

# Hemsec Residential SIPs Panel

11mm / 11mm OSB Facings

Rev: 1216-A  
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## PANEL DATA

### Cover Width

1200mm

### Available Lengths

Standard Panel Lengths 2400, 3000, 3500, 4000, 5000, 6000mm  
Bespoke Lengths Available on request

## DIMENSIONS & WEIGHT

Panel Thickness (mm)	100	125	150	175	200
Internal OSB/3 Thickness (mm)	11	11	11	11	11
Foam Core Thickness (mm)	78	103	128	153	178
External OSB/3 Thickness (mm)	11	11	11	11	11
Weight (kg/m <sup>2</sup> )	17.42	18.57	19.71	20.85	21.99

## PRODUCT TOLERANCES

Length	-3mm	+3mm
Width	-3mm	+3mm
Thickness	-3mm	+3mm
Squareness	maximum 2mm variance	

## PANEL CORE

A closed cell Polyurethane rigid foam system with zero Ozone Depletion Potential (ODP) supplied by BASF Polyurethanes Europe.

The PUR core is CFC and HCFC free providing a < 5 value for GWP, as specified by various regulatory bodies. For further technical information, please contact Hemsec SIPs.

## PANEL FACINGS

The Residential 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 0.13 W/mK.

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 Hemsec SIPs.

## THERMAL PERFORMANCE

Panel Thickness (mm)	100	125	150	175	200
Thermal transmittance (U-Value) W/m <sup>2</sup> K	0.34	0.26	0.20	0.17	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)

Foam Core Thickness (mm)	70 to 80	≥80 to <120	≥120
Declared Thermal Conductivity $\lambda_D$ (W/mK)	0.030	0.029	0.028

## FIRE

Panel Internal and External OSB and CPB facings have Class 3 surface spread of flame to BS476: Part 7: 1987. When Hemsec 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).

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## ACOUSTIC

Please refer to Hemsec SIPs BBA certificate, Section 12 – Resistance to Airborne Sound.

## STRUCTURAL

### Loading Capacity Walls

Hemsec 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.

11mm OSB Sheathing	Span of Panel (m)						
	2.0	2.5	3.0	3.5	4.0	4.5	5.0
Load at Max. deflection of span/200 (kNm-2)	5.90	3.48	1.88	1.02	0.60	0.37	0.24
Load at Max. deflection of span/333 (kNm-2)	4.08	2.09	1.21	0.76	0.51	0.36	0.24

### Loading Capacity Roofs

Hemsec SIPs 175mm 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.

11mm OSB Sheathing	Span of Panel (m)						
	2.0	2.5	3.0	3.5	4.0	4.5	5.0
Load at Max. deflection of span/200 (kNm-2)	14.00	7.20	3.89	2.10	1.23	0.77	0.50
Load at Max. deflection of span/333 (kNm-2)	8.44	4.32	2.50	1.57	1.05	0.74	0.50

For further technical information please refer to our BBA certificate or contact Hemsec SIPs.

## QUALITY & DURABILITY

Hemsec SIPs are manufactured from the highest quality materials, using state of the art production equipment to rigorous quality control standards, complying with ISO9001:2008 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.

## 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.

Hemsec SIPs are BBA / NHBC approved and are eligible for Premier Guarantee.

## PACKING

Hemsec SIPs 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.

Panel Thickness (mm)	100	125	150	175	200
No. Panels/pack (max)	10	8	7	6	5

## 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.

## DELIVERY

All deliveries are by road transport to project site. Off loading & storage is the responsibility of the customer.

## SITE PROCEDURES

Panel care information and indicative drawings are available from Hemsec SIPs Limited.