

# Product Data Sheet

## OSB3-EPS Panels

### PANEL DATA

#### Cover Width

1200mm

#### Available Lengths

Standard Panel Lengths: 2400, 2700, 5100mm

Bespoke Lengths: Available on request at E.O.C

### DIMENSIONS & WEIGHT

Standard sizes as per the table below.

Non standard panels sizes can be cut from the standard panels.

For special sizes please contact our sales office T: 07577791936 E: [info@ecosipshomes.co.uk](mailto:info@ecosipshomes.co.uk)

Thickness: (mm)	119	144	169	194	219
Internal OSB/3 Thickness: (mm)	11	11	11	11	11
Foam Core Thickness: (mm)	97	122	144	172	197
External OSB/3 Thickness: (mm)	11	11	11	11	11
Weight: (kg/m <sup>2</sup> )	15.3	16.3	17.4	18.4	19.4
U-Value as Wall Type 1: (W/m <sup>2</sup> )	0.21	0.18	0.16	0.14	0.13
U-Value as Wall Type 2: (W/m <sup>2</sup> )	0.26	0.21	0.18	0.16	0.14
U-Value as Wall Type 3: (W/m <sup>2</sup> )	0.23	0.20	0.17	0.15	0.14
U-Value as Roof Type 1: (W/m <sup>2</sup> )	●	0.22	0.20	0.18	0.16
U-Value as Roof Type 2: (W/m <sup>2</sup> )	●	0.16	0.14	0.12	0.10

### All dimensions are nominal and within a tolerance of +/-3mm

**Wall Type 1** = 102.5mm brick, 60mm cavity, breathable reflective membrane, SIP wall panel at specified thickness, vapour membrane, 25mm service batten, 12.5mm plasterboard, 3mm skim

**Wall Type 2** = 5mm render, 12mm MGO panel exterior, breathable membrane, SIP wall at specified thickness, 25mm service battens, 12.5mm vapour check plasterboard, 3mm skim.

**Wall Type 3** = 18mm Timber cladding, 50mm ventilated cavity, reflective breathable membrane, SIP wall panel at specified thickness, 25mm service batten, 12.5mm vapour check plasterboard, 3mm skim.

**Roof Type 1** = Standard clay tiles, 25mm tiling batten, 25mm counter batten, breathable roofing membrane, SIP roof panel at specified thickness, 25mm service void, vapour check plasterboard, 3mm skim.

**Roof Type 2** = Standard clay tiles, 25mm tiling batten, 25mm counter batten, breathable roofing membrane, SIP roof panel at specified thickness, 25mm service void, 50mm Thermaline super, 3mm skim.

### PRODUCT TOLERANCES

Length	-3mm	+0mm
Width	-3mm	+0mm
Thickness	-1mm	+1mm
Squareness	Maximum 2mm Variance	

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### PERFORMANCE

#### Fire

Panel Internal and External OSB has class 3 surface spread of flame to BS476 Part 7: 1987.  
When SIPs are used as part of a through-wall build up they pass the requirements of BS476 Part 21 fire resistance of load bearing walls and have achieved up to 75 minutes fire rating.  
Non-load bearing walls can achieve up to a 90 minute fire rating (BS476 Part 22:1987)

EPS insulation contains a bromide free polymeric flame retardant, in accordance with EU REACH legislation.

#### Acoustic

##### Internal Walls

OSB Faced Panel plus 12.5mm plasterboard to each face achieved a weighted sound reduction index (SRI) 40dB (DnT,w+C;Ctr).

##### Party Walls (Single Panel Construction)

OSB Faced Panel plus 12.5mm Fireline and 12.5mm Plasterboard to both faces, achieved a weighted sound reduction index (SRI) 49dB

##### External Walls

OSB Faced Panel plus 12.5mm Fireline and 12.5mm Plasterboard to one face, achieved a weighted sound reduction index (SRI) 41dB

#### Structural

##### Loading Capacity Walls & Roofs

For Loading values please refer to the Structural Design Guide which can be sent out by email. For copies of our Technical Manuals please email [info@ecosipshomes.co.uk](mailto:info@ecosipshomes.co.uk)

#### Quality & Durability

Eco Sips Homes structural insulated panels are manufactured from the highest quality materials, using state of the art production equipment to rigorous quality control standards, complying with ISO90001:2008 standard, ensuring long-term reliability and service life.

The panels will have comparable durability to that of OSB/3 to BS EN 300: 2006, therefore, provided the installation remains weathertight and damp-proof; a life of at least 60 years may be expected.

The long life expectancy of our product will reduce energy consumption of a building over its lifespan.

#### Increased Usable Floor Space

When building a house with Eco Sips Homes SIP wall panels to achieve a U Value of 0.16W/m<sup>2</sup> the structure can be just 252mm thick.(1) In comparison a timber frame structure to achieve the same U-Value could be up to 460mm thick (2) and a full fill masonry cavity wall would need to be 453mm thick to achieve the same U-Value.

(1) Eco Sips Homes No Cavity Render System = 5mm render/12mm MgO Board/breathable membrane/194mm Eco SIPs Panel/25mm service battens/12.5mm vapour check plasterboard, 3mm skim. (2) Timber Frame Wall = 102.5mm Brick/50mm cavity/0.3mm foil faced breathable membrane/12mm OSB/280mm glass mineral wool quilt between 280mm deep studs, 12.5mm vapour check plasterboard/3mm skim. (3) Masonry Full Cavity Wall = 102.5mm brick/220mm rock mineral fibre/100mm dense block/15mm dab cavity/12.5mm plasterboard on dabs/3mm skim.

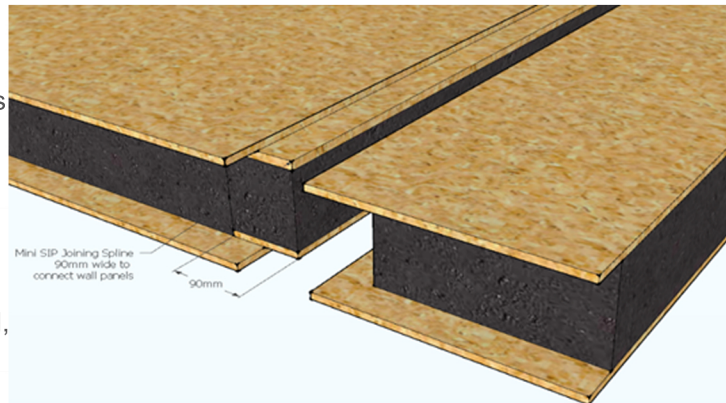
This means on a 10m x 8m 2 storey house, the Eco Sips Home building system can yield an extra 13.8m<sup>2</sup> of usable internal space for the same building footprint when compared to the construction method above (2)

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### LESS THERMAL BRIDGING

(Right) Illustration shows the typical panel joining detail with a SIP spline. Unlike conventional timber frame construction which has repeating timber studs the Eco Sips Homes open panel system uses mini SIP splines to join panels together. It is possible to have a long run of panels joined with this method giving continuous insulation in the wall which compared to a closed panel system or timber frame, significantly reduces cold bridging.



### IMPROVED AIR TIGHTNESS

Due to the inherently air-tight way that SIP buildings are constructed, structural insulated panel builds typically have lower air pressure results, meaning it's easier to achieve the required SAP rating for your EPC (Energy Performance Certificate)

### PANEL FACINGS

The SIPs panel comprises of BBA Approved 11mm Internal and External Oriented Strand Board (OSB) grade 3 facings. OSB/3 has a thermal conductivity value  $\lambda$  of 0.013 W/m K. Manufactured to specification EN 13986 and EN 300:2006, OSB/3 comprises of strands of softwood bonded together using a formaldehyde free synthetic resin. The OSB boards are responsibly sourced and comply to FSC and PEFC chain of custody requirements. Further information and Certification can be obtained on request through Eco Sips Homes.

### JOINTING

Materials used to join panels should be selected to meet the structural requirements of the construction and be approved by the projects' Structural Engineer. Standard SIP panel splines provide low air leakage and enhance thermal performance. Solid timber splines should be responsibly sourced and the suppliers must provide evidence of its sustainability credentials through FSC / PEFC certification.

### GUARANTEES & WARRANTIES

Warranties for SIPs construction are available from companies that offer warranty schemes and the majority of lenders are able to offer mortgages on SIPs houses.

### PACKAGING

Panels are stacked horizontally and the pack is wrapped in polythene. The number of panels in each pack depends on panel length and weight. Typical pack height is 1100mm

Thickness: (mm)	119	149	169	194	219
No. Panel / Pack (max)	10	8	7	6	5

### DELIVERY

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

### SITE PROCEDURES

Site assembly instructions are available from Eco Sips Homes Limited