



Jabfloor 70, 100, 150, 200 and 250

Floor insulation – over slab with screed finish

Jabfloor is a closed cell expanded polystyrene (EPS) insulation board suitable for use in all floor constructions.

A range of compressive strengths are available to suit all building types from domestic to industrial.

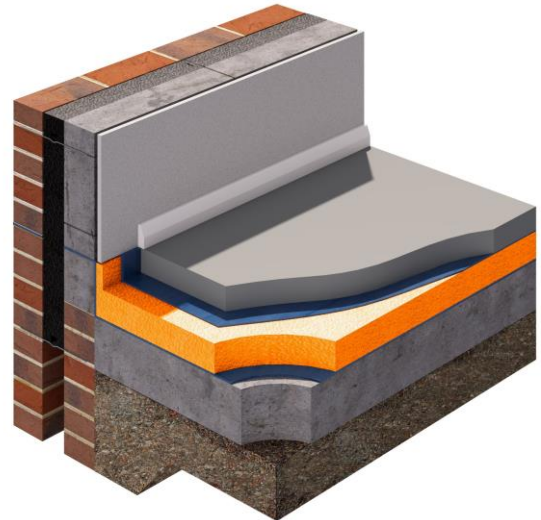
Approved by BBA as Jablite Floor Insulation - Certificate number 87/1796.

For guidance and recommendation for specification of type and thickness of floor screed laid over insulation materials refer to BS 8204. (see installations details for more information)

Jabfloor can be used in temperatures up to 80°C. It is therefore suitable for use with underfloor heating systems.

Jabfloor does not degrade when placed in high moisture areas and is resistant to the effects of freeze thaw. Jabfloor will remain an effective insulation for the life of the building

There are no requirements for special PPE when installing or cutting Jabfloor. (full installation details are shown later)



Dimensions

Standard Size	2400 x 1200mm
Standard Thickness	25, 30, 40, 50, 60, 75, 100, 120, 150 and 200mm (Other thicknesses available to order)

Properties :

Grade	Thermal Conductivity (Lambda) (W/mK)	Design load at 1% nominal compression (kPa)	Design load at 10% nominal compression (kPa)
Jabfloor 70	0.038	20	70
Jabfloor 100	0.036	45	100
Jabfloor 150	0.035	70	150
Jabfloor 200	0.034	90	200
Jabfloor 250	0.034	100	250

More detailed physical properties are shown on our EPS Datasheet.





Application : This information is provided as guidance only, please refer to the Jabfloor compressive strengths table.

Grade	Application
Jabfloor 70	Domestic
Jabfloor 100	Offices, Special Occupancy Residential (e.g. Care Home)
Jabfloor 150	Public, Government and Educational Buildings
Jabfloor 200	Industrial and Commercial
Jabfloor 250	Industrial, Cold Store, Heavy Commercial

Accreditation :

BBA	Jabfloor Insulation has been assessed and approved by the British Board of Agrément as Jablite Floor Insulation for use over slab with a screed finish in ground bearing floors. Certificate number 87/1796. This Certificate covers Grades 70, 100 and 150.
NHBC Approved	NHBC accepts the use of Jablite Floor Insulation, provided it is installed, used and maintained in accordance with the BBA Certificate, in relation to NHBC Standards, Chapters 5.1 Substructure and ground bearing floors and 5.2 Suspended ground floors
CE marking	Jablite have taken the responsibility of CE marking the product in accordance with harmonised European Standard BS EN 13163 : 2012. Declaration of Performance is available on Request.
Quality	All Jablite products are manufactured in production facilities which are certified to ISO 9001 Quality Management
Environmental Responsibility	All Jablite manufacturing facilities are ISO 14001 certified. We operate an Environmental Management System which includes our supply chain (see BREEAM section for more information)
Compliance	Jabfloor conforms to the required properties as defined in BS EN 13163:2012 – Thermal insulation products for buildings – Factory made expanded polystyrene (EPS) products – Specification. This includes compliance with BS 3837 Part 1
Fire	<p>Solid ground floors are not required to provide fire resistance. When properly installed Jabfloor is fully protected by the screed floor finish and will have no adverse effect on the fire performance of the building into which it is installed.</p> <p>Jabfloor is supplied as non-flame retardant material as standard.</p>





Environment and Sustainability :

A+	Jabfloor insulation is manufactured from EPS (expanded polystyrene) which achieves an A+ rating in the BRE Green Guide to Specification.
Climate Change	<p>Jabfloor insulation has an ozone depletion potential (ODP) of zero and a global warming potential (GWP) of less than 5.</p> <p>EPS does not create any known risk to the environment</p>
100%	Jabfloor insulation is 100% recyclable.
BREEM	<p>Responsible Sourcing.</p> <p>Jablite insulation products are manufactured in factories which are ISO 14001 and ISO 9001 certified Jablite purchases raw material from suppliers who are ISO 14001 certified. The ISO certificate are in the Technical Resource Centre on the Jablite website www.Jablite.co.uk</p> <p>Key Process (Insulation Manufacture) ISO 14001: Certificate Number EMS 559414</p> <p>Supply Chain Processes (supply of materials for end products) ISO 14001: Certificate Number NL 015213-1</p> <p>Embodied Impact Jablite EPS is manufactured using low energy processes.</p> <p>The calculation of embodied impact relative to thermal performance is a function of the material volume (for each build), its BRE Green Guide Rating and its thermal conductivity.</p> <p>The thermal conductivity of our products is available on both the product packaging and this datasheet</p>
Biological Properties	<p>Jabfloor EPS insulation is non-toxic and non-biodegradable.</p> <p>Jabfloor will not sustain mould growth and has no nutrient value to insects or vermin.</p>





INSTALLATION

Concrete slab

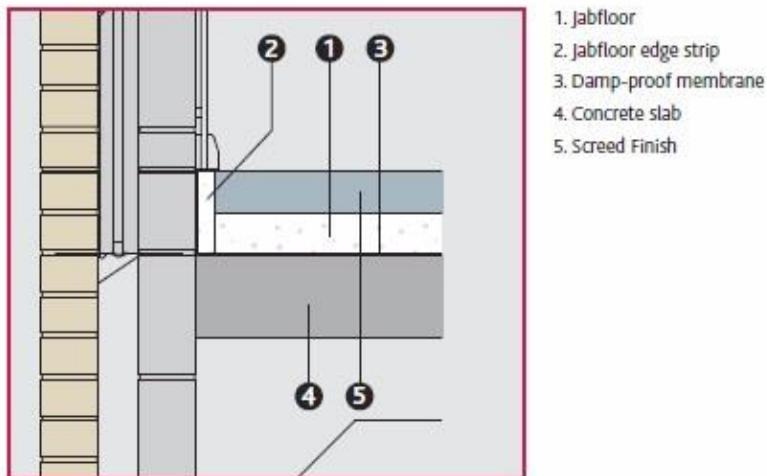
The concrete floor should have a level even surface. A tamped finish is suitable for laying Jabfloor.

Damp-proof membrane

A suitable DPM such as 250 μ (1000 gauge) polythene sheet must be included in the floor construction. This may be installed above or below the concrete slab. (see diagrams)

If a liquid DPM is used, please ensure it is compatible with Jabfloor. Liquid DPM's must be allowed to dry before laying Jabfloor.

Damp-proof membrane below insulation



Jabfloor

Jabfloor should be loose-laid over the prepared surface with board joints tightly butted.

Before laying wet screed the joints of the Jabfloor insulation should be taped with 75mm wide masking tape or similar, alternatively a building paper or polythene sheet may be laid over the surface of the insulation.

Jabfloor is easily cut with a sharp knife or fine toothed saw to fit on site.

Note: Jablite EPS products are compatible with all common building materials. Direct contact with hydrocarbons and strong solvents should be avoided. A suitable membrane such as polythene sheet may be used to separate Jablite EPS from these substances.



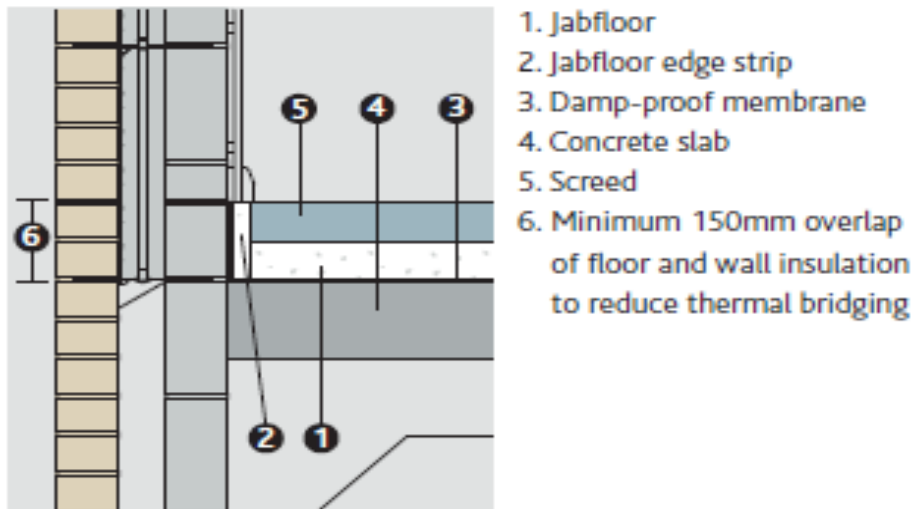
INSTALLATION

Thermal Bridges

Jabfloor edge strip is placed vertically around the external perimeter of the insulation.

The edge strip should finish at the top of the screed thickness, isolating the screed from the external masonry wall.

The cavity wall insulation must overlap the floor insulation by at least 150mm (as indicated below)



Screed

Sand/cement screeds should be at least 65mm-thick for domestic applications and 75mm-thick for non domestic applications. BS8204 details full specifications and application of screeds.

During screeding operations, the surface of the insulation should be protected from impact damage or excessive trafficking by the use of spreader boards.

Services

Electrical conduits, gas and water pipes may be accommodated within the Jabfloor insulation layer. Pipes etc. should be securely fixed to the concrete slab.

Jabfloor should not be allowed to come into direct contact with PVC-sheathed cable, nor closer than 12mm to hot-water pipes (except pipes for underfloor heating systems).

Jabfloor can be used in direct contact with underfloor heating pipes as these normally operate below the maximum recommended working temperature for Jabfloor HP which is 80°C.

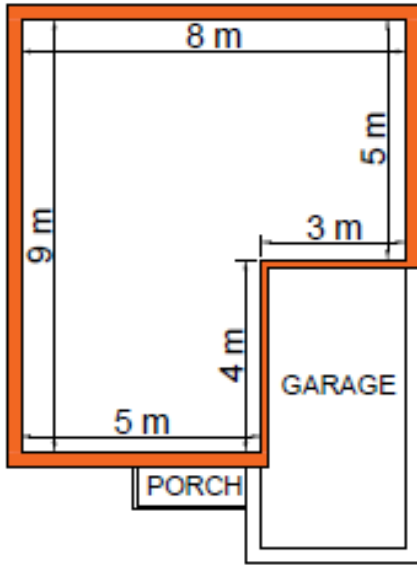
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U VALUES

The calculation of heat loss or U value through a floor is based on the ratio of the external perimeter to the area of the floor (P/A Ratio). Example of how to calculate the P/A ratio is shown below.



The perimeter and area are measured to the internal wall finishes as shown on the diagram.

Example Detached House

$$\text{Perimeter (P)} = 8 + 5 + 3 + 4 + 5 + 9 = 34$$

$$\text{Area (A)} = (5 \times 4) + (8 \times 5) = 60$$

$$\text{P/A Ratio} = 34 \div 60 = 0.57$$

Note: The exposed perimeter includes any edges where heat loss may occur, i.e. external walls and those into an unheated space such as a porch or garage.

Tables showing the thickness of Jabfloor to achieve U values based on P/A ratios are provided on the following pages.





U VALUES

The tables below show the required thicknesses of Jabfloor 70, 100, 150, 200 and 250 to meet U-values of 0.25, 0.22, 0.20, 0.18, 0.15 and 0.10 W/m²K.

The calculations have been based on a standard dense concrete floor slab 100mm thick and 63mm dense sand and cement screed placed over the insulation. They have been carried out in accordance with BS EN ISO 13370.

Table 4.1:

Thickness (mm) to achieve a U-value of 0.25 W/m ² K				
P/A Ratio	Jabfloor 70	Jabfloor 100	Jabfloor 150	Jabfloor 200 & 250
1.00	110	105	100	100
0.90	110	100	100	95
0.80	105	100	95	95
0.70	100	90	90	85
0.60	95	90	85	80
0.50	85	80	80	75
0.40	75	75	70	70
0.30	60	60	55	55
0.25	50	45	45	45
0.20	30	30	30	30
0.15	25	25	25	25

Table 4.2:

Thickness (mm) to achieve a U-value of 0.22 W/m ² K				
P/A Ratio	Jabfloor 70	Jabfloor 100	Jabfloor 150	Jabfloor 200 & 250
1.00	130	120	120	115
0.90	125	120	115	115
0.80	120	115	115	110
0.70	120	110	110	110
0.60	115	105	105	105
0.50	110	100	100	95
0.40	95	90	90	85
0.30	80	75	75	70
0.25	65	65	60	60
0.20	50	50	50	50
0.15	25	25	25	25

NB: Thickness indicated may be obtained using one or two layers of standard thickness product





Table 4.3:

Thickness to achieve a U-value of 0.20 W/m^2K				
P/A Ratio	Jabfloor 70	Jabfloor 100	Jabfloor 150	Jabfloor 200 & 250
1.00	145	135	135	130
0.90	140	135	130	125
0.80	140	130	130	125
0.70	135	130	125	120
0.60	130	125	120	115
0.50	120	115	115	110
0.40	110	105	105	100
0.30	100	95	90	85
0.25	85	80	80	75
0.20	65	60	60	60
0.15	40	40	40	40

Table 4.4:

Thickness to achieve a U-value of 0.18 W/m^2K				
P/A Ratio	Jabfloor 70	Jabfloor 100	Jabfloor 150	Jabfloor 200 & 250
1.00	170	160	150	145
0.90	160	155	150	145
0.80	160	150	145	140
0.70	160	145	140	140
0.60	150	140	135	135
0.50	140	135	130	125
0.40	130	125	120	115
0.30	115	110	105	105
0.25	105	100	95	95
0.20	85	80	80	75
0.15	55	50	50	50

NB: Thickness indicated may be obtained using one or two layers of standard thickness product





Table 4.5:

	U-values: $0.15 W/m^2K$			
P/A Ratio	Jabfloor 70	Jabfloor 100	Jabfloor 150	Jabfloor 200 & 250
1.00	210	195	190	185
0.90	200	190	190	185
0.80	200	190	185	180
0.70	195	185	180	175
0.60	190	180	175	175
0.50	180	170	170	160
0.40	170	160	160	150
0.30	150	145	130	135
0.25	140	130	130	125
0.20	120	115	115	110
0.15	90	85	85	80

Table 4.6:

Thickness to achieve a U-value of $0.10 W/m^2K$				
P/A Ratio	Jabfloor 70	Jabfloor 100	Jabfloor 150	Jabfloor 200 & 250
1.00	320	305	300	300
0.90	320	300	300	300
0.80	320	300	300	300
0.70	320	300	300	280
0.60	320	300	300	275
0.50	300	300	280	275
0.40	300	270	270	260
0.30	270	260	250	240
0.25	250	240	230	225
0.20	230	220	210	210
0.15	200	190	190	180

NB: Thickness indicated may be obtained using one or two layers of standard thickness product

