

Hemsec Residential SIPs Panel

11mm / 11mm OSB Facings

PANEL DATA

Cover Width:

1220mm

Available Lengths:

Standard Panel Lengths

2400, 2700, 3000, 4800, 5100, 6000mm

Bespoke Lengths

Available on request at E.O.C

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/m²)	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. PUR has a thermal conductivity value λ of 0.028 W/m K.

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 λ 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 Hemsec SIPs.

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.

PERFORMANCE

Panel Thickness: (mm)	100	125	150	175	200
Thermal transmittance: (U-value) W/m² K	0.320	0.248	0.203	0.172	0.149

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)

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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).

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) 49 dB.

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

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
Permissible Load (kNm-2)	5.90	4.72	3.93	3.37	2.65	2.09	1.70
Load at Max. deflection of span/333 (kNm-2)	4.08	2.09	1.21	0.76	0.51	0.36	0.24
Load at Max. deflection of span/200 (kNm-2)	5.90	3.48	1.88	1.02	0.60	0.37	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
Permissible Load (kNm-2)	14.00	8.96	6.22	4.57	3.50	2.77	2.24
Load at Max. deflection of span/333 (kNm-2)	8.44	4.32	2.50	1.57	1.05	0.74	0.50
Load at Max. deflection of span/200 (kNm-2)	14.00	7.20	3.89	2.10	1.23	0.77	0.50

For further information please refer to our BBA certificate.

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.

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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

DELIVERY

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

SITE PROCEDURES

Site assembly instructions are available from Hemsec SIPs Limited.