

Structurally Insulated Panels for Garden Room applications (Page 1)

Garden Room SIPs						
Construction SIP panels consist of enhanced grey EPS closed cell insulation (70 grade), laminated both side with 11mm OSB3 with PUR adhesives at high pressure.						
Standard Tolerances						
Length	+/-3mm					
Width	+/-3mm					
Thickness	+/-1.5%					
Panel Code:	FS75-11	FS100-11	FS125-11	FS150-11	FS175-11	FS200-11
U Value:	0.39W/m2k	0.31 W/m2k	0.25 W/m2k	0.21 W/m2k	0.19 W/m2k	0.16 W/m2k

Enhanced Grey EPS 70 grade Declared Performance Characteristics	
Length	L(3)
Width	W(3)
Thickness	T(2)
Squareness	S(5)
Flatness	P(10)
Compressive Strength @ 10% Deformation	CS(10)70 (70 kPa)
Dimensional stability @ 23°C / 50% RH	DS(N)2
Dimensional stability @ 70°C / 90% RH	DS(70,90)1
Long term water absorption by immersion –Total	WL(T)4
Long term water absorption by immersion –Partial	0.31 KG/M ²
Tensile Strength –Dry Conditioned	TR200
Tensile Strength-Wet Conditioned (28 days)	TR200
Shear Strength	0.18 N/mm ²
Water Vapour diffusion resistance factor	20 TO 40 μ
Tabulated Value Water vapour permeability	0.015 to 0.030 mg(Pa.h.m)
Bending Strength BS115	115kPa
Thermal Conductivity	0.031 W/mK
Reaction to Fire	Euroclass E
Nominal Density	15 kg/m ³

Future SIPs Limited

T: 01452 840284 E: info@futuresips.co.uk W: www.futuresips.co.uk

VAT Registration Number 346 5939 60 Registered in England and Wales: 12296842

Registered Office: Unit 27, Staunton Court Business Park, Ledbury Road, Staunton, Gloucestershire GL19 3QS

Structurally Insulated Panels for Garden Room applications (Page 2)

11mm OSB3 Physical Properties		
Test	Standard Reference	Calculation value
Water vapour resistance	EN 12524 & EN 13986	150 (wet cup) /240 (dry cup) (μ -value)
Reaction to fire	(BS) BS 476-7 AD B 2006	Class 3
Reaction to fire (Euroclass)	EN 13501-1 EN 1398	D-s2,d0 (excluding flooring)
Charring rate (β_0, ρ, t)	EN 1995-1-2	(20 mm) 0.78 mm/min
Thermal conductivity (γ)	EN 13986	0.13 W/(m.K)

11mm OSB3 Mechanical Properties		
Test	Standard Reference	Calculation
Mean density tolerance	EN 323	+/- 15%
Bending strength (MOR) - major axis	EN 310	>20 N/mm ²
Bending strength (MOR) - minor axis	EN 310	>10 N/mm ²
Modulus of elasticity (MOE) - major axis	EN 310	>3500 N/mm ²
Modulus of elasticity (MOE) - minor axis	EN 310	>1400 N/mm ²
Internal bond E	N 319	>0.32 N/mm ² Internal
bond after boil test	EN 1087-1	>0.13 N/mm ²
Swelling in thickness 24h	EN 317	<15 %
Formaldehyde release - perforator value	EN 120	<8.0(E1) mg/100g
Moisture content - ex works	EN 322	2-12 %

Structures should be assigned to service class 1 or 2 as defined in EN 1995-1-1 (Eurocode 5). According to this standard, OSB3 is suitable for use in both of these service classes.

Future SIPs Limited

T: 01452 840284 E: info@futuresips.co.uk W: www.futuresips.co.uk

VAT Registration Number 346 5939 60 Registered in England and Wales: 12296842

Registered Office: Unit 27, Staunton Court Business Park, Ledbury Road, Staunton, Gloucestershire GL19 3QS