFFICIENT HOMES**

What is it and why does it work better?

STYROFOAM brand insulation is made from highly water-resistant material which surrounds millions of tiny pockets of still, dry "air." The "air" in the cells is a gas that insulates much better than actual air.

**BUILD BETTER WITH FULLY
INSULATED 2 X 4 WALLS**

Get more done with less work

STYROFOAM brand insulation lets you build with sturdy yet light-to-handle 2 x 4 walls that reduce heat loss and moisture problems. It insulates the entire wall, reducing heat loss through studs. Full-wall coverage is better than adding to wall cavity insulation because only insulated sheathing contributes 100% towards the wall system's effective R-value. It's the primary insulation; cavity batts are secondary.

With non-insulating OSB sheathing it would take an R-value of 20 between the studs to equal the thermal performance of 1" of STYROFOAM brand sheathing with R-13 between the studs. This is because 1" of STYROFOAM brand sheathing has almost 10 times higher R-value

than $\frac{7}{16}$ " OSB. Also R-19 batts installed in 2 x 6 walls deliver less than R-18 in the cavity because the batts are compressed. An easy-to-build 2 x 4 wall with R-13 batts and 1" STYROFOAM brand insulation has higher effective R-value (R-16.7) than a 2 x 6 wall with R-19 batts and conventional wood sheathing (R-15.8). This means you can achieve a higher effective R-value for less cost with STYROFOAM brand insulation. Yet, with all that insulating power, 2 x 4 walls still increase usable space by 40 sq. ft. in a 2,000 sq. ft. home compared with a home built with 2 x 6 walls.



**WE HAVE ALL YOUR
APPLICATIONS COVERED**

- Interior and exterior basement walls
- Above and below basement floors
- Radiant floor heating
- Sheathing
- Crawl spaces
- Cathedral ceilings
- Residing



SIMPLIFY AND SPEED UP CONSTRUCTION

STYROFOAM brand insulation is easy to work with

Lightweight and always the same weight, regardless of weather, STYROFOAM brand insulation cuts easily, needing just a score and snap. It works with most cladding with no special preparation, and comes in a product mix to meet your system needs.

Save time and \$\$, make more profits

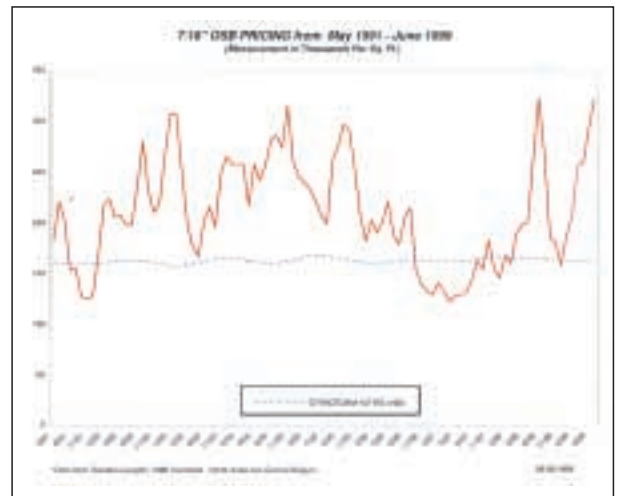
STYROFOAM brand insulation needs less nailing and less time – and fewer steps, since it can substitute for housewrap in many states. Your labor costs go down, and so do your callbacks in initial construction.

Easy to install

Printed stud finders at 16" o.c. make installation simple. Your crew can use pneumatic equipment with roofing nails, plastic caps/washed nails or staples. You get a tighter fit over framing since STYROFOAM brand insulation is flexible and resilient to handle irregularities and doesn't need a 1/8" gap between sheets like OSB. To make sure the job goes smoothly, installation guides are available.

HELPS YOU FORECAST PRICING BETTER

Pricing of STYROFOAM brand insulation has been much more stable than wood sheathing.



**STYROFOAM
BRAND INSULATION
GIVES YOUR
CUSTOMER MORE
ADVANTAGES**

DELIVERS ONGOING ENERGY SAVINGS

Because STYROFOAM brand insulation covers the entire wall, it saves more on heating and cooling costs year after year. These significant savings can help homeowners pay for additional enhancements to their homes, such as kitchen cabinets, more elaborate bathrooms or appliance upgrades.

**REDUCES THE RISK OF
MOISTURE PROBLEMS**

STYROFOAM brand insulation keeps wall cavities warmer than OSB

Batts need stationary air to be effective. But with a large temperature differential between drywall and exterior sheathing, warm air rises, cold air falls, creating convective looping currents and causing condensation on the colder surface.



2 x 4 walls with STYROFOAM brand insulation are more energy efficient and drier than 2 x 6 walls with OSB

Indoor Temperature = 72°F 40%RH Outdoor Temperature = -3°F 80%RH

| Wall Construction [†] | Effective R-value ^{††} | Sheathing Temp. | Dew Point Temp. | Degrees of Safety* |
|--------------------------------|---------------------------------|-----------------|-----------------|---------------------------|
| 2 x 4, R-13, OSB | 11.8 | 3.2 | 4 | None – CAUTION: Dew Point |
| 2 x 6, R-19, OSB | 15.8 | 1.5 | 4 | None – CAUTION: Dew Point |
| 2 x 6, R-19, R-5 TGW | 20.7 | 13.7 | 3.5 | 10.2 |
| 2 x 4, R-13, R-5 TGW | 16.7 | 18.8 | 3.5 | 15.3 |
| 2 x 4, R-13, R-7.5 TGW | 19.4 | 24.7 | 6.7 | 18 |

[†]Walls constructed of interior air film, 1/2" drywall, 6-mil poly, fiberglass batts, sheathing (OSB or STYROFOAM brand insulation), vinyl siding and an outside air film

^{††}R-values shown are based on DOW extruded polystyrene. The higher the R-value, the greater the insulation power. Ask your seller for the fact sheet on R-values.

*Degrees of safety indicate how many degrees the sheathing temperature is above the dew point temperature. The greater the difference, the less likely for condensation to occur.

STYROFOAM brand insulation keeps cavities insulated, reducing temperature differential so air moves less with less potential for dew point condensation. The entire wall system is more thermally efficient because the fiberglass batts remain dry, maintaining energy-saving R-value.

Won't absorb or hold moisture

STYROFOAM brand insulation is made from the same material as STYROFOAM brand Buoyancy Billets. It's not affected by jobsite weather or wind-driven rain. It reduces stud movement and shrinkage/warping, letting you use 2 x 4 walls.

STYROFOAM brand insulation reduces callbacks for:

- Paint peeling
- Wall bowing
- Nail pops
- Nail bleeding through drywall

**MARKETING
SUPPORT THAT
HELPS YOU SELL**

15-YEAR LIMITED THERMAL WARRANTY

Only STYROFOAM brand insulation keeps your homes protected this well

STYROFOAM brand insulation was the first sheathing to offer a 15-year warranty to homeowners. It's backed by Dow for the peace of mind of your customers and yourself. With warranty claim costs rising in the industry, this is a difference you can market to set your homes apart from the competition.

WHY STYROFOAM BRAND INSULATION IS YOUR #1 CHOICE

Remember, only STYROFOAM brand insulation offers this unbeatable combination of benefits:

- Advantages for you
 - Fewer call backs
 - Higher insulation value
 - Fewer moisture-related problems
 - Easy installation
 - Lower total construction costs
 - Durability
 - High compressive strength
 - Doesn't crumble
 - Doesn't rot
 - Not affected by moisture
- Advantages for the home owner
 - Comfort from reduced drafts
 - Reduced utility costs
 - Reduced outside noise intrusion
 - Reduced potential for wall/roof mold and decay
 - A healthier home



Model Home Point of Sale materials include a counter card, a home buyer video and brochure, an installation certificate, and a homeowner gift, plus you have the option to link to www.styrofoam.com from your website. The Model Home Program/Dow support includes a traffic-building local ad kit with a local press release, radio scripts, newspaper ad slicks, and a jobsite sign. Tech notes and installation instructions are also available.





For sales information: 1.800.232.2436
For technical information: 1.800.441.4369

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