



# Jabfloor 70, 100, 150, 200, 250

## Floor insulation – below ground supported slab

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

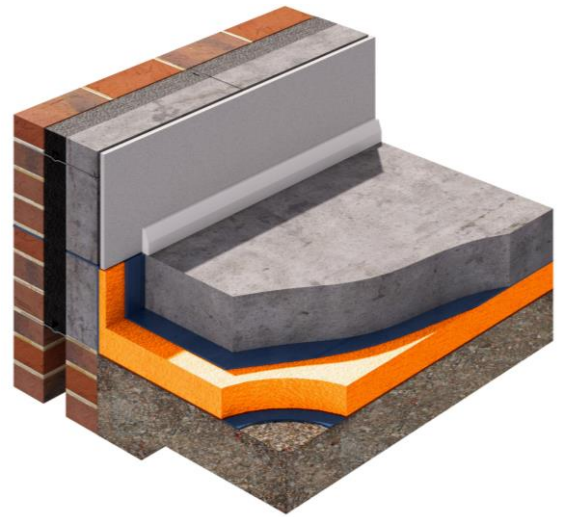
Available in a range of compressive strengths to suit all building types from domestic to industrial.

Jabfloor insulation has been tested and approved by the British Board of Agrément (BBA) as Jablite Floor Insulation 70, 100 and 150. Certificate number 87/1796

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

Jabfloor HP 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.

Jabfloor is lightweight and easy to install. There are no requirements for special PPE when installing or cutting Jabfloor. (full installation details are shown later)



### Dimensions

Standard Size	2400 x1200mm
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 :

<b>BBA</b>	Jabfloor Insulation has been assessed and approved by the British Board of Agrément as Jablite Floor Insulation for use below slab in solid ground floors. Certificate number 87/1796. This Certificate covers Grades 70, 100 and 150.
<b>NHBC Approved</b>	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
<b>CE marking</b>	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.
<b>Quality</b>	All Jablite products are manufactured in production facilities which are certified to ISO 9001 Quality Management
<b>Environmental Responsibility</b>	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)
<b>Compliance</b>	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
<b>Fire</b>	<p>Solid ground floors are not required to provide fire resistance. When properly installed Jabfloor is fully protected by the concrete slab 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> <p>Euroclass E, flame-retardant material is available to order.</p>





## Environment and Sustainability :

<b>A+</b>	Jabfloor insulation is manufactured from EPS (expanded polystyrene) which achieves an A+ rating in the BRE Green Guide to Specification.
<b>Climate Change</b>	<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>
<b>100%</b>	Jabfloor insulation is 100% recyclable.
<b>BREEM</b>	<p><b>Responsible Sourcing.</b></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 <a href="http://www.Jablite.co.uk">www.Jablite.co.uk</a></p> <p><b>Key Process (Insulation Manufacture)</b> ISO 14001: Certificate Number EMS 559414</p> <p><b>Supply Chain Processes (supply of materials for end products)</b> ISO 14001: Certificate Number NL 015213-1</p> <p><b>Embodied Impact</b> 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>
<b>Biological Properties</b>	<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

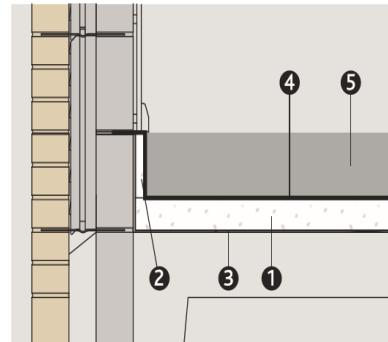
### Damp-proof membrane

Good building practice indicates that a DPM is placed below the Jabfloor and a vapour control layer (VCL) is installed on the warm side of the insulation to inhibit the risk of interstitial condensation.

If a liquid DPM is used, care should be taken that it is compatible with the Jabfloor and that it is completely dry before the insulation is laid.

The ground should be excavated to the required level and compacted to ensure a firm, flat, level surface.

A suitable DPM such as 250 $\mu$  (1000 gauge) polythene sheet is installed over the prepared ground or blinded hardcore base. Ensure all joints of the membrane are lapped and sealed.



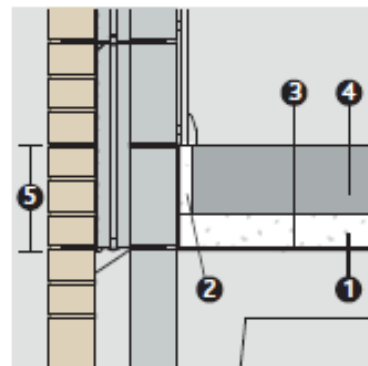
1. Jabfloor
2. Jabfloor edge strip
3. Damp-proof membrane
4. Vapour control layer
5. Concrete slab

### Jabfloor

Jabfloor is loose-laid over the DPM with all joints tightly butted. The insulation boards are easily cut to fit on site with a sharp knife or fine toothed saw.

Vertical upstands of Jabfloor Edge Strip should be used around perimeter to prevent cold bridging, as detailed in BRE Report 262.

A suitable VCL such as 125 $\mu$  (500 gauge) polythene sheet is laid over the Jabfloor with all joints lapped and sealed.



1. Jabfloor
2. Jabfloor edge strip
3. Damp-proof membrane
4. Concrete slab
5. Minimum 150mm overlap of floor and wall insulation to reduce thermal bridging

### Concrete Slab

The concrete slab is then poured or pumped over the insulation/VCL to the required thickness.

During these operations the vapour control layer and insulation must be protected from impact damage or excessive trafficking by the use of spreader boards.

Where structural steel reinforcement is incorporated into the concrete slab this must be placed onto spacer pads sufficient to prevent puncturing the VCL and damaging the insulation.

The concrete slab is then either tamped or power-floated to provide the required finish.

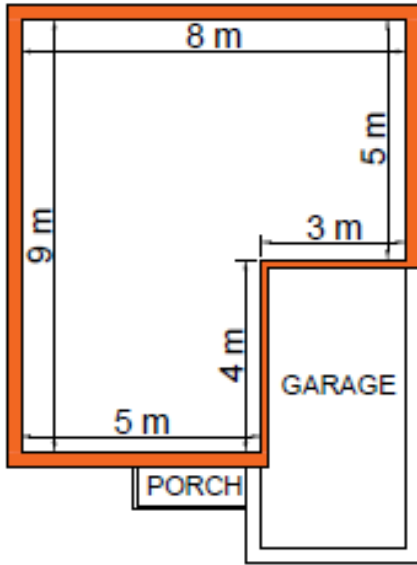
Note: Jablite EPS products are compatible with all common building materials. Direct contact with hydrocarbons and strong solvents should be avoided. A suitable membrane such as polythene sheet may be used to separate Jablite EPS from these substances.





## 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 0.10W/m<sup>2</sup>K.

The calculations have been based on a standard dense concrete floor slab 100mm thick and carried out in accordance with BS EN ISO 13370.

**Table 2.1:**

Thickness (mm) to achieve U-value 0.25 W/m <sup>2</sup> K				
P/A Ratio*	Jabfloor 70	Jabfloor 100	Jabfloor 150	Jabfloor 200 & 250
1.00	110	105	100	100
0.90	110	100	100	100
0.80	105	100	100	100
0.70	100	100	95	90
0.60	100	90	90	85
0.50	85	80	80	75
0.40	80	75	70	70
0.30	65	60	60	55
0.25	50	50	50	50
0.20	40	30	30	30
0.15	25	25	25	25

**Table 2.2:**

Thickness (mm) to achieve U-value 0.22 W/m <sup>2</sup> K				
P/A Ratio*	Jabfloor 70	Jabfloor 100	Jabfloor 150	Jabfloor 200 & 250
1.00	130	125	120	120
0.90	125	120	120	120
0.80	125	120	120	110
0.70	120	120	110	110
0.60	120	110	110	105
0.50	110	100	100	100
0.40	100	100	90	90
0.30	80	80	75	75
0.25	70	65	65	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 2.3:**

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

**Table 2.4:**

Thickness (mm) to achieve U-value 0.18 $W/m^2K$				
P/A Ratio*	Jabfloor 70	Jabfloor 100	Jabfloor 150	Jabfloor 200 & 250
1.00	170	160	160	150
0.90	170	160	150	150
0.80	160	150	150	150
0.70	160	150	150	140
0.60	150	150	150	140
0.50	150	140	140	130
0.40	130	125	120	120
0.30	120	110	110	110
0.25	105	100	100	100
0.20	85	80	80	75
0.15	60	55	50	50

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





Table 2.5:

Thickness (mm) to achieve U-value 0.15 $W/m^2K$				
P/A Ratio*	Jabfloor 70	Jabfloor 100	Jabfloor 150	Jabfloor 200 & 250
1.00	210	200	190	190
0.90	210	195	190	190
0.80	200	190	190	180
0.70	200	190	180	175
0.60	190	180	175	170
0.50	190	175	170	170
0.40	170	170	160	160
0.30	160	145	140	140
0.25	140	140	130	125
0.20	120	120	115	110
0.15	100	85	85	80

Table 2.6:

Thickness (mm) to achieve U-value 0.10 $W/m^2K$				
P/A Ratio*	Jabfloor 70	Jabfloor 100	Jabfloor 150	Jabfloor 200 & 250
1.00	320	320	300	300
0.90	320	320	300	300
0.80	320	300	300	300
0.70	320	300	300	300
0.60	320	300	300	275
0.50	300	300	275	270
0.40	300	275	275	260
0.30	275	260	250	240
0.25	260	240	240	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

