

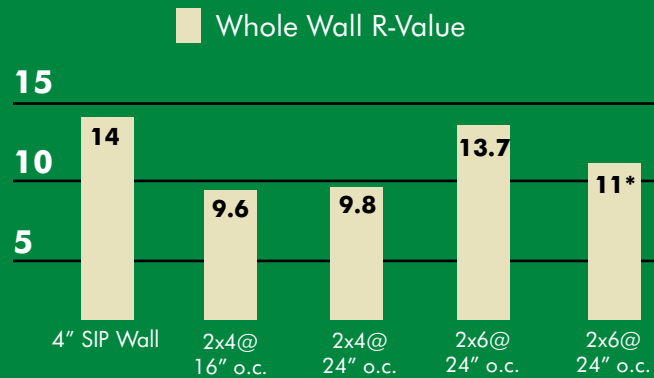
SIP Walls are Engineered to Minimize Thermal Bridging



What are Structural Insulated Panels?

The basic definition of a structural insulated panel is "A structural sandwich panel which consists of a foam plastic insulation core securely bonded between two structural facings (such as oriented strand board)." Other structural facings can be used for specific applications. The foam core in a SIP performs a structural, insulating and air-sealing function in wall, roof, floor and foundation systems.

WHOLE WALL R-VALUE COMPARISON



This chart shows a realistic comparison between SIP wall and stud wall thermal performance. Superior design enables even a 4-inch SIP wall to outperform the fatter 2x6 stud wall, despite the stud wall's nominally higher rated insulation. The 4-inch SIP wall beats the 2x4 stud wall by R-4, providing 40% more thermal resistance.

Source: Jan Kosny, Andre Desjarais, and Jeff Christian, ORNL
From Figure 9, Whole Wall Rating/Label for Structural Insulated Panel Steady-State Thermal Analysis, June 4, 1999

*Test shows that in the "worst case commonly found of procedures for installing batt insulation" the performance drops to R-11. This is a result of common installation imperfections such as "rounded shoulders, 2% cavity voids, compression around wiring, and paper facers stapled to the inside of studs."

From Table 4, How Imperfections Affect the Whole Wall R-value of 2 x 6 Batt-Insulated Wall. ORNL.

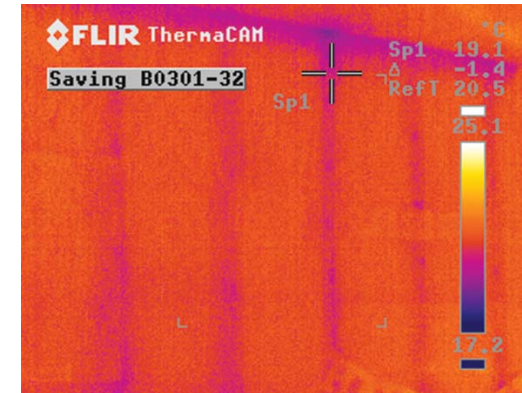
Qualify for ENERGY STAR®

Building with SIPs makes it easy to qualify for the ENERGY STAR for Homes Program. ENERGY STAR does not require blower door or duct blaster tests for SIP homes to meet the program's requirements, decreasing the costs of an ENERGY STAR inspection. ENERGY STAR is a nationally recognized label that will help you sell homes.

Eliminate callbacks

SIPs are an engineered high performance system that results in fewer callbacks.

- Straight, flat, true walls.
- No drywall nail pops.
- No cracks due to lumber shrinkage.
- No "comfort complaints."



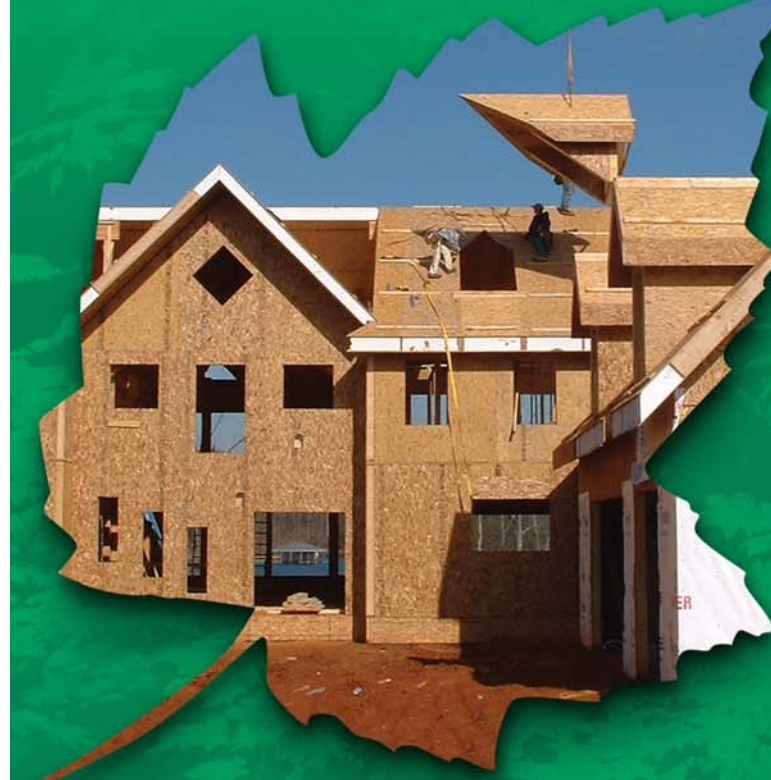
Thermal imaging of wood-framed wall shows heat escaping through studs.

Photo courtesy of Thermapan Structural Insulated Panels.



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Building GREEN Starts with SIPs

Building green starts with SIPs

Growing concerns over environmental and energy issues have changed the way homes are built. It is clear that the future of building will involve “green” homes and building practices that minimize environmental impact. Building with high performance structural insulated panels (SIPs) provides the basis for any green home—a well insulated building envelope. Building green with SIPs will also save you money and labor, so start building with SIPs today.

Make more money

You’ll improve your profits when you build with SIPs. SIPs are fabricated offsite and delivered to the jobsite ready to assemble. There is no need to perform the individual operations of framing, sheathing, and insulating. You’ll reduce your dry-in and cycle time and there is very little waste to worry about. Also, because you’ll give your customers what they really want in a house—an energy-efficient, green home that is safer and more comfortable to live in—you can expect a steadier stream of more profitable business.



Give your customers the green benefits they deserve

Green building starts with the exterior shell of the home. SIP wall and roof panels have a highly insulating core of rigid foam that will save homeowners energy. Building with structural insulated panels gives a home higher R-value insulation throughout the wall and less air leakage. These energy-efficient features can allow smaller heating and cooling equipment to be used, adding up to even more energy savings for homeowners.

From HVAC equipment to solar photovoltaic cells, a solid structural insulated panel building envelope will make other systems perform at their maximum capabilities because it limits the amount of heating and cooling loss through the building envelope.

Using airtight structural insulated panel construction will not only add energy efficiency, but also make for superior control over indoor air quality (IAQ), an important aspect of all green homes. Structural insulated panels also reduce jobsite waste and use resource-efficient engineered wood products, making them an ideal green building product.



Join SIPA Today

SIPA is a non-profit association that provides education, marketing, and support for the SIP industry. Sign up today at www.sips.org to receive the many benefits of SIPA membership.

Save energy

SIPs save energy because there is very little framing necessary. Sawn lumber is a relatively poor insulator and causes energy loss through “thermal bridging.” SIPs have been instrumental in the creation of zero energy and zero energy ready homes. These high performance homes produce as much energy as they consume through the combination of energy-efficient technologies such as SIPs and onsite renewable energy.

Save labor

A recent R.S. Means study shows building with SIPs saves 41% on labor.* That’s because SIPs arrive at your construction site ready to set in place with speed and precision and there is no need to install sheathing or insulation.

There’s less time sorting and cutting materials on site, less waste, and less bracing required. Panels as large as 8 ft. x 24 ft. can be set in place quickly with mechanical assistance allowing for faster dry-in time. The walls and roof are then immediately ready for exterior finish systems. And, since interior framing can be done after SIPs are set, you can work inside in a controlled environment once windows and exterior doors are installed.

When building dormers, they can be assembled on the ground and set in place as a single unit saving additional time and labor.

*BASF Corporation Time and Motion Study, R.S. Means, 2006

Membership benefits include:

- Receive qualified leads from visitors to the SIPA website (www.sips.org)
- Link to your company’s website from your SIPA website listing
- 20% discount on all SIPA publications and promotional brochures
- Free Builder Toolkit with SIPA logos and SIP brochures to help you promote your business
- Learn basic and advanced SIP building techniques at educational seminars at the SIPA Annual Meeting and Conference
- Free subscription to Building Systems magazine, Building with Structural Insulated Panels book and Building with SIPs DVD
- Opportunity to post projects and case studies on SIPA website

