



# McVeigh - Sips

## **PRODUCT APPLICATION**

Structural Insulated Panel (*SIPs*) are a factory engineered timber based building panel designed for external walls and roofs for buildings in domestic and non domestic applications such as houses, offices, commercial buildings, leisure facilities, schools, hospitals and hotels. SIPs provide the structural, thermal and air tight building envelope in a single application, this can aid to simplify and accelerate the construction process.

## **FORMAT OPTIONS**

### ***Singe Format***

Individual panels engineered to a maximum 1200mm wide delivered flat pack for site assembly.

### ***Large Format***

Factory assembled SIPs, typically story height x the width of a structural bay incorporating door and window apertures, building paper and lifting slings. Panels are generally delivered to site in stillage racks and installed with appropriate lifting equipment.

## **DIMENSIONS & WEIGHT**

Thickness : (mm)	100	125	150	180
Weight : kg/m <sup>2</sup>	22.1	23.1	24.2	25.5

## **PRODUCT TOLERANCES**

Length	-3mm	+3mm
Width	-3mm	+3mm
Thickness	-3mm	+3mm

## **AVAILABLE LENGTHS**

Single panels upto 6.0m.

## **AVAILABLE WIDTHS**

Single panels upto 1200mm.



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## **MATERIALS –**

### ***OSB – (Orientated Strand Board)***

- OSB Grade 3 BBA Approved board
- Manufactured to BS EN 300: 1997 For OSB /3, Load bearing oriented strand boards for use in humid conditions.
- Standard external and internal sheet thickness 15mm.

### **INSULATION CORE**

- Polyurethane (PUR): CFC & HCFC free, Closed Cell insulation core with a Zero Ozone Depletion Potential (ODP) and Low Global Warming Potential (GWP) of 3.

### **PANEL JOINT**

Panel to panel joints are either 15mm thick OSB splines or softwood timber posts.

### **Air Leakage**

Overall air leakage for complete envelope less than  $5\text{m}^3/\text{hr}/\text{m}^2$  at 50Pa.

### **PERFORMANCE**

#### **Thermal Insulation**

Panel thickness      Thermal transmittance (U Value)  $\text{W}/\text{m}^2 \text{K}$

100mm	0.28
125mm	0.22
150mm	0.18
180mm	0.15

Calculated using the method required by the Building Regulations Part L2 (England & Wales) and Building Standards Part J (Scotland).

Also calculated in accordance with BS EN ISO 6946:1997 and BRE report (BR443 : 2006)

Above based on an aged thermal conductivity of 0.026  $\text{w}/\text{m K}$  for the insulation core and 0.13  $\text{w}/\text{m K}$  for the OSB Facings.

### **Fire**

The panels have passed the requirements of BS476 Part 21 fire resistance of load bearing walls and has achieved up to 75 minutes fire rating.



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## Acoustics Internal Walls

- OSB Faced Panel plus 12.5mm plasterboard and 12.5mm fireboard to each face achieved a weighted sound reduction index (SRI) 49dB (DnT,w+C;Ctr). (This construction will achieve a FR - 60 minutes fire rating)

## Party Walls (Single Panel Construction)

- OSB Faced Panel plus 12.5mm Sound Block and 12.5mm Plaster board to each face achieved a weighted sound reduction index (SRI) 49 db.(This construction will achieve a FR- 60 minutes fire rating)

## STRUCTURAL Loading Capacity Walls

- **SIPS** / 125mm Wall panel. The permissible design load values for the effective span of the panels based on the results of tests undertaken and analysed in accordance with BS5268-2 : 2002 Loading as follows.

Loading	Maximum Distance between Panel supports.					
	2.0	2.2	2.4	2.6	2.8	3.0
Vertical (kNm-1)	38	38	38	38	38	38
Lateral						
For Strength (kNm-2)	8.14	7.40	6.79	6.26	5.82	5.43
For Deflection (kNm-2)	2.40	1.80	1.39	1.09	0.87	0.71
Racking Resistance (kNm-1)	4.08	3.71	3.40	3.14	2.91	2.72

- For Full Loading information please refer to BBA certificate.



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## Loading Capacity Roofs

- **SIPS** / 180mm Roof panel. The permissible design load values for the effective span of the panels based on the results of tests undertaken and analysed in accordance with BS5268-2 : 2002.

Loading	Maximum Distance between Panel supports.						
	2.0	2.5	3.0	3.5	4.0	4.5	5.0
Vertical (kNm-1)	7.89	6.31	5.06	3.19	2.13	1.50	1.09

- For Full Loading information please refer to BBA certificate.

## QUALITY & DURABILITY

**SIPS** Insulated Panels are manufactured from the highest quality materials, using state of the art production equipment to rigorous quality control standards, complying with ISO9000 standard, ensuring long-term reliability and service life.

## GUARANTEES & WARRANTIES

The OSB and SIPs are BBA Approved and the Panel system satisfies the requirements of the Zurich Approval building guarantee.

## PACKING

### Standard Packing

**SIPS** single panels are stacked horizontally and wrapped in polythene.

The number of panels in each pack depends on panel length and weight. Typical pack height is 1100mm. Maximum pack weight 1000kg.

Panel thickness (mm)	100	125	150	180
No. panel/pack (max)	9	7	6	5

## DELIVERY

All deliveries (unless indicated otherwise) are by road transport to project site. Off loading is the responsibility of the client.