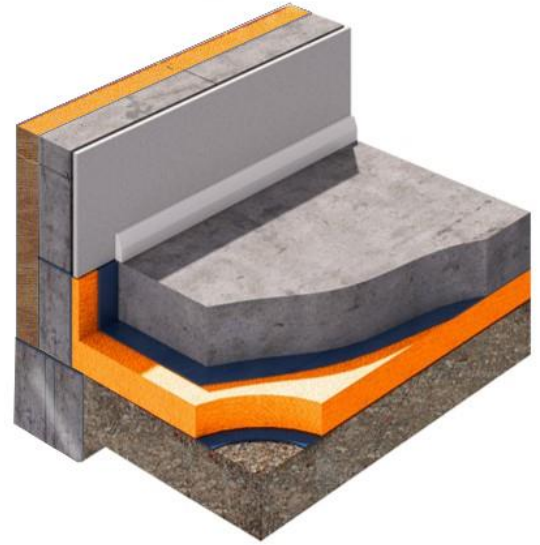




# Jablite Substructure Insulation Board

Jablite Substructure Insulation Boards are manufactured from unique innovative closed cell expanded polystyrene (EPS) with low water absorption properties.

- Thermal conductivity as low as 0.031 W/mK
- Resistant to the effects of freeze/thaw
- High compressive strengths available – 200 and 300 grade and 200 +
- Global Warming Potential <5
- Ozone Depletion Potential = Zero



Jablite Substructure Insulation Board is manufactured in accordance with BS EN ISO 13163:2012+A2 under a Quality Management System approved to BS EN ISO 9001:2015 and Environmental Management System to ISO 14001:2015

The insulation is a lightweight and easy-to-install solution.

There are no requirements for special PPE when installing or cutting the insulation panels.

- Manufactured from expanded polystyrene insulation
- Excellent compressive strength
- Resistant to ground moisture penetration
- Unaffected by air infiltration
- Easy to handle and install
- Ideal for new build and refurbishment

## Dimensions

<b>Size</b>	1200 x 1200mm (with 15mm rebated edges) Board coverage 1.44m <sup>2</sup>
<b>Thickness</b>	Single thickness 50mm up to 240mm (in 5 mm increments)

## Application

This information is provided as guidance only, please refer to the compressive strengths table (next page)

Product Selector	200	200 +	300	500
Basement Walls	✓	✓	✓	✓
Basement Floor	✓	✓	✓	✓
Cavity Wall Below DPC	✓	✓	✓	✓
Heavy Duty Floors			✓	✓

**PROPERTIES**

Substructure Insulation Board	200	200 +	300	500
<b>Mechanical properties</b>				
Design load at 10% nominal compression (kN/m <sup>2</sup> )	200	200	300	500
Design load at 1% nominal compression (kN/m <sup>2</sup> )	90	90	120	190
Design Loads for Long Term Compressive Creep (kN/m <sup>2</sup> )	60	60	90	150
Bending Strength (kN/m <sup>2</sup> )	250	250	450	450
<b>Thermal Properties</b>				
Declared Thermal Conductivity (W/mK)	0.033	0.031	0.033	0.033
<b>Moisture Properties</b>				
Long term water absorption by immersion to BS EN 12087:2013	≤ 1%			
Long term water absorption by diffusion to BS EN 12088:2013	≤ 1%			
<b>Fire Performance</b>				
Classification to BS EN 13501-1:2018	Euroclass E			

**Compressive Strength**

Jablite supplies insulation boards in a range of grades suitable for basements, heavy-duty, commercial, industrial flooring and walls.

Jablite 200 and 300 and 200 + have adequate resistance to the loads associated with light maintenance traffic. Jablite 500 is available for higher loading requirements.

**Designing for Long Term Compressive Creep**

On a floor where heavy industrial units or other similar heavy items are to be permanently installed imposing extra load on the insulation the calculation should allow for compressive creep.

The design load to use for Jablite Substructure Insulation Board for this application is 30% of the 10% compressive strength figure. This will result in less than 2% compression in the insulation boards over 50 years.

**Fire Performance**

Jablite Substructure Insulation Board meets European Classification (Euroclass) E to BS EN 13501-1:2018



**EXAMPLES**

Of typical build-up, 2.5 m deep  
(Measured from ground level to finished basement floor level)

**Basement Wall construction**

- 12.5mm Plasterboard on dabs
- 150mm Reinforced In-situ Concrete Wall
- Vapour Control Layer
- **90 mm Jablite Substructure Insulation Board 200+**
- Tanking membrane\*
- Earth backfill

**U value achieved: 0.18 W/m<sup>2</sup>K**

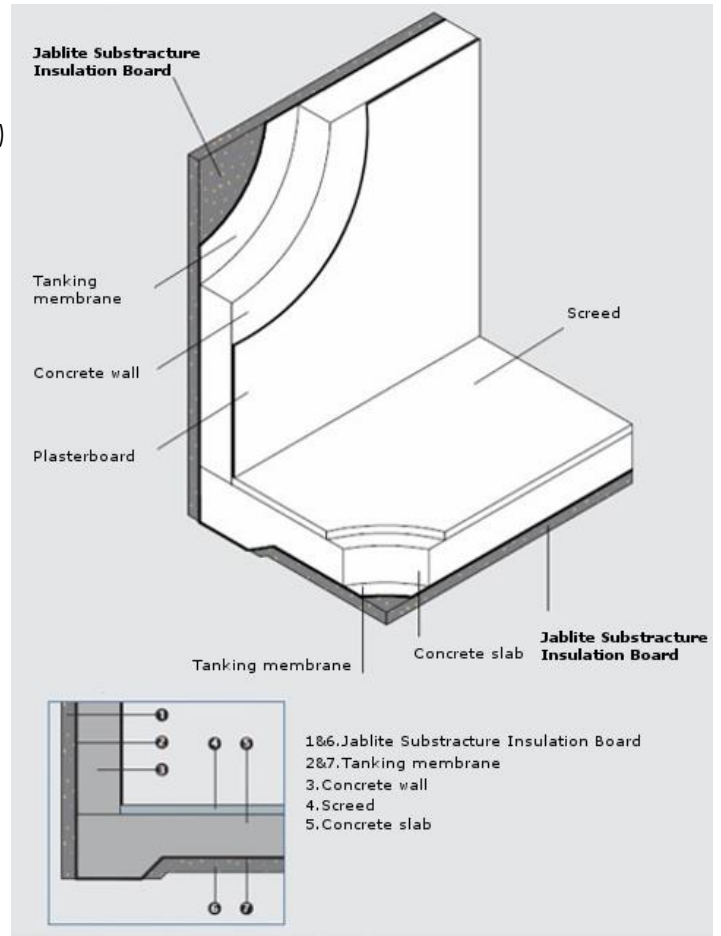
**Under Concrete Slab Floor construction**

Perimeter / Area = 0.4

- 50 mm Screed
- 150mm Reinforced In-situ Concrete slab
- Vapour Control Layer
- **80 mm Jablite Substructure Insulation Board 200+**
- Tanking membrane\*
- Compacted levelled earth

**U value achieved: 0.18 W/m<sup>2</sup>K**

\*Tanking membrane compatible with Jablite Substructure Insulation Board



**U-VALUES TABLE**

**Basement wall insulation**

Grade	THICKNESS (mm)					
	50	60	70	80	90	100
200+	0.26	0.24	0.21	0.19	0.18	0.16
200, 300,500	0.28	0.25	0.22	0.20	0.19	0.17

**Floor under concrete slab: grade 200+ with 0.031 thermal conductivity**

Perimeter/Area ratio	Substructure Insulation Board THICKNESS (mm)					
	50	60	70	80	90	100
1	0.28	0.26	0.24	0.22	0.21	0.19
0.8	0.27	0.25	0.23	0.21	0.20	0.19
0.6	0.25	0.23	0.22	0.20	0.19	0.18
0.4	0.23	0.21	0.20	0.18	0.17	0.16
0.3	0.21	0.19	0.18	0.17	0.16	0.15

The above values are calculated for the example build-up.



**Floor under concrete slab: Grades 200, 300 and 500 with 0.033 thermal conductivity**

Perimeter/Area ratio	Substructure Insulation Board THICKNESS (mm)					
	50	60	70	80	90	100
1	0.29	0.27	0.25	0.23	0.21	0.20
0.8	0.28	0.26	0.24	0.22	0.21	0.20
0.6	0.26	0.24	0.22	0.21	0.20	0.19
0.4	0.23	0.22	0.20	0.19	0.18	0.17
0.3	0.21	0.20	0.19	0.18	0.17	0.16

The above values are calculated for the example build-up.

**ACCREDITATION AND QUALITY**

<b>CE, UKCA marking</b>	Jablite have taken the responsibility of CE marking the product in accordance with harmonised European Standard BS EN 13163:2012+A2:2016. 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 14001:2015 certified.
<b>Compliance</b>	Jablite Substructure Insulation Board conforms to the required properties as defined in BS EN 13163:2012+A2:2016– Thermal insulation products for buildings – Factory made expanded polystyrene (EPS) products – Specification. This includes compliance with BS 3837 Part 1

