

portersIPS™

Structural Insulated Panels



Wall and roof
building panels
for residential,
commercial, &
light industrial
construction.



STRUCTURAL INSULATED PANELS

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THE PORTERSIPS ADVANTAGE

Structural insulated panels (SIPs) are a high performance building system for residential and light commercial construction. The panels consist of an insulating foam core sandwiched between two structural facings, typically oriented strand board (OSB). SIPs are manufactured under factory controlled conditions and can be fabricated to fit nearly any building design.

SIPs provide three major benefits:

- speed of construction / labor savings***
- energy savings / efficiency***
- sustainable manufacturing / environmentally friendly***



LABOR SAVINGS

Building with structural insulated panels is much faster, up to 55% faster, than construction using conventional framing.*

PorterSIPs wall and roof panels are pre-manufactured to exact specifications off-site and can be custom cut to any size or configuration from a raw 8'x24' panel. The large sizes are inherently stronger and particularly useful when open designs with long roof spans are desired.

PorterSIPs achieve their structural integrity with an 'I' beam effect by using rigid sheets of OSB as the flanges and a rigid plastic foam core as the web. The key to this structure's performance is the continuous glue line between the EPS core and the

OSB, keeping them straight and true in a continuous plane.

Because the structural 'frame' and thermal envelope are one and the same, supervision and coordination of trades are simplified which means less labor spent on job site and a shorter construction timetable compared to that of a 'stick built' structure. Each panel arrives on-site ready to install and fastens together quickly. This quick time frame also allows for structures to be erected year round in a fraction of the time.

PorterSIPs are not only easy to work with, they are 25% stronger than conventional building. SIPs give you a structurally superior building, faster dry in, and an energy efficient

envelope designed to meet all of your local building codes.

ENERGY EFFICIENCY

PorterSIPs provide superior insulation properties over typical conventional construction. Independent testing has shown that SIP walls are up to 60% more energy efficient and reduce air leakage by up to 90% when compared to fiberglass insulated walls of the same thickness.

Owners of SIP buildings report less interior noise, fewer drafts, and more consistent interior temperatures due to the continuous foam core inside every panel. Their inherent air-tightness also allows for better control of indoor air quality.



SIP panels are manufactured to your specifications and fully compatible with almost any home design.



PorterSIP's in-house staff specializes in converting standard home plans to SIP plans.

*RS Means, 2006 [Time Study]



Whether it's a large-scale commercial project or a residential dream house, PorterSIPs construction saves energy, time, and money by shortening the construction timetable, cutting labor costs, and reducing energy usage.

PorterSIPs use 1lb EPS (98% air and 2% plastic) foam core for structure and insulation. The insulating core of a structural insulated panel provides continuous insulation using solid lumber for top, bottom, and corner plating therefore greatly reducing thermal bridging. Sealants at every connection also reduce drafting and air leakage.

Since SIP buildings are well insulated and air tight, a properly sized HVAC system is smaller than one in a conventionally framed home and will also run more efficiently. Cost for both the system and the energy it takes to heat or cool your home will be significantly reduced by up to 60%.

Energy Star guidelines require new homes to include higher insulation levels and an expanded thermal enclosure checklist. Constructing with PorterSIPs allows builders to meet these requirements faster and easier.

ENVIRONMENTALLY FRIENDLY

PorterSIPs use materials that minimize the impact on our environment. By weight, PorterSIPs use approximately 89% engineered wood (OSB), 10% EPS foam plastic and less than 1% water activated polyurethane adhesive.

OSB is sustainably forested from fast growth small timber. Exterior SIP walls use approximately 3% solid dimensional lumber in comparison to 15 – 25% for 'stick-built' construction. OSB is a renewable, recyclable, biodegradable resource that is easily manufactured in large sheets. Engineered woods like OSB make the best use of forests and are better for the environment than fiberglass, steel or concrete. They reduce energy, emissions, and waste in both their manufacture and use.

In addition, no off-gassing is produced from the foam releasing system, and the EPS foam core can be recycled.

Because SIPs are pre-cut to size and shape, they reduce on-site waste of dimensional lumber and sheathing material. Most waste is kept in the factory where it is recycled, preventing additional waste in our landfills.



"R" VALUE OF PORTERSIP PANELS

Panel Thickness	Whole Wall "R" Value
4 1/2" (11.4cm)	15.2
6 1/2" (16.5cm)	24.7
8 1/4" (21.0cm)	33.0
10 1/4" (26.0cm)	42.5
12 1/4" (31.1cm)	52.0



**SIP VS. STICK BUILDING
LOAD COMPARISON CHART**

Roof Panel Thickness	Comparable Stick Method (Hem Fir #2)	Span Distance (L/240 Deflection)	Load in lbs. per sq. ft. (SIP)	Load in lbs. per sq. ft. (stick)
4 1/2" SIP	2 x 4@24" OC	7'8"	52	25
6 1/2" SIP	2 x 6@24" OC	12'	41	26
8 1/4" SIP	2 x 8@24" OC	14'	44	30
10 1/4" SIP	2 x 10@24" OC	16'	42	34
12 1/4" SIP	2 x 12@24" OC	18'	39	37

Charts are effective as of 4/11/2016, and for comparison (not design) purposes only. Please refer to NTA or www.portersips.com and American Wood Council for complete current information.



Using PorterSIPs in your new home design can improve energy efficiency by up to 60%!

HIGH QUALITY MANUFACTURING AND PROJECT SUPPORT

PorterSIPs has over 50 years of experience in SIP panel manufacturing. Our manufacturing facility uses state of the art machinery and certified operators. CNC cutting machinery assures dimensional accuracy so that customers receive precisely-cut, tight-fitting panels with a 1/64" tolerance.

The structure of virtually any residential or commercial building (roof, floor, and walls) can be constructed using PorterSIPs. Our in-house drafting service specializes in assisting customers and their architects with converting conventional construction plans into panel plans. With the added ease of construction and impressive energy

savings, it's clear to see why PorterSIPs are becoming the informed choice in new building systems.

Contact PorterSIPs to learn more about saving time, energy, and money on your next project.