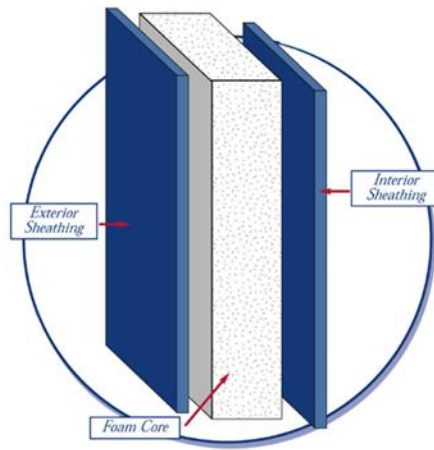


Advantages of SipsBuild SIPs

So, what is a SIP?



Structural insulated panels (SIPs) are a high-performance building system for residential and light commercial construction. The panels consist of a fire rated insulating foam core or basaltic fibre slab sandwiched between two structural facings, typically Fibre Cement Sheeting (FC). SIPs are manufactured under factory-controlled conditions and can be fabricated to fit nearly any building design. The result is a building system that is extremely strong, energy efficient and cost effective. Building with SIPs will save you time, money and labour.

- It is a high-performance building panel for floors, walls and roofs in residential and commercial Buildings.
- Panels are typically made using Expanded Polystyrene (EPS) or Rockwool slabs sandwiched between two structural skins.
- Our panels have been developed using a hard cement fibre board which is more suitable for the Australian conditions.
- Rockwool and Fibre Cement Board are both non-combustible materials. EPS is produced with an included fire retardant.

SipsBuild panels are joined by a concealed structural steel framework (or our newly developed FRP banding) which gives an extremely strong, energy efficient, lightweight structure.

Panels have been tested by Curtin University which confirm they can withstand up to 2.5 times the cyclone loading requirements.

External and internal wall panels are nominally 2700mm high x 1200mm wide. Panels can be pre-cut to any size and have electrical conduits pre-cut and in-wall plumbing services can be fitted where required.

The panels can be produced in three nominal thicknesses of 90mm, 100mm, and 150mm depending on requirements. Indicative R values are from R 2.3 to R 4,6.

The panel is made from two sheets of Fibre Cement board (9mm) non-combustible to AS1530:1 class 1. The board is pressure bonded to a central core of SL Grade Expanded Polystyrene to AS 1366.3 which contains a flame retardant or a non-combustible Rockwool slab. The perimeters of each panel are encased with light gauge structural and semi structural steel members or a newly developed encasement of Fibre Reinforced Polymer (FRP) making each panel a fully enclosed cell.

All panel joints are watertight and sealed by application of a continuous bead of Polyurethane Sealant. All joints are then taped and flushed the walls are then ready for painting or whatever finish is required. This makes entire walls single airtight structures.

SIP structures benefit from:

1. Excellent Thermal Performance

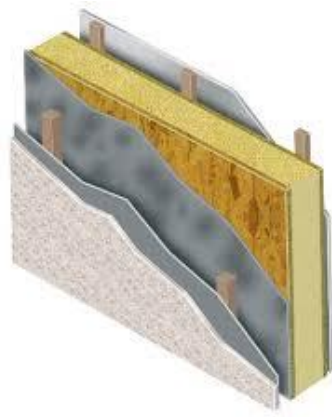
SipsBuild's Structural Insulated Panels provide superior thermal performance, which will last the life span of the building. This is due to the solid core of fire rated Expanded Polystyrene (EPS) or Rockwool insulation throughout the structure which ensures that the building is heated and cooled evenly, remains free from cold and hot spots and will benefit from reduced heating and cooling costs. EPS and / or Rockwool delivers R-value ranging from 3.20 to 4.60 per inch.

2. Low U-value walls and roof

SipsBuild's Structural Insulated Panels offer extremely high thermal performance. As an example, the Rockwool core of rigid insulation and fibre cement sheeting can achieve U-Values as low as 0.14 Watts per Meter Squared Kelvin (W/m²K) or better, making significant savings on your annual heating costs.

3. **Integral Insulation**

The insulation is integral to the SipsBuild SIP Building System, and therefore eliminates the need and cost for cavity insulation.



4. **Habitable Roof Space**

SipsBuild's SIP Building Systems do not require roof trusses, therefore providing space for an additional habitable room in the roof.

5. **Extra Floor Space**

SipsBuild's Structural Insulated Panels create more internal floor space for the same external dimensions in comparison to masonry construction. This is because a SIP structure provides excellent strength and insulation in a smaller wall width.

6. **Low Wastage**

SipsBuild's Structural Insulated Panels are pre-engineered in a factory environment which results in less defects and wastage throughout the manufacturing processes.



7. **Fast Construction Method**

By using SipsBuild's Structural Insulated Panels, on-site construction time can typically be reduced by up to thirty percent. Onsite construction as well as Factory construction times will be greatly reduced with the introduction of the planned large format panel manufacturing facility in SE Queensland



8. **Improved Scheduling & Programme Control**

External and internal follow on trades can start work sooner as the SipsBuild's Building System, when wrapped with a breather membrane, offers a weather-tight shell helping you complete your project faster.

With a SipsBuild Building System it is easier to predict project completion times as the system is relatively simple to erect and requires no wet trades or brick layers.

9. **Design Flexibility**

Using specialist in-house 3D CAD software, SipsBuild's Structural Insulated Panels can be designed to accommodate a wide variety of building applications.



10. **Robust and Solid Feel**

A SipsBuild home delivers a robust and solid feel compared to other timber frame systems. This is achieved due to its solid core construction and the fixing of plasterboard directly to the inner face of the SIP Panel.

11. **Airtightness**

Poor airtightness is a major cause of heat loss. A SipsBuild home provides a controllable indoor environment due to the superior air tightness of the system.

12. **Limited Cold Bridging**

SipsBuild's Structural Insulated Panels are joined together with a newly developed continuous strip of Fibre Reinforced Polymer (FRP) which has almost zero heat conductivity providing a continuous enclosed insulating core through the walls and roof of the building. This greatly improves the thermal efficiency of the building compared to timber frame studs and cavity insulation which is prone to slumping and mortar drops during the construction process.

13. **Solid Panels Provide a Rigid Surface for Fixings**

In most cases, no additional timber 'noggin's are required to facilitate the hanging of radiators and kitchen units as is required with timber frame construction. Have you ever wanted to hang something in a specific spot, but felt limited as to where the studs in the wall were located? SIPs are sheathed with 9mm FC Board, making the entire panel strong enough to support pictures, curtains, and even cabinets.