



# Jablite Board 250, 300, 350, 400 and 500

## Floor insulation – Cold Store floors

Jablite Board is suitable for use below a concrete ground slab in Cold Store floors.

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

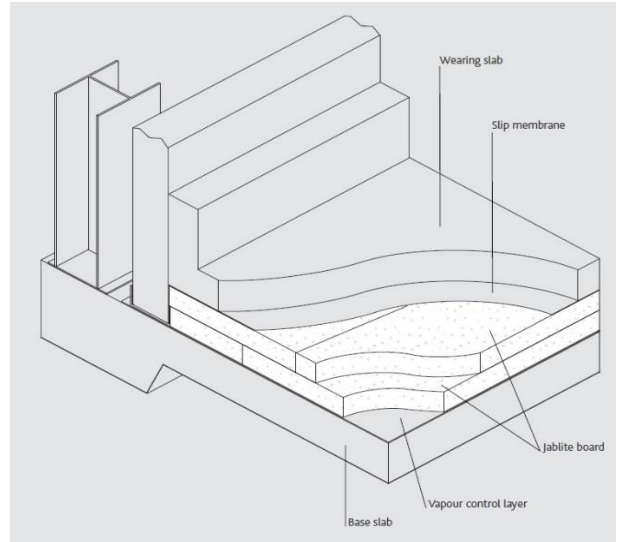
There is a requirement to insulate the ground floors of chiller and cold stores to protect against the action of frost on the ground.

Cold store floors are subject to high floor loadings, therefore Jablite Board Grade 250 or higher should be used.

The advice of the structural design engineer should always be sought when deciding which grade of Jablite to use in this application.

The Jablite Board should be placed in two layers with the joints cross laid to prevent cold bridging.

Jablite Board 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

<b>Standard Size</b>	<b>2400 x1200mm.</b>
<b>Standard Thickness</b>	<b>50, 75, 100, 150, 200, 250 and 300mm</b> <b>Other thicknesses are available</b>

## Properties :

Grade	Thermal Conductivity (Lambda) (W/mK)	Design load at 1% nominal compression (kPa)	Design load at 10% nominal compression (kPa)
Jablite Board 250	0.034	100	250
Jablite Board 300	0.033	120	300
Jablite Board 350	0.033	140	350
Jablite Board 400	0.033	160	400
Jablite Board 500	0.033	190	500

More detailed physical properties are shown on our EPS Datasheet.





**Application :** The recommendations of BS EN 1991-1-1 and BS EN 1990 should be followed in the design of the floor

<b>Cold Store Applications</b>	<p>Jablite Board Grade 250 is recommended as a minimum for floors subject to the dynamic loads of fork lift trucks.</p> <p>Cold stores and similar buildings may also have storage racking systems which impose high loads on the concrete slab and insulation. Consideration of the point loads shall be taken into account.</p> <p>In all instances the advice and assessment of a design engineer must be sought in choosing which grade of Jablite Board is appropriate for the application.</p>
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Please use the design load at 1% nominal compression for the design and selection of Jablite Board for Cold Store floors.

Compressive Creep –Jablite EPS has been tested for behaviour under cyclic loading and compressive creep characteristics in accordance with EN 1606.

The maximum creep design load for each grade can be calculated as 30% of the 10% compressive strength. At this load a compression of 2% is expected over 50 years.

**Accreditation :**

<b>CE marking</b>	<p>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.</p>
<b>Quality</b>	<p>All Jablite products are manufactured in production facilities which are certified to ISO 9001 Quality Management</p>
<b>Environmental Responsibility</b>	<p>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)</p>
<b>Compliance</b>	<p>Jablite Board 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</p>
<b>Fire</b>	<p>Solid ground floors are not required to provide fire resistance. When properly installed Jablite Board 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>Jablite Board is supplied as non-flame retardant material as standard.</p>





## Environment and Sustainability :

<b>A+</b>	Jablite Board is manufactured from EPS (expanded polystyrene) which has an A+ rating in the BRE Green Guide to Specification.
<b>Climate Change</b>	<p>Jablite Board 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>	Jablite Board 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>Jablite Board EPS is non-toxic and non-biodegradable.</p> <p>Jablite Board will not sustain mould growth and has no nutrient value to insects or vermin.</p>





## INSTALLATION

The floor construction shall be designed to suit the conditions within the cold store with particular reference to the temperature and load.

Floors of cold stores designed to work below 0°C must be insulated to protect against frost heave. These installation details are for this type of floor.

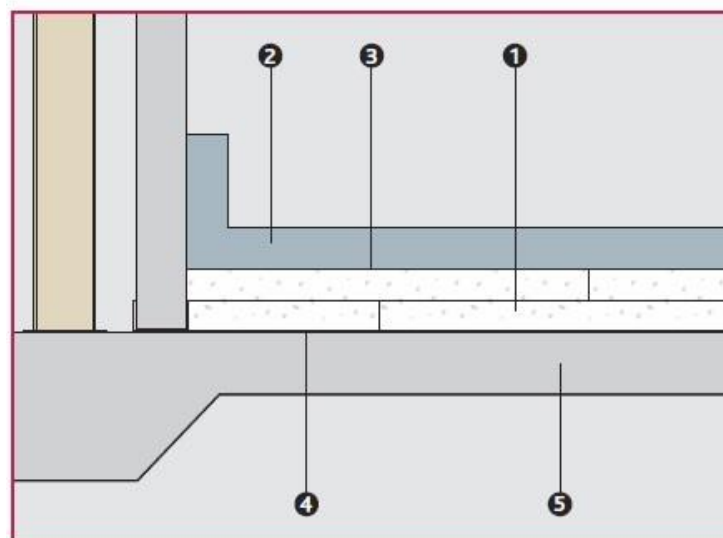
For chiller rooms and other large storage facilities not subject to this requirement the installation details contained in our data sheet for Jabfloor Below Concrete Slab may be followed.

Further details and guidance can be found within the IACSC publication "Model Building Specifications for Design, Installation and Commissioning of Insulated Envelopes and Insulated Floors for Temperature Controlled and Ambient Environments".

### Site preparation

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

Cold store floor insulation



- |                      |                         |
|----------------------|-------------------------|
| 1. Jablite board     | 4. Vapour-control layer |
| 2. Wearing slab      | 5. Base slab            |
| 3. 2mm slip membrane |                         |

### Base Slab

The base slab is cast onto the ground and will be of a design to suit the construction.

Appropriate frost protection heating shall be placed within the base slab when necessary. The IACSC guidance document mentioned above provides specifications and requirements for heating mats in this application.





## INSTALLATION

### Vapour Seal

The floor is sealed against vapour penetration by the use of an HDPE membrane minimum 1000 gauge (250 microns).

This membrane is installed over the concrete sub-base. All edges of the membrane are lapped and sealed to provide a continuous vapour seal.

If a similar performing liquid DPM is used, care should be taken that it is compatible with the Jablite Board (EPS) and that it is completely dry before the insulation is laid.

### Jablite Board

Two layers of Jablite board are laid over the vapour membrane with joints tightly butted. Boards are cross laid with joints staggered to prevent cold bridging. The boards are easily cut to fit with a sharp knife or fine toothed saw.

The grade shall be determined by the structural design engineer, taking into consideration the dead and dynamics loads to be imposed on the floor.

A slip layer is placed over the insulation boards, this may be 500 gauge polythene sheet, building paper or any similar sheet material.

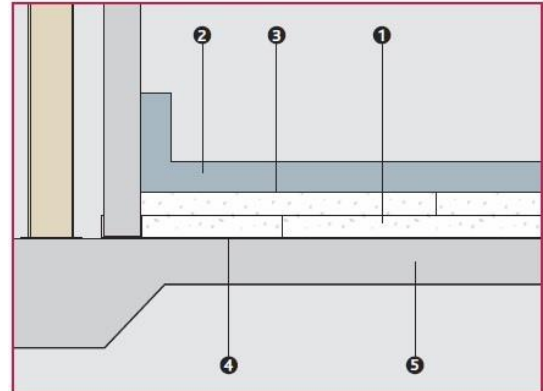
### Wearing Slab

The reinforced concrete slab is placed on suitable spacer pads over the insulation and slip membrane. The design of the slab shall be to suit the loads and use of the cold store, as determined by the design engineer.

During the installation of the concrete wearing slab the insulation and slip membrane should be protected from impact damage or excessive trafficking by the use of spreader boards.

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

Cold store floor insulation



- 1. Jablite board
- 2. Wearing slab
- 3. 2mm slip membrane
- 4. Vapour-control layer
- 5. Base slab

