Jablite Jabfloor Classic

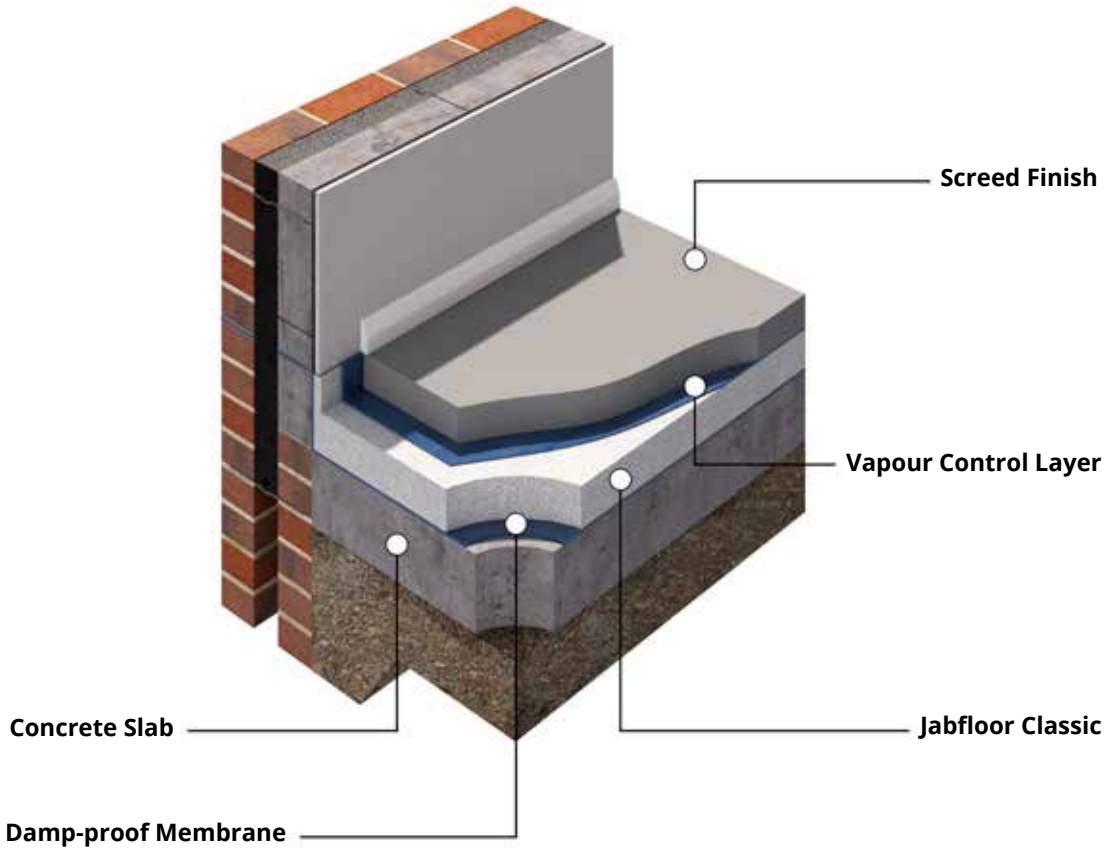
Technical Information

Jablite

INTELLIGENT INSULATION

CONTENTS

1.0 JABLITE JABFILL



Jabfloor insulation can be used in all floor constructions for both domestic and commercial buildings. The application will determine the grade of Jabfloor required for your project. Jabfloor 70 is mainly used for domestic floors, whereas Jabfloor 100 is widely used for commercial floors where higher loadings are likely to be encountered.

Jabfloor is also available in higher grades up to 250 which may be required in certain specialist industrial and commercial applications.

Jabfloor can be place above a concrete slab or a pre-cast concrete floor in ground-floor constructions and finished with a wearing layer of chipboard to relevant U-value requirements.

Easy to handle

Jabfloor is manufactured from expanded polystyrene (EPS) which is lightweight and easy to handle on site.

Permanent

Jabfloor is rot-proof and durable and will remain effective for the life of the building.

It also has the added advantage of being flood-proof.

Rapid construction

No specialised trades or equipment are required.

Versatile

Jabfloor can be used above or below the damp-proof membrane.

Environment

Expanded polystyrene has been awarded an A+ rating by the BRE's Green Guide to

Specification.

All-dry construction

The use of Jabfloor with a chipboard finish provides an all-dry method of construction, saving up to one week in site time compared to a wet screed.

Type

Jabfloor is supplied as EPS 70,100, 150, 200 and 250 as defined in BS EN 13163. Flame retardant additive material is available to order.

Approvals

Jabfloor has been assessed and approved by the British Board of Agrément for use above a concrete slab with timber floor finishes; Certificate number 87/1796.

Dimensions

Standard size: 2400 x 1200mm.

Standard thicknesses: 25, 30, 40, 50, 60, 75, 100, 120, 150 and 200mm (Other thicknesses available to order).

Fire

Solid ground floors are not required to provide fire resistance. When properly installed, the EPS insulation is fully protected by the chipboard and will have no adverse effect on the fire performance of the floor. Euroclass E, flame retardant material, is available to order.

U-values

The rate of heat loss through a ground floor varies with its size and shape. The thickness of insulation required to meet a given U-value will similarly depend on the size and shape of the floor. Approved Documents L1A , L1B, L2A and L2B guide you to BS EN ISO 13370 as the method for determining floor U-values based on the floor perimeter and floor area where:

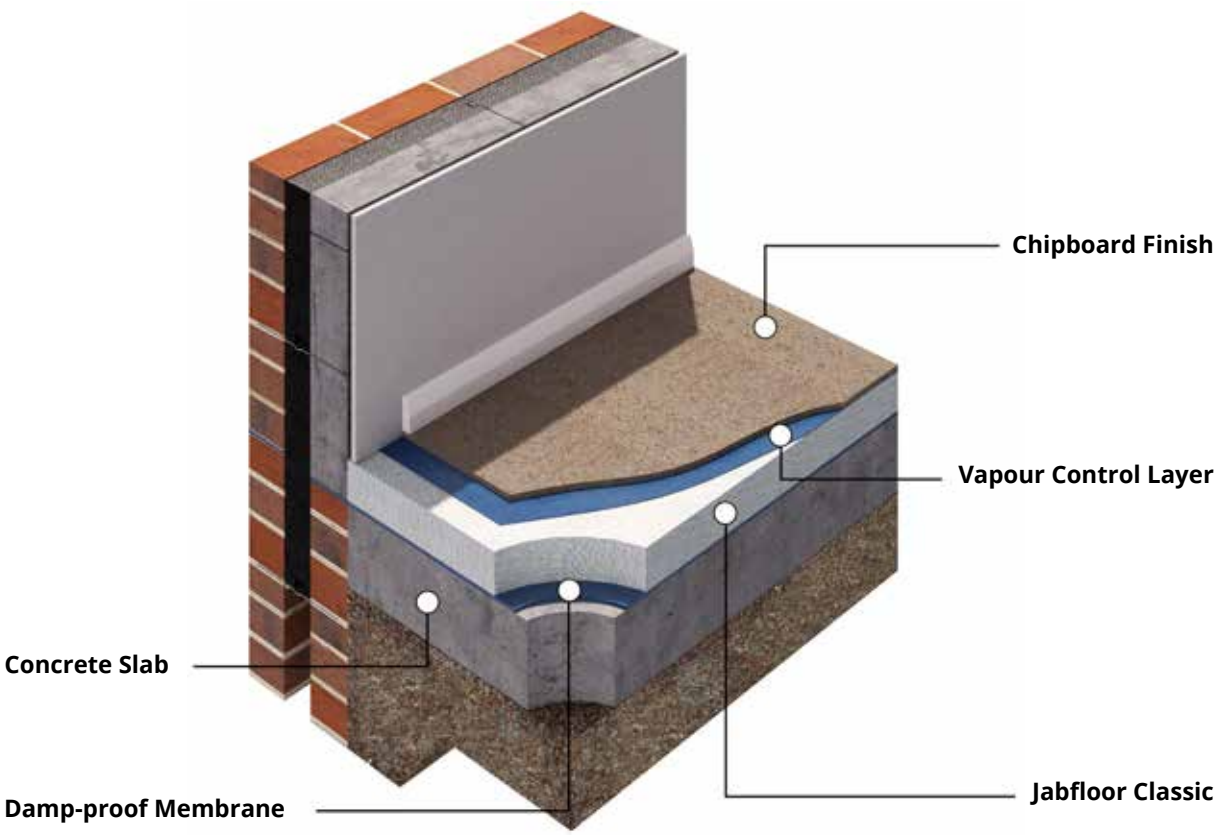
"P" is length of exposed perimeter in metres and "A" is floor area in square metres.

The measurement of both the floor area and perimeter should be made on the internal finished surface of the walls enclosing the heated space; unheated areas such as garages, porches and storage spaces need not be included. For buildings such as terraces or blocks of flats and apartments, the measurement should be taken over the total gross ground-floor area.

U-values are based on the following k-values:

- Jabfloor 70 0.038W/mK
- Jabfloor 100 0.036W/mK
- Jabfloor 150 0.035W/mK
- Jabfloor 200 0.034W/mK
- Jabfloor 250 0.034W/mK

2.0 BELOW CHIPBOARD FINISH



U-value Tables

U-VALUE: 0.25 W/m²K				
P/A Ratio	**Jabfloor 70**	**Jabfloor 100**	**Jabfloor 150**	**Jabfloor 200 & 250**
1.00	110	105	100	100
0.90	105	100	100	100
0.80	100	100	100	90
0.70	100	100	90	90
0.60	90	90	85	85
0.50	85	80	80	75
0.40	75	75	70	70
0.30	60	60	55	55
0.25	50	50	50	50
0.20	30	30	30	30
0.15	25	25	25	25

Key

standard thickness two layers of standard thickness

Standard thicknesses: 25, 30, 40, 50, 60, 75, 100, 120, 150, 200mm

U-VALUE: 0.22 W/m²K				
P/A Ratio	**Jabfloor 70**	**Jabfloor 100**	**Jabfloor 150**	**Jabfloor 200 & 250**
1.00	130	125	120	115
0.90	125	120	115	110
0.80	120	115	115	110
0.70	120	110	110	105
0.60	110	105	105	100
0.50	105	100	100	100
0.40	100	90	85	85
0.30	85	75	75	70
0.25	65	65	60	50
0.20	50	50	50	30
0.15	25	25	25	25

U-VALUE: 0.20 W/m²K				
P/A Ratio	**Jabfloor 70**	**Jabfloor 100**	**Jabfloor 150**	**Jabfloor 200 & 250**
1.00	150	135	135	130
0.90	140	135	130	125
0.80	140	130	130	125
0.70	135	125	125	120
0.60	130	120	120	115
0.50	120	115	110	110
0.40	110	105	100	100
0.30	100	90	90	85
0.25	85	80	75	75
0.20	65	60	60	60
0.15	40	45	40	45

U-VALUE: 0.18 W/m²K				
P/A Ratio	**Jabfloor 70**	**Jabfloor 100**	**Jabfloor 150**	**Jabfloor 200 & 250**
1.00	170	160	150	145
0.90	160	160	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	100
0.25	100	100	100	90
0.20	85	80	75	75
0.15	55	55	50	50

Key

standard thickness two layers of standard thickness

Standard thicknesses: 25, 30, 40, 50, 60, 75, 100, 120, 150, 200mm

U-VALUE: 0.15 W/M²K				
P/A Ratio	**Jabfloor 70**	**Jabfloor 100**	**Jabfloor 150**	**Jabfloor 200 & 250**
1.00	210	195	190	190
0.90	200	190	190	180
0.80	200	190	190	180
0.70	195	190	180	175
0.60	190	180	175	170
0.50	180	170	170	160
0.40	170	160	160	150
0.30	150	140	140	135
0.25	140	130	130	125
0.20	120	115	110	110
0.15	90	85	85	80

U-VALUE: 0.10 W/m²K				
P/A Ratio	**Jabfloor 70**	**Jabfloor 100**	**Jabfloor 150**	**Jabfloor 200 & 250**
1.00	320	320	300	300
0.90	320	300	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	270	270
0.30	270	260	250	240
0.25	250	240	230	225
0.20	230	220	210	210
0.15	200	190	190	180

Key

standard thickness two layers of standard thickness

Standard thicknesses: 25, 30, 40, 50, 60, 75, 100, 120, 150, 200mm

Installation

Concrete slab

The concrete slab should have a level, evenly-tamped surface; a floated or screeded finish is not necessary. The slab should be left as long as possible after laying to allow it to dry out.

Damp-proof membrane

Jabfloor Classic should not be regarded as a damp-proof membrane (DPM), and a suitable DPM must be used to protect floors in contact with the ground. The membrane may be positioned either above or below the concrete slab; (See figures 6.2 and 6.3). Liquid membranes are positioned above the concrete slab.

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

Where the DPM is positioned below the concrete slab, a vapour-control layer, of minimum 1000g polythene or equivalent, should be laid over the Jabfloor Classic. All edges should be overlapped a minimum 150mm and taped, and the material should be turned up 100mm at the perimeter and fixed behind the skirting.

Services

Providing the work is carried out in accordance with the relevant Byelaws or Regulations, electrical conduits, gas and water pipes can be accommodated within the thickness of the concrete slab.

If this is not possible, it is permissible to accommodate the services within the thickness of the insulation providing the pipes etc. are securely fixed to the slab. Jabfloor Classic should not be allowed to come into direct contact with PVC-sheathed cable, nor closer than 12mm to hot-water pipes; pipes should be haunched with a sand/cement mix or lagged using a proprietary material intended for this purpose.

Where subsequent access is required to the services, a removable panel should be provided by cutting out an appropriate area of chipboard finish and supporting it on the battens. The battens should be of preservative-treated timber, securely attached to the concrete slab using masonry nails or screws and plugs, and the chipboard screwed to the batten.

Jabfloor Classic

Jabfloor Classic should be loose-laid over the prepared surface; all joints should be tightly butted and taped with 75mm-wide adhesive tape to prevent the ingress of screed between the boards. The boards should be cut with a sharp knife to fit accurately around services, and taped as necessary.

Partitions etc.

Where masonry partitions or other heavy structures are to be built directly onto the chipboard floor, the insulation should be interrupted and a solid batten provided along the line of the partition, beneath the chipboard, to provide support. The batten should be of preservative-treated timber, securely attached to the concrete slab using masonry nails or screws and plugs.

Doorways

The chipboard should be positively supported at external doorways by the use of a solid batten spanning at least the width of the door. The batten should be of preservative-treated timber, securely attached to the concrete slab using masonry nails or screws and plugs.

At internal doorways, if the tongued-and-grooved joint of the chipboard is lost, a batten should be used to provide support as described above for external doorways.

Chipboard finish

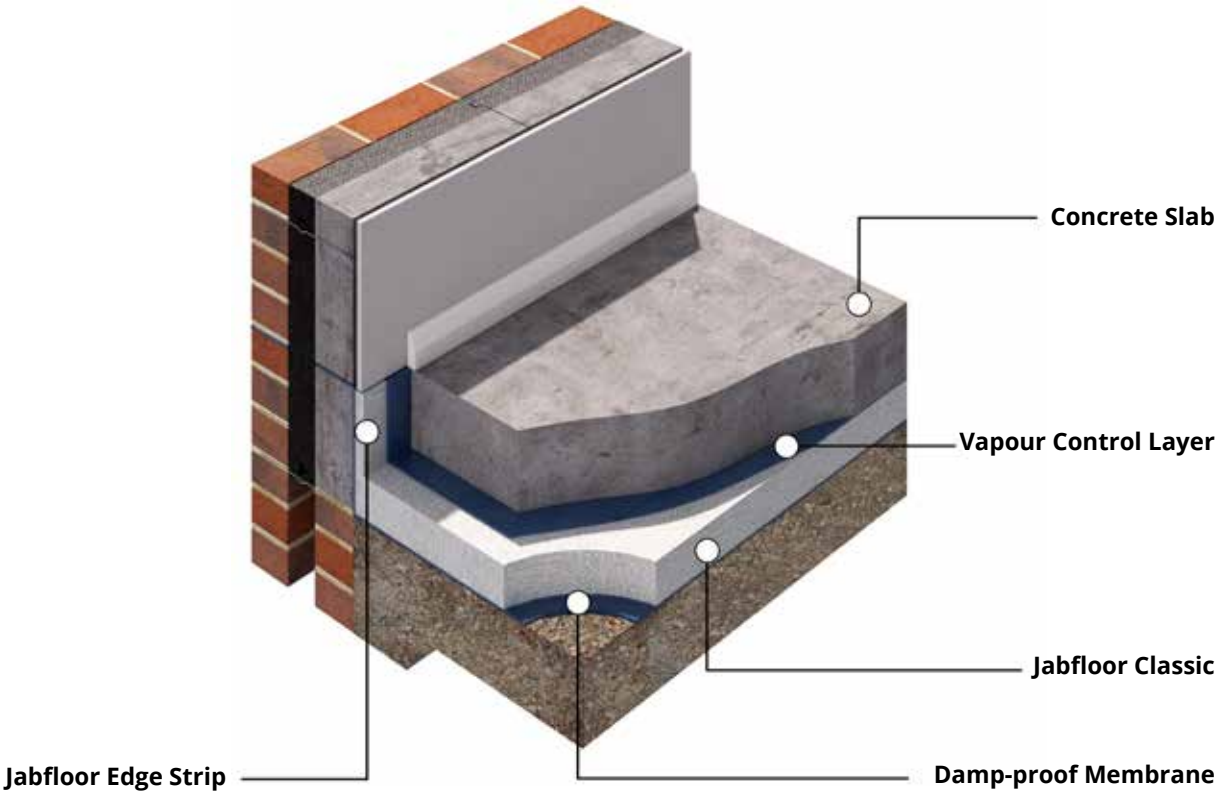
The chipboard should be Type P5 minimum 18mm-thick, with tongued-and-grooved edges, as described in BS EN 312. It is important that the recommendations given in BS EN 312 are followed regarding protection of the chipboard from water spillage in bathrooms, kitchens and utility areas.

Laying should proceed from one corner of the room ensuring that a 10-12mm gap is provided at the perimeter to allow for expansion. Temporary wedges should be placed in expansion gaps during laying to allow the chipboard joints to be tightened; the wedges must be removed after the adhesive has dried.

The boards should be laid with staggered cross joints, and all edges should be glued as laying proceeds using a PVA-based woodworking adhesive. In corridors, or wherever there are long uninterrupted runs of flooring, the inclusion of a 20mm expansion gap at 10m centres is required in addition to the 10-12mm perimeter gap.

A suitable solid timber batten should be installed beneath the expansion joint to provide support. The batten should be of preservative-treated timber, securely attached to the concrete slab using masonry nails or screws and plugs.

2.1 BELOW GROUND SUPPORTED SLAB



U-VALUE: 0.25 W/m²K				
P/A Ratio	**Jabfloor 70**	**Jabfloor 100**	**Jabfloor 150**	**Jabfloor 200 & 250**
1.00	115	105	105	100
0.90	110	105	100	100
0.80	105	100	100	100
0.70	105	100	100	90
0.60	100	90	90	85
0.50	90	85	85	80
0.40	80	75	75	75
0.30	65	60	60	60
0.25	55	50	50	50
0.20	40	40	40	30
0.15	25	25	25	25

Key

standard thickness two layers of standard thickness

Standard thicknesses: 25, 30, 40, 50, 60, 75, 100, 120, 150, 200mm

U-VALUE: 0.22 W/m²K				
P/A Ratio	**Jabfloor 70**	**Jabfloor 100**	**Jabfloor 150**	**Jabfloor 200 & 250**
1.00	135	125	120	120
0.90	135	125	120	115
0.80	135	120	115	115
0.70	135	115	115	110
0.60	115	110	110	105
0.50	110	105	100	100
0.40	100	100	90	90
0.30	85	80	80	75
0.25	85	70	65	65
0.20	85	50	50	50
0.15	30	30	25	25

U-VALUE: 0.20 W/m²K				
P/A Ratio	**Jabfloor 70**	**Jabfloor 100**	**Jabfloor 150**	**Jabfloor 200 & 250**
1.00	150	140	140	135
0.90	145	140	135	130
0.80	145	135	130	130
0.70	140	130	130	125
0.60	135	125	125	120
0.50	125	120	115	115
0.40	115	110	105	105
0.30	100	100	100	90
0.25	90	85	80	80
0.20	70	65	65	60
0.15	40	40	40	40

U-VALUE: 0.18 W/m²K				
P/A Ratio	**Jabfloor 70**	**Jabfloor 100**	**Jabfloor 150**	**Jabfloor 200 & 250**
1.00	170	160	160	150
0.90	170	160	160	150
0.80	170	160	150	145
0.70	160	150	145	145
0.60	160	145	140	140
0.50	145	140	135	130
0.40	135	125	125	120
0.30	120	115	110	105
0.25	105	100	100	100
0.20	90	85	80	80
0.15	60	55	55	55

Key

standard thickness two layers of standard thickness

Standard thicknesses: 25, 30, 40, 50, 60, 75, 100, 120, 150, 200mm

U-VALUE: 0.15 W/m²K				
P/A Ratio	**Jabfloor 70**	**Jabfloor 100**	**Jabfloor 150**	**Jabfloor 200 & 250**
1.00	210	200	195	190
0.90	210	195	190	190
0.80	210	195	190	180
0.70	200	190	190	180
0.60	195	190	180	175
0.50	190	175	170	170
0.40	175	170	160	160
0.30	160	145	145	140
0.25	145	135	135	130
0.20	125	120	115	115
0.15	100	90	85	85

U-VALUE: 0.10 W/m²K				
P/A Ratio	**Jabfloor 70**	**Jabfloor 100**	**Jabfloor 150**	**Jabfloor 200 & 250**
1.00	350	320	300	300
0.90	350	320	300	300
0.80	320	300	300	300
0.70	320	300	300	300
0.60	320	300	300	275
0.50	320	300	300	270
0.40	300	275	270	260
0.30	270	260	250	250
0.25	260	250	240	230
0.20	240	220	220	210
0.15	210	195	190	190

Key

standard thickness two layers of standard thickness three layers of standard thickness

Standard thicknesses: 25, 30, 40, 50, 60, 75, 100, 120, 150, 200mm

Installation

Damp-proof membrane

Jabfloor Classic should not be regarded as a damp-proof membrane (DPM). A suitable DPM must be provided, positioned either above or below the Jabfloor Classic, or on top of the concrete slab.

Liquid membranes are positioned above the slab. The hardcore should be blinded before receiving either the Jabfloor Classic or the DPM. If a liquid DPM is used, care should be taken that it is compatible with the Jabfloor Classic and that it is completely dry before the insulation is laid.

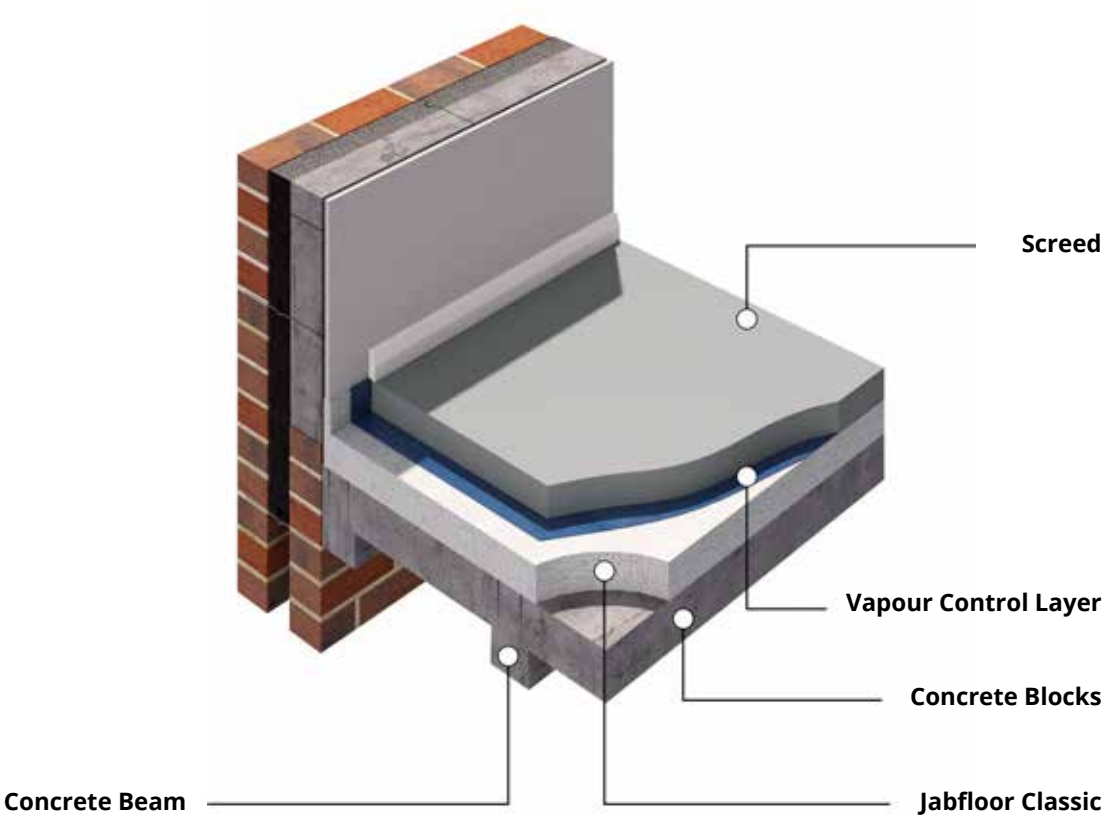
Jabfloor Classic

Jabfloor Classic should be loose-laid over the prepared surface; all joints should be tightly butted. If the concrete slab is to be poured directly onto the Jabfloor Classic, the joints should be covered with 75mm-wide adhesive tape to prevent the ingress of concrete or grout between the boards. Vertical upstands of Jabfloor Classic edge strip should be used around perimeter to prevent cold bridging, as detailed in BRE Report 262.

Concrete slab

The concrete slab is laid to the required thickness and either tamped or power-floated to provide the required finish. During these operations, the surface of Jabfloor Classic or the DPM should be protected from impact damage or excessive trafficking by the use of spreader boards.

2.2 BELOW SCREED FINISH



U-VALUE: 0.25 W/m²K				
P/A Ratio	**Jabfloor 70**	**Jabfloor 100**	**Jabfloor 150**	**Jabfloor 200 & 250**
1.00	105	100	100	100
0.90	105	100	100	100
0.80	100	100	90	90
0.70	100	90	90	85
0.60	90	85	85	80
0.50	85	80	75	75
0.40	75	70	70	65
0.30	60	55	55	55
0.25	50	50	50	40
0.20	30	30	25	25
0.15	25	25	25	25

Key

standard thickness two layers of standard thickness

Standard thicknesses: 25, 30, 40, 50, 60, 75, 100, 120, 150, 200mm

U-VALUE: 0.22 W/m²K				
P/A Ratio	**Jabfloor 70**	**Jabfloor 100**	**Jabfloor 150**	**Jabfloor 200 & 250**
1.00	125	120	115	115
0.90	125	115	115	110
0.80	120	115	110	110
0.70	115	110	105	105
0.60	110	105	100	100
0.50	105	100	100	90
0.40	100	90	85	85
0.30	80	75	70	70
0.25	65	60	60	60
0.20	50	50	50	40
0.15	25	30	25	25

U-VALUE: 0.20 W/m²K				
P/A Ratio	**Jabfloor 70**	**Jabfloor 100**	**Jabfloor 150**	**Jabfloor 200 & 250**
1.00	145	135	130	125
0.90	140	130	130	125
0.80	135	130	125	120
0.70	135	125	120	120
0.60	130	120	115	115
0.50	120	115	110	105
0.40	110	100	100	100
0.30	100	90	85	85
0.25	80	75	75	75
0.20	65	60	55	55
0.15	40	40	30	30

U-VALUE: 0.18 W/m²K				
P/A Ratio	**Jabfloor 70**	**Jabfloor 100**	**Jabfloor 150**	**Jabfloor 200 & 250**
1.00	170	160	150	145
0.90	160	150	145	145
0.80	160	150	145	140
0.70	160	145	140	135
0.60	150	140	135	130
0.50	140	130	130	125
0.40	130	120	120	115
0.30	115	105	105	100
0.25	100	100	90	90
0.20	80	75	75	75
0.15	55	50	50	50

Key

standard thickness two layers of standard thickness

Standard thicknesses: 25, 30, 40, 50, 60, 75, 100, 120, 150, 200mm

U-VALUE: 0.15 W/m²K				
P/A Ratio	**Jabfloor 70**	**Jabfloor 100**	**Jabfloor 150**	**Jabfloor 200 & 250**
1.00	210	190	190	180
0.90	200	190	190	180
0.80	195	190	180	175
0.70	195	180	175	170
0.60	190	175	170	170
0.50	180	170	170	160
0.40	170	160	170	150
0.30	150	140	135	135
0.25	140	130	125	125
0.20	120	115	110	105
0.15	90	85	80	80

U-VALUE: 0.10 W/m²K				
P/A Ratio	**Jabfloor 70**	**Jabfloor 100**	**Jabfloor 150**	**Jabfloor 200 & 250**
1.00	320	300	300	300
0.90	320	300	300	300
0.80	320	300	300	300
0.70	320	300	300	275
0.60	320	300	300	270
0.50	300	300	270	270
0.40	300	270	260	260
0.30	270	250	250	240
0.25	250	240	230	225
0.20	230	220	210	210
0.15	200	190	190	180

Key

standard thickness two layers of standard thickness three layers of standard thickness

Standard thicknesses: 25, 30, 40, 50, 60, 75, 100, 120, 150, 200mm

Installation

Concrete slab

The concrete slab should have a level, evenly-tamped surface; a floated or screeded finish is not necessary. The slab should be left as long as possible after laying to allow it to dry out.

Damp-proof membrane

Jabfloor Classic should not be regarded as a damp-proof membrane (DPM), and a suitable DPM must be used to protect floors in contact with the ground. The membrane may be positioned either above or below the concrete slab; liquid membranes are positioned above the concrete slab. If a liquid DPM is used, care should be taken that it is compatible with Jabfloor Classic, and that it is completely dry before the insulation is laid.

Services

Providing the work is carried out in accordance with the relevant Byelaws or Regulations, electrical conduits, gas and water pipes can be accommodated within the thickness of the concrete slab. If this is not possible, it is permissible to accommodate the services within the thickness of the insulation providing pipes etc. are securely fixed to the slab. Jabfloor Classic should not be allowed to come into direct contact with PVC-sheathed cable, nor closer than 12mm to hot-water pipes; pipes should be haunched with a sand/cement mix or lagged using a proprietary material intended for this purpose.

Jabfloor Classic

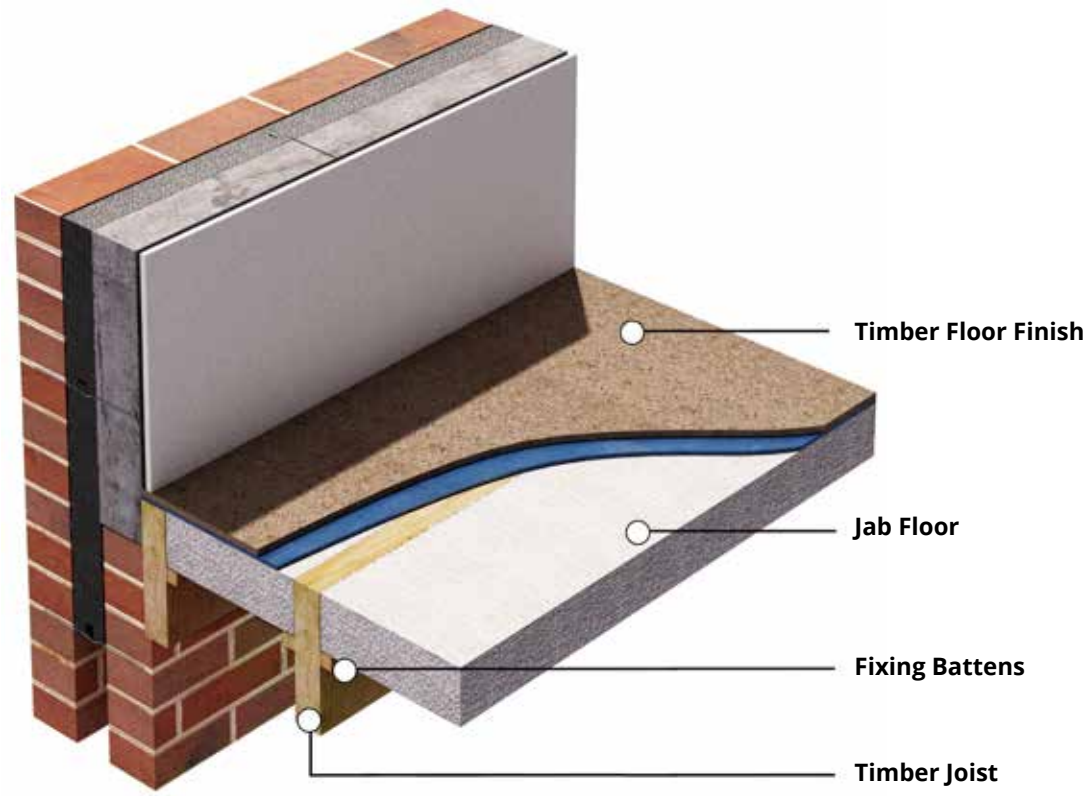
Jabfloor Classic should be loose-laid over the prepared surface; all joints should be tightly butted and taped with 75mm-wide adhesive tape to prevent the ingress of screed between the boards. The boards should be cut with a sharp knife to fit accurately around services, and taped as necessary.

Screeding

The recommendations of the appropriate parts of BS 8204 should always be followed. Sand/cement screeds should be at least 65mm-thick for domestic applications and 75mm-thick for non-domestic applications. In order to minimise cracking or curling, the screed should be laid so that jointless areas do not exceed 15m2 and with the ratio of length to width not exceeding 1.5:1.

If these limits cannot be observed, the use of light-gauge galvanised-metal reinforcement, placed centrally in the screed, will help to distribute shrinkage cracks evenly. During the screeding operations, the surface of the insulation should be protected from impact damage or excessive trafficking by the use of spreader boards.

2.3 PRECAST SUSPENDED CONCRETE FLOOR



U-VALUE: 0.25 W/m²K				
P/A Ratio	**Jabfloor 70**	**Jabfloor 100**	**Jabfloor 150**	**Jabfloor 200 & 250**
1.00	85	80	75	75
0.90	80	75	75	75
0.80	80	75	75	70
0.70	75	70	70	70
0.60	70	65	65	65
0.50	65	60	60	60
0.40	60	55	55	50
0.30	50	40	40	40
0.25	40	30	30	30
0.20	25	25	25	25
0.15	-	-	-	-

Key

standard thickness two layers of standard thickness

Standard thicknesses: 25, 30, 40, 50, 60, 75, 100, 120, 150, 200mm

U-VALUE: 0.22 W/m²K				
P/A Ratio	**Jabfloor 70**	**Jabfloor 100**	**Jabfloor 150**	**Jabfloor 200 & 250**
1.00	105	100	100	100
0.90	100	100	100	90
0.80	100	100	90	90
0.70	100	90	90	85
0.60	90	85	85	80
0.50	85	80	80	75
0.40	80	75	70	70
0.30	65	60	60	60
0.25	55	50	50	50
0.20	40	40	40	40
0.15	25	25	25	25

U-VALUE: 0.20 W/m²K				
P/A Ratio	**Jabfloor 70**	**Jabfloor 100**	**Jabfloor 150**	**Jabfloor 200 & 250**
1.00	120	115	110	105
0.90	120	110	110	105
0.80	115	110	105	105
0.70	110	105	105	100
0.60	110	100	100	100
0.50	100	100	100	90
0.40	100	90	85	85
0.30	80	75	75	75
0.25	70	65	65	65
0.20	55	55	50	50
0.15	40	30	30	30

U-VALUE: 0.18 W/m²K				
P/A Ratio	**Jabfloor 70**	**Jabfloor 100**	**Jabfloor 150**	**Jabfloor 200 & 250**
1.00	140	130	130	125
0.90	140	130	125	125
0.80	135	130	125	120
0.70	130	125	120	120
0.60	130	120	120	115
0.50	120	115	115	110
0.40	115	105	105	100
0.30	100	100	100	90
0.25	90	85	85	80
0.20	75	70	70	70
0.15	55	50	50	50

Key

standard thickness two layers of standard thickness

Standard thicknesses: 25, 30, 40, 50, 60, 75, 100, 120, 150, 200mm

U-VALUE: 0.15 W/m²K				
P/A Ratio	**Jabfloor 70**	**Jabfloor 100**	**Jabfloor 150**	**Jabfloor 200 & 250**
1.00	180	170	170	160
0.90	180	170	170	160
0.80	175	170	160	160
0.70	170	160	160	160
0.60	170	160	160	150
0.50	160	160	150	145
0.40	160	145	140	140
0.30	140	135	130	125
0.25	130	125	120	115
0.20	115	110	105	105
0.15	100	85	85	85

U-VALUE: 0.10 W/m²K				
P/A Ratio	**Jabfloor 70**	**Jabfloor 100**	**Jabfloor 150**	**Jabfloor 200 & 250**
1.00	300	300	275	270
0.90	300	300	270	270
0.80	300	275	270	260
0.70	300	275	270	260
0.60	300	270	260	260
0.50	300	270	260	250
0.40	270	260	250	240
0.30	260	250	240	230
0.25	250	240	230	220
0.20	240	220	220	210
0.15	210	200	195	190

Key

standard thickness two layers of standard thickness

Standard thicknesses: 25, 30, 40, 50, 60, 75, 100, 120, 150, 200mm

U-value Tables – Beam & Block Floor, Concrete Block

U-VALUE: 0.25 W/m²K				
P/A Ratio	**Jabfloor 70**	**Jabfloor 100**	**Jabfloor 150**	**Jabfloor 200 & 250**
1.00	100	100	90	90
0.90	100	90	90	85
0.80	100	90	85	85
0.70	100	85	85	80
0.60	90	85	80	80
0.50	85	80	75	75
0.40	75	70	70	65
0.30	65	60	55	55
0.25	55	50	50	50
0.20	40	40	40	40
0.15	25	25	25	25

U-VALUE: 0.22 W/m²K				
P/A Ratio	**Jabfloor 70**	**Jabfloor 100**	**Jabfloor 150**	**Jabfloor 200 & 250**
1.00	120	115	110	105
0.90	120	110	110	105
0.80	115	110	105	105
0.70	110	105	105	100
0.60	110	100	100	100
0.50	105	100	100	90
0.40	100	90	85	85
0.30	85	80	75	75
0.25	75	70	65	65
0.20	60	55	55	50
0.15	40	40	40	30

U-VALUE: 0.20 W/m²K				
P/A Ratio	**Jabfloor 70**	**Jabfloor 100**	**Jabfloor 150**	**Jabfloor 200 & 250**
1.00	135	130	125	120
0.90	135	125	125	120
0.80	130	125	120	120
0.70	130	120	120	115
0.60	125	120	115	110
0.50	120	110	110	105
0.40	110	105	100	100
0.30	100	100	90	90
0.25	90	85	80	80
0.20	75	70	70	65
0.15	55	50	50	50

Key

standard thickness two layers of standard thickness

Standard thicknesses: 25, 30, 40, 50, 60, 75, 100, 120, 150, 200mm

U-VALUE: 0.18 W/m²K				
P/A Ratio	**Jabfloor 70**	**Jabfloor 100**	**Jabfloor 150**	**Jabfloor 200 & 250**
1.00	160	145	145	140
0.90	160	145	140	140
0.80	150	145	140	135
0.70	150	140	135	135
0.60	145	135	135	130
0.50	140	130	130	125
0.40	130	125	120	115
0.30	120	110	110	105
0.25	110	105	100	100
0.20	100	90	85	85
0.15	75	70	65	65

U-VALUE: 0.15 W/m²K				
P/A Ratio	**Jabfloor 70**	**Jabfloor 100**	**Jabfloor 150**	**Jabfloor 200 & 250**
1.00	195	190	180	175
0.90	195	190	180	175
0.80	190	180	175	170
0.70	190	180	175	170
0.60	190	175	170	170
0.50	180	170	170	160
0.40	170	160	160	160
0.30	160	150	145	140
0.25	150	140	135	135
0.20	135	125	125	120
0.15	115	105	105	100

U-VALUE: 0.10 W/m²K				
P/A Ratio	**Jabfloor 70**	**Jabfloor 100**	**Jabfloor 150**	**Jabfloor 200 & 250**
1.00	320	300	300	300
0.90	320	300	300	300
0.80	320	300	300	275
0.70	320	300	300	275
0.60	300	300	275	270
0.50	300	300	270	270
0.40	300	270	270	260
0.30	275	260	260	250
0.25	270	250	250	240
0.20	250	240	230	225
0.15	230	220	210	210

Key

standard thickness two layers of standard thickness

Standard thicknesses: 25, 30, 40, 50, 60, 75, 100, 120, 150, 200mm

Installation

The surface to receive the Jabfloor Classic should be level and even, providing a fully supporting surface. Level discrepancies are common with beam and block and hollow core plank floors, therefore a levelling screed or compound should be used to remove level variations. Dry sand is not recommended as a levelling medium.

Damp proof membrane

Damp proof membranes are not required over suspended concrete floors, however there may be a requirement for a protective barrier against Radon, other gases or ground contaminants. This membrane may be placed above or below the Jabfloor Classic.

If a liquid membrane is used this will be applied to the concrete floor surface. Care should be taken to ensure it is compatible with Jabfloor Classic EPS and that it is completely dry before the insulation is laid.

Services

It is permissible to accommodate services within the thickness of the insulation provided pipes etc are securely fixed to the concrete floor. Jabfloor should not be allowed to come into direct contact with PVC-sheathed cables, nor closer than 12mm to hot water pipes. Cables can be secured to ensure contact does not occur, placed in conduit or covered with any material such as polythene DPM or building paper. Pipes should be independently lagged.

Jabfloor Classic

Jabfloor Classic should be loose laid over the prepared surface; all joints should be tightly butted. The boards should be cut with a sharp knife to fit accurately around services.

Screeding

When applying a screed finish the joints of the Jabfloor Classic boards should be taped with 75mm-wide adhesive tape to prevent ingress of screed between the boards. The recommendations of the appropriate parts of BS 8204 should always be followed.

Sand/cement screeds should be at least 65mm-thick for domestic applications and 75mm-thick for non-domestic applications. In order to minimise cracking or curling, the screed should be laid so that jointless areas do not exceed 15m² and with the ratio of length to width not exceeding 1.5:1.

If these limits cannot be observed, the use of a light-gauge galvanised metal reinforcement, placed centrally in the screed, will help to distribute shrinkage cracks evenly.

During screeding operations, the surface of the Jabfloor Classic should be protected from impact damage or excessive trafficking by the use of spreader boards. A 30mm thick perimeter edge strip of insulation should be provided for the depth of the screed to reduce cold bridging as recommended in BRE Report 262.

Chipboard

The chipboard should be Type P5 with tongued and grooved edges as described in BS 7916. A minimum thickness of 18mm is required for domestic applications and 22mm for non-domestic applications.

It is important that the recommendations given in BS 7916 are followed regarding protection of the chipboard from water spillage in bathrooms, kitchens and utility areas.

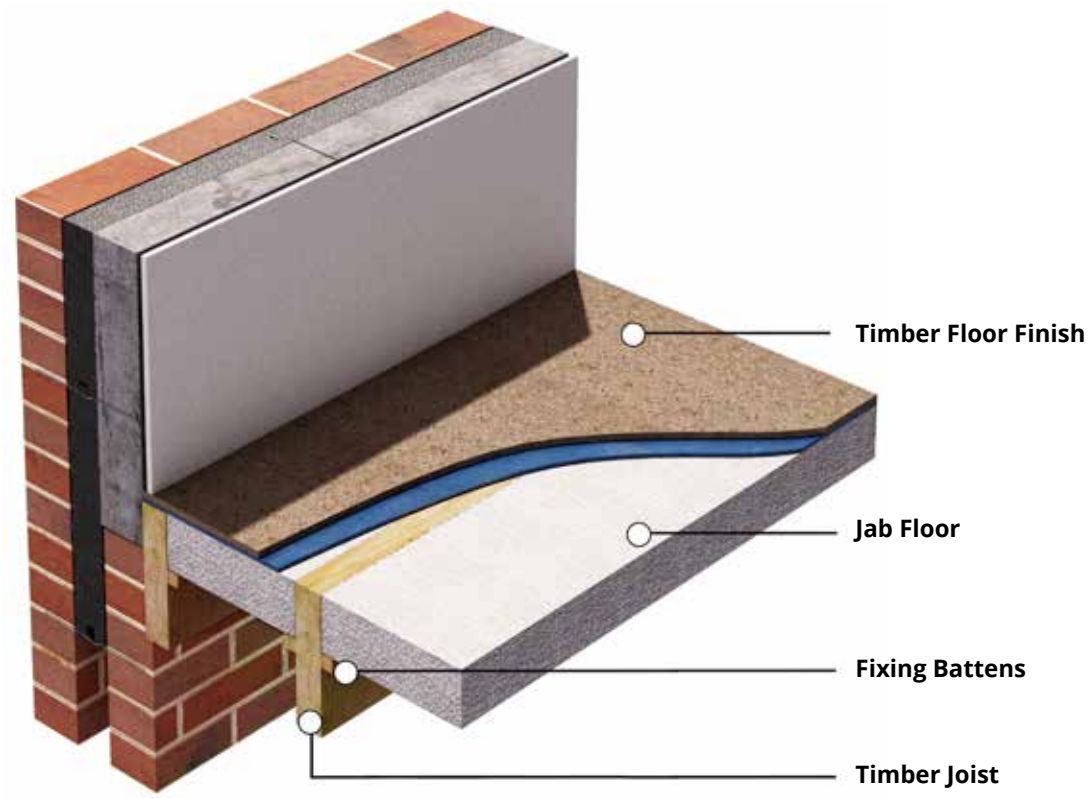
Installation of the chipboard sheets should proceed from one corner of the room ensuring that a 10–12mm gap is maintained at the perimeter to allow for expansion. Temporary wedges should be placed in the expansion gaps during laying to allow the chipboard joints to be tightened; the wedges must be removed after the adhesive has dried.

The boards should be laid with staggered joints, and all edges glued as laying proceeds using a PVA based woodworking adhesive.

The chipboard should be supported where masonry partitions or other heavy structures are to be built directly onto the chipboard finish and at external and internal doorways. This is achieved by cutting back the insulation and providing a solid timber batten along the line of the partition or door opening, beneath the chipboard. The batten should be of preservative treated timber, securely attached to the concrete floor using masonry nails or screws and plugs.

In corridors, or wherever there are long uninterrupted runs of flooring, the inclusion of a 20mm expansion gap at 10m centres is required in addition to the 10-12mm perimeter gap. The edges of the chipboard at the expansion gap must be supported by a timber batten as described above.

2.4 SUSPENDED TIMBER FLOOR



U-VALUES						
P/A Ratio	**0.25W/m²K**	**0.22W/m²K**	**0.20W/m²K**	**0.18W/m²K**	**0.15W/m²K**	**0.10W/m²K**
1.00	130	160	175	210	260	410
0.90	125	150	175	200	260	410
0.80	120	150	170	195	250	410
0.70	120	145	170	190	250	400
0.60	110	140	160	190	240	400
0.50	105	130	160	180	230	390
0.40	100	120	140	170	220	375
0.30	75	105	125	150	210	360
0.25	65	90	110	140	190	345
0.20	50	70	90	120	170	325
0.15	25	40	60	90	140	295

Key

standard thickness | two layers of standard thickness | three layers of standard thickness

Standard thicknesses: 25, 30, 40, 50, 60, 75, 100, 120, 150, 200mm

Installation

Support

To prevent movement, Jabfloor should be adequately supported along its length.

Suitable supports consisting of 25x25mm timber battens are nailed to the sides of the joists. A slight gap will prevent Jabfloor Classic and the timber boards rubbing against each other.

Jabfloor Classic

Jabfloor Classic should be cut to fit snugly between the joists and should be pushfitted into position, with the ends of adjacent boards tightly butted.

Chipboard finish

Where chipboard is used as the floor finish it should be Type P5, minimum 18mm-thick for domestic floor applications and 22mm-thick for non-domestic floor applications, with tongued and grooved edges as described in BS 7916.

3.0 JABFLOOR CLASSIC DATASHEET

Jabfloor Classic EPS is a lightweight cellular plastic material suitable for a wide range of building insulation applications. It is an excellent insulating medium which exhibits consistent thermal performance over the range of temperatures normally encountered in buildings.

The material is versatile, light in weight, clean and easy to handle, and provides a cost-effective means of including permanent insulation in floors, walls and roofs to meet, and exceed, the standards laid down in the Building Regulations.

Technical Description

Composition

Jablite insulation products are manufactured from EPS. The material comprises expandable beads of polystyrene pre-foamed and fused together in a steam-heated mould under pressure. This produces a block of material, up to 7314mm long, which is then cut to and/or shape. After cutting to size, the material may be faced or laminated with other materials to suit its application.

Alternatively, the beads may be moulded into a finished, shaped section which requires no further processing.

Material Type

The following types of material are available, as defined in BS EN 13163:

- EPS 70
- EPS 100
- EPS 150
- EPS 200
- EPS 250.

In addition, each type is available as either Euroclass F, or Euroclass E containing a flame-retardant additive. Additional types are also available for specific applications; for example, types with compressive-stress values, at 10%, of 400 and 500kPa.

Shape and size

After moulding, the 'block' material is cut to size, thickness and taper, if required, according to the intended end use; see individual product and application data.

Tolerances

In accordance with BS EN 13163 tolerances on the cut dimensions are defined as follows:

Length: ± 3mm or ± 0.6% whichever is greater (L1)

Width: ± 3mm or ± 0.6% whichever is greater (W1)

Thickness: ± 2mm (T1)

Squareness: ± 5mm per 1000mm (S1)

Alternative tolerances can be provided for specific applications.

Dimensional stability

In accordance with BS EN 13163 = DS(N)5 ± 0.5% under constant laboratory conditions.

Density

The density range is 15-35kg/m³ for EPS types shown below.

Nominal Densities

- EPS 70 15kg/m³
- EPS 100 20kg/m³
- EPS 150 25kg/m³
- EPS 200 30kg/m³
- EPS 250 35kg/m³

Standards

Where relevant, Jablite products are produced to the requirements of BS EN 13163 'Thermal insulation products for buildings – Factory made products of expanded polystyrene (EPS) – specification'.

Jablite Limited has been assessed and approved to BS EN ISO 9001:2000 'Quality systems; for quality assurance in production, installation and servicing'.

Properties & Performance

Mechanical properties

Jablite EPS has a high strength to weight ratio.

Tensile strength	Ranges from 20-400kPa, according to type and product.
Compressive strength	Ranges from 70-250kPa, according to type and product; method of test, BS EN 826.
Bending strength	Ranges from 115-350kPa, according to grade and product; method of test BS 4370:Part 1, method 4.
Design load	Ranges from 20-100kPa for 1% nominal strain, according to type and product; method of test EN 826.

Moisture Properties

Although Jablite has significant resistance to the passage of water vapour, it should not be regarded as a damp-proof membrane or vapour-control layer, and will not provide a barrier against damp penetration.

A suitable damp-proof membrane or vapour-control layer will be required in most forms of construction: see individual product and application data.

Biological Properties

EPS will not sustain mould growth, and has no nutrient value to insects or vermin. The material is non-biodegradable and care should be taken to dispose of waste and offcuts at a licensed waste site.

Thermal Properties

Thermal movement Coefficient of linear expansion, 0.6 x 10-6/ºC.

The material is sufficiently resilient and flexible that no allowance need be made for thermal expansion in the method of installation.

Jablite EPS is suitable for meeting, and in many cases exceeding, the thermal insulation requirements set out in the Building Regulations Approved Documents:

- L1A - Conservation of fuel and power in new dwellings.
- L1B - Conservation of fuel and power in existing dwellings.
- L2A - Conservation of fuel and power in new buildings other than dwellings.
- L2B - Conservation of fuel and power in existing buildings other than dwellings.

Reference can be made to individual products sections to obtain specific details on meeting thermal values with Jablite products.

Working temperature range

EPS can be used within the temperature range -150ºC to +80ºC. Jablite EPS is unaffected by the normal range of climatic temperatures and can be safely used in cold stores and similar applications.

During installation, and in service, contact with hot-water pipes or other surfaces where the temperature is likely to exceed 80ºC for continuous periods should be avoided.

A minimum 12mm air gap should be maintained between the insulation and hot-water pipes, or they should be lagged. In roofing applications, care should be taken that hot bitumen is not allowed to 'pool' under the insulation during installation since this can result in burning of the underside.

Compatibility with other materials

EPS is soluble in aromatic, halogenated solvents and ketones; it should be protected from contact with hydrocarbons and strong solvents using a suitable membrane.

The material is unaffected by contact with solvent-free bitumen providing that, where necessary, the precautions set out above regarding temperature are observed.

EPS should not be permitted to come into contact with PVC-sheathed electrical cables since this will lead to migration of plasticiser from the PVC resulting in embrittlement of the cable sheath. Cables should be protected by the use of a physical barrier, for example by being enclosed in a conduit or by an air gap.

Service Life

Providing it is correctly installed and protected, Jablite will remain effective for the life of the building.

Storage

Store Jablite boards under cover, protected from high winds and out and out of direct sunlight. Care should be taken in storage not to bring the boards into contact with highly flammable materials such as paint, solvent or petroleum products. Smoking should be prohibited in the storage area and the products must not be exposed to flame or other ignition source.

TYPICAL PROPERTIES OF JABLITE INSULATION					
	EPS 70	**EPS 100**	**EPS 150**	**EPS 200**	**EPS 250**
Mechanical Properties					
Compressive Strength @10% compression (kPa)	70	100	150	200	250
Compressive Strength @1% nominal strain (kPa)	20	45	70	90	100
Bending Strength (kPa)	115	150	200	250	350
Moisture Properties					
Water vapour diffusion resistance factor μ	20-40	30-70	30-70	40-100	40-100
Water vapour permeability δ mg/(Pa.h.m)	0.018-0.036	0.010-0.024	0.010-0.024	0.007-0.018	0.007-0.018
Vapour resistivity (MNs/gm)	145	200	238	238	238
Thermal Properties					
Thermal conductivity (W/mK, at 10°C)	0.038	0.036	0.035	0.034	0.034
Thermal resistivity (mK/W)	26.32	27.78	28.57	29.41	29.41

4.0 FIRE PERFORMANCE

In common with all organic materials, EPS is combustible. However, provided it is specified and installed correctly and in accordance with the manufacturer's instructions and BS 6203, it will not present any undue fire hazard. The standard recommends that for all applications, the material should be protected by either a laminated facing layer, or by being enclosed by the form of construction.

EPS is considered less toxic than many common building materials. It produces around 93% less carbon monoxide compared to solid woods and 98% less than chipboard (from tests carried out by APME).

Combustion

EPS is 'combustible' as defined in BS 476: Part 4.

When burning, EPS behaves like other hydrocarbons such as wood and paper. The products of combustion are hydrogen bromide, carbon monoxide, carbon dioxide, styrene, and water vapour; the decomposing styrene will give off a certain amount of dense black soot.

Neither chlorine nor cyanide is given off by EPS in a fire.

EPS is 98% air therefore combustion gases from burning EPS will always be at a low level.

Insulation for flat roofs is rated in categories E or F under BS EN 13501-1:2002 Fire classification of construction products and building. The categories are defined as follows:

Class F: Products for which no reaction to fire performances are determined or which cannot be classified in one of the Classes A1, A2, B, C, D, E.

Class E: Products capable of resisting, for a short period, a small flame attack without substantial flame spread.

The entire Jablite EPS range of insulation products for roofs contains a fire-retardant additive making it rated Class E. This is important as it reduces the fire risk caused by vandalism or accidental ignition on site, either during storage or installation.

EPS Products within the Jablite inverted roof range shrink away from the heat source when exposed to ignition energy. When ignited by the heat source, it self-extinguishes when the heat source is taken away.

Ignition temperature

Combustible gases are produced around 350ºC and flash ignition temperature is 490ºC.

Calorific value

40MJ/kg

Specific heat capacity

1.13kJ/kgºC

5.0 SUSTAINABILITY

Jablite Insulation and the Code for Sustainable Homes

The Code for Sustainable Homes (the Code) is the national standard for the sustainable design and construction of new homes. The Code aims to reduce our carbon emissions and create homes that are more sustainable. It applies in England, Wales and Northern Ireland.

Code for Sustainable Homes, Category 3: Materials

Mat 01: Environmental Impact of Materials

Jablite inverted roof insulation products are made from EPS (expanded polystyrene) which has an A+ rating in the BRE Green Guide to Specification for EPS 100 and EPS 150.

The BRE Green Guide to Specification provides you with easy-to-use guidance on how to make the best environmental choices when selecting construction materials and components.

Environmental rankings: A+ represents the best environmental performance and E the worst environmental impact.

Code for Sustainable Homes, Category 6: Pollution

Jablite Insulation has a Global Warming Potential (GWP) of less than 5 and an Ozone Depletion Potential (ODP) of zero.

The blowing agent used during manufacture is pentane which has zero ODP and a GWP of less than 5.

Jablite Insulation and BREEAM

BREEAM (Building Research Establishment Environmental Assessment Method) sets the standard for best practice in sustainable design and in the measurement of a building's environmental performance.

BREEAM enables developers, designers and building managers to demonstrate the environmental credentials of their buildings to clients, planners and other parties.

BREEAM, Material 04 Insulation

In this category, the specified aim of BREEAM is to "recognise and encourage the use of thermal insulation which has a low embodied environmental impact relative to its thermal properties and has been responsibly sourced."

It is a pre-requisite of BREEAM that any new insulation specified for use within the following building elements must be assessed:

1. External Wall
2. Ground floor
3. Roof

Embodied Impact

Jablite insulation products are made from EPS which has been given an A+ rating by the BRE for EPS 100 and EPS 150.

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.

The thermal conductivity of our products is available on both the product packaging and on relevant product technical datasheets which can be found on this website.

Responsible Sourcing

Jablite insulation products are manufactured in factories which are ISO 14001 certified and Jablite purchases raw material from suppliers who are ISO 14001 certified.

Key Process (Insulation Manufacture)

ISO 14001: Certificate Number EMS 559414

Supply Chain Processes (supply of materials for end products)

ISO 14001: Certificate Number NL 007629-1

Jablite Insulation and the Environment

Recycling

Jablite insulation products are 100% recyclable. We collect waste from building projects and recycle it.

Our manfacturing process

All Jablite insulation products are manufactured at sites with ISO 14001 certification.

Steam is the main ingredient used in the manufacture of Jablite insulation. The water consumption is low because the water is clean and can be re-used many times in the process.

No solid waste is generated during the manufacturing; any broken or faulty parts that do not pass our stringent quality control standards can be broken up and re-introduced into the process.

Jablite insulation products do not contain and are not manufactured using any substances which are controlled under Montreal or Kyoto Protocols.

Efficient use of natural resources

Jablite insulation products are 98% air and therefore extremely resource efficient. The lightweight nature of Jablite insulation means that less fuel is used when transporting from factory to building site.

Jablite insulation products are made from expanded polystyrene (EPS), a plastic that is obtained from oil. In Europe, the percentage of oil used in manufacturing EPS is 0.1%.

Styrene

The monomer styrene has been manufactured for more than 70 years and is used in a wide range of products.

Styrene exists naturally and can be found in many foodstuffs including strawberries, beans, nuts, beer, wine, coffee beans and cinnamon.

Pentane

Pentane, a non-CFC expansion agent is used to expand polystyrene granules into the cellular structure that makes the production of EPS possible.

Pentane is a slightly volatile liquid in the same chemical family as methane, ethane, propane and butane and is continually being formed in natural processes in the digestive systems of animals and the decomposition of vegetables. It is not considered a substance harmful to health by European health authorities.

Pentane does not contain chlorine and therefore does not harm the ozone layer.

No CFCs (chloroflourocarbons) or HCFCs (hydrochloro-fluorocarbons) are used in the manufacture of Jablite products.

6.0 APPENDICES

Jablite
INTELLIGENT INSULATION

6.1 JABFLOOR CLASSIC 70 DECLARATION OF PERFORMANCE

No:		03788501000
1	Unique identification code of the product-type:	Jabfloor Classic 70
2	Type, batch or serial number or any other element allowing identification of the construction product as required pursuant to Article 11(4) of the CPR:	Grade EPS 70
3	Intended use or uses of the construction product, in accordance with the harmonised technical specification, as foreseen by the manufacturer:	EPS insulation for use in floor construction
4	Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant to Article 11(5):	Jablite Ltd, Infinity House, Anderson Way, Belvedere, Kent, DA17 6BG
5	Where applicable, name and contact address of the authorised representative whose mandate covers the tasks specified in Article 12(2):	Not Applicable
6	System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:	AVCP System 3
7	In case of the declaration of performance of the construction product covered by a harmonised standard: - name and number of notified body:	British Board of Agrément; BRE (RtF)
	- performed:	Thermal Conductivity Compressive stress at 10% deformation Reaction to Fire
	- under system:	3
	- and issued:	Test report on application

Declared Performance

Essential Characteristic	Performance	Harmonised technical standard
Length and Width	L3 & W3	BS EN 13163:2012
Thickness	T2	BS EN 13163:2012
Squareness	Sb5	BS EN 13163:2012
Flatness	P30	BS EN 13163:2012
Reaction to Fire	Euroclass F and E	BS EN 13501-1:2007 +A1:2009
Durability of RtF against ageing / degradation	Fire performance of EPS does not deteriorate with time	BS EN 13163:2012
Thermal Conductivity λD	0.038W/mK	BS EN 13163:2012
Thermal Resistance	See Table 3 – Thermal Resistance	BS EN 12667:2001
Compressive Strength at 10% deformation	CS(10)70	BS EN 13163:2012
Compressive Creep	cc(2/1.5/50)0.3σ_{10}	BS EN 13163:2012
Water Vapour Transmission	20 - 40μ	BS EN 12086:2013
Dimensional Stability	DS(N)5	BS EN 1603:2013

Thermal Resistance – Table 3

Nominal Board Thickness	100 Classic (m²K/W)
25mm	0.6579
30mm	0.7895
40mm	1.0526
50mm	1.3158
60mm	1.8750
75mm	1.9737
100mm	2.6316
120mm	3.1579
150mm	3.9474
200mm	5.2632

The performance of the product identified in points 1 and 2 is in conformity with the declared performance.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4.

On behalf of the manufacturer by:

Wayne Brown, Manufacturing Director

Belvedere – 1st July 2013

6.2 JABFLOOR CLASSIC 100 DECLARATION OF PERFORMANCE

No:		03788501000
1	Unique identification code of the product-type:	Jabfloor Classic 100
2	Type, batch or serial number or any other element allowing identification of the construction product as required pursuant to Article 11(4) of the CPR:	Grade EPS 100
3	Intended use or uses of the construction product, in accordance with the harmonised technical specification, as foreseen by the manufacturer:	EPS insulation for use in floor construction
4	Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant to Article 11(5):	Jablite Ltd, Infinity House, Anderson Way, Belvedere, Kent, DA17 6BG
5	Where applicable, name and contact address of the authorised representative whose mandate covers the tasks specified in Article 12(2):	Not Applicable
6	System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:	AVCP System 3
7	In case of the declaration of performance of the construction product covered by a harmonised standard: - name and number of notified body:	British Board of Agrément; BRE (RtF)
	- performed:	Thermal Conductivity Compressive stress at 10% deformation Reaction to Fire
	- under system:	3
	- and issued:	Test report on application

Declared Performance

Essential Characteristic	Performance	Harmonised technical standard
Length and Width	L3 & W3	BS EN 13163:2012
Thickness	T2	BS EN 13163:2012
Squareness	Sb5	BS EN 13163:2012
Flatness	P30	BS EN 13163:2012
Reaction to Fire	Euroclass F and E	BS EN 13501-1:2007 +A1:2009
Durability of RtF against ageing / degradation	Fire performance of EPS does not deteriorate with time	BS EN 13163:2012
Thermal Conductivity λD	0.036W/mK	BS EN 13163:2012
Thermal Resistance	See Table 3 – Thermal Resistance	BS EN 12667:2001
Compressive Strength at 10% deformation	CS(10)100	BS EN 13163:2012
Compressive Creep	cc(2/1.5/50)0.3σ_{10}	BS EN 13163:2012
Water Vapour Transmission	30 - 70μ	BS EN 12086:2013
Dimensional Stability	DS(N)5	BS EN 1603:2013

Thermal Resistance – Table 3

Nominal Board Thickness	100 Classic (m²K/W)
25mm	0.6944
30mm	0.8333
40mm	1.1111
50mm	1.3889
60mm	1.6667
75mm	2.0833
100mm	2.7778
120mm	3.3333
150mm	4.1667
200mm	5.5556

The performance of the product identified in points 1 and 2 is in conformity with the declared performance.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4.

On behalf of the manufacturer by:

Wayne Brown, Manufacturing Director

Belvedere – 1st July 2013

6.3 JABFLOOR CLASSIC 150 DECLARATION OF PERFORMANCE

No:		03788501000
1	Unique identification code of the product-type:	Jabfloor Classic 150
2	Type, batch or serial number or any other element allowing identification of the construction product as required pursuant to Article 11(4) of the CPR:	Grade EPS 150
3	Intended use or uses of the construction product, in accordance with the harmonised technical specification, as foreseen by the manufacturer:	EPS insulation for use in floor construction
4	Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant to Article 11(5):	Jablite Ltd, Infinity House, Anderson Way, Belvedere, Kent, DA17 6BG
5	Where applicable, name and contact address of the authorised representative whose mandate covers the tasks specified in Article 12(2):	Not Applicable
6	System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:	AVCP System 3
7	In case of the declaration of performance of the construction product covered by a harmonised standard: - name and number of notified body:	British Board of Agrément; BRE (RtF)
	- performed:	Thermal Conductivity Compressive stress at 10% deformation Reaction to Fire
	- under system:	3
	- and issued:	Test report on application

Declared Performance

Essential Characteristic	Performance	Harmonised technical standard
Length and Width	L3 & W3	BS EN 13163:2012
Thickness	T2	BS EN 13163:2012
Squareness	Sb5	BS EN 13163:2012
Flatness	P30	BS EN 13163:2012
Reaction to Fire	Euroclass F and E	BS EN 13501-1:2007 +A1:2009
Durability of RtF against ageing / degradation	Fire performance of EPS does not deteriorate with time	BS EN 13163:2012
Thermal Conductivity λD	0.035W/mK	BS EN 13163:2012
Thermal Resistance	See Table 3 – Thermal Resistance	BS EN 12667:2001
Compressive Strength at 10% deformation	CS(10)150	BS EN 13163:2012
Compressive Creep	cc(2/1.5/50)0.3σ_{10}	BS EN 13163:2012
Water Vapour Transmission	30 - 70μ	BS EN 12086:2013
Dimensional Stability	DS(N)5	BS EN 1603:2013

Thermal Resistance – Table 3

Nominal Board Thickness	100 Classic (m²K/W)
25mm	0.7143
30mm	0.8571
40mm	1.1429
50mm	1.4286
60mm	1.7143
75mm	2.1429
100mm	2.8571
120mm	3.4286
150mm	4.2857
200mm	5.7143

The performance of the product identified in points 1 and 2 is in conformity with the declared performance.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4.

On behalf of the manufacturer by:

Wayne Brown, Manufacturing Director

Belvedere – 1st July 2013

6.4 CONTROL OF SUBSTANCE HAZARDOUS TO HEALTH (COSHH) DATASHEET

1 IDENTIFICATION

Product Names

Jablite board	Jabvent	Jabfloor	Jabcore	Jabroll	Jablite Profile
Jabwall	Jabdec	Jablok	Jabfill	Jabtherm	Jablite Flat Roof Tapered
Jabsqueeze	Claymaster	Fillmaster	Floatmaster	Premium Jablite FRI	

Product Type	Expanded Polystyrene (EPS), Euroclass F and E
Supplier Address	Jablite Limited, Infinity House, Anderson Way, Belvedere, Kent, DA17 6BG
Contact Number	020 8320 9100

2 COMPOSITION / INFORMATION ON INGREDIENTS

Description

Expanded polystyrene containing residual amounts of Pentane expanding agent.

Euroclass E products also contain a brominated flame retardant, Hexabromocyclododecane (HBCDD)

Dangerous Components/Constituents

Component Name	CAS Number	EINECS	Content	Hazard
Pentane	109-66-0 78-78-4	203-692-4 201-142-8	< 1% wt	F+,R12
HBCDD	25637-99-4	247-148-4	> 0.1% wt	N, R50/53

Other Information CAS number for polymer component - 900 3-53-6 (polystyrene)

3 HAZARDS IDENTIFICATION

Human Health Hazard

EPS is not known to lead to any skin irritations and is regarded as biologically inert. Residual quantities of Pentane and styrene monomer are insignificant. However during hot wire cutting of EPS if ventilation is not adequate the fumes generated can cause irritation to the respiratory tracts and eyes. Where substantial dust is produced in subsequent processing of EPS (e.g., band sawing or grinding), suitable dust extraction must be provided, to ensure that exposure does not exceed 10 mg/m³ 8 Hours TWA (Occupational Exposure Limit for total inhalable dust).

Safety Hazards

EPS is organic and therefore combustible. The following fire precautions are recommended:

1. Smoking should be prohibited in the storage and processing areas.
2. EPS should be stored away from highly flammable material such as paint or petroleum products.
3. Storage and working areas should be kept free from rubbish which may spread fire or ignite spontaneously.
4. Fire extinguishers and/or hose reels should be available at an easily recognisable fire point and at all times close at hand when welding or burning adjacent to EPS.
5. Polystyrene dust, like other hydrocarbon based polymers in this form, is classified as a Group (a) flammable dust and precautions should be taken as required by Section 31 of the Factories Act 1961.
6. If there is an outbreak of fire, the Fire Brigade should be called immediately and advised that EPS is involved. The area should be evacuated by all personnel, except those fighting the fire.

4 FIRST AID MEASURES

First Aid – Inhalation

- Only dust produced from machining EPS or small particles are likely to be inhaled.
- Clear the respiratory tracts
- If recovery does not occur obtain medical attention

First Aid – Skin

- No specific measures

First Aid – Eye

- Flush EPS particles from the eye with water
- If rapid recovery does not occur obtain medical attention

First Aid – Ingestion

No specific measures.

First Aid – Fire

- Inhalation of smoke or fumes
  - Remove from exposure into fresh air
  - Keep warm and at rest
  - If there is respiratory distress, give oxygen
  - If breathing stops or shows signs of failing, apply artificial respiration
  - Obtain immediate medical attention
- Skin Contact
  - Molten Material – Immediately flood affected area and adhering molten polymer with plenty of cold water
  - DO NOT attempt to remove molten or solidified material from the skin
  - Obtain immediate medical attention

5 FIRE FIGHTING MEASURES

Specific Hazards

- Hazardous combustion products may include carbon monoxide and carbon dioxide
- Hydrogen bromide will also be released from flame retardant (Euroclass E) grades

Extinguishing Media

- Foam, water spray or fog
- Dry chemical powder or carbon dioxide.

6 ACCIDENTAL RELEASE MEASURES

The product is in solid form and releases no harmful substances.

Personal Protection	No specific measures
Clean up Methods	Dispose of in accordance with section 13

7 HANDLING AND STORAGE

Store under cover in dry conditions taking into account recommendations in section 3 - Fire Precautions.

Stockpiles should not contain more than 60 cubic metres (about 1 tonne). If a bigger volume needs to be stored it should be divided into two or more stockpiles at least 20m apart.

EPS stockpiles should be sited so that in the event of a fire flowing or dripping molten material will not cause the spread of fire to other combustible materials or to other areas of a building, in particular staircases and corridors.

Storage should be in a level situation at ground level (not on ramps).

Raised thresholds to doorways or bunds should be provided where storage on upper floors is unavoidable (particularly to the edges of floors without upstands and around staircases).

The bund walls should be of fire-resisting and liquid-tight construction.

The capacity of the bund area should be at least 3% of the maximum volume of EPS stored.

Stockpiles should be sited in such a manner that permanently marked access ways can be maintained. Stockpiles should not impair the performance of any sprinkler system.

In warehouses or where large quantities of EPS are stored consideration should be given to the use of sprinklered premises.

On building sites EPS should be stored wherever possible in a fenced compound or building which can be secured, under cover protected from high winds and raised above damp surfaces. Protect from direct sunlight. Stack boards flat without bearers.

Storage temperature: Ambient.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

No specific protection is required when handling EPS

Occupational Exposure Standards

The following are the Maximum Exposure Limits (MEL) for the expansion agent and for the hazardous decomposition products:

Component Name	Limit type	Value	Unit	Other Info.
Expansion agent				
Pentane	TWA 8hr	1770	mg/m³	UK Solvents
Pentane	STEL 15min	2210	mg/m³	UK Solvents
Decomposition products				
Styrene Monomer	TWA 8hr	430	mg/m³	EH40
Styrene Monomer	STEL 15min	1080	mg/m³	EH40
Hydrogen Bromide (Euroclass E)	STEL 15min	10	mg/m³	EH40

TWA = Time Weighted Average - STEL = Short Term Exposure Limit

9 PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Cellular Foam
Form	Moulded shapes or sheets
Colour	White, pink (Claymaster), grey (Premium)
Density	Ranges from 10kg/m³ to 60kg/m³
Solubility in water	Not soluble
Solubility in other solvents	Soluble in aromatic, halogenated solvents and ketones
Softening Point	95-100°C
Ignition temperature in air	350°C

10 STABILITY / REACTIVITY

Stability	Stable under normal use conditions.
	Decomposes above 200°C
Conditions to avoid	Heat flames and sparks. Strong sunlight for prolonged periods.
Hazardous Decomposition Products	Styrene Monomer, Hydrogen Bromide products (Euroclass E) & Carbon Monoxide when burned

11 TOXICOLOGICAL INFORMATION

Expanded polystyrene is non-toxic and is not irritating to the skin or eyes.

12 ECOLOGICAL INFORMATION

All products are not biodegradable and non-toxic.

Euroclass E products contain a substance which is classified as dangerous for the environment. However recent studies on aquatic organisms have shown that articles such as PS foams, while containing this substance, do not need to be classified for environmental hazard.

All products have zero Ozone Depleting Potential (ODP) and virtually zero Global Warming Potential (GWP). Products may contain some residual Pentane that has a very low Global Warming Potential of <0.00044.

13 DISPOSAL CONSIDERATIONS

Waste Disposal

Recover or recycle if possible. Scrap expanded polystyrene is not classified as "Notifiable Waste" and may be disposed of in suitable land-fill tips or by incineration under approved conditions. Advice on the preferred method should be obtained at all times.

Flame retardant grades (Euroclass E) contain a halogen complex flame retardant additive encapsulated in the polystyrene which can give rise to the emission of gases such as hydrogen bromide during incineration of waste product.

14 TRANSPORT INFORMATION

UN Number	2211

15 REGULATORY INFORMATION

EC Label Name	Expanded Polystyrene
R18	In use, may form flammable/explosive vapour-air mixture
S16	Keep away from sources of ignition - No smoking
R50/53	REACH regulation (EC) No 1907/2006
	Products are an Article. Additional labelling is not necessary
	Contains Hexabromocyclododene above 0.1% (w/w) listed in the REACH Substances for Authorisation (18/2/11)

16 OTHER INFORMATION

Uses and Restrictions	Insulation of walls roofs and floors in domestic and other buildings. Cut Pieces for Packaging. Civil Engineering and Floatation, Protection of Foundations from Clay Movement.
ISSUE	Edition 06 April 2011
EH&S Distribution	This document contains important information to ensure the safe storage, handling and use of this product. The information in this document should be brought to the attention of the person in your organisation responsible for advising on safety matters.

Certificate of Registration

QUALITY MANAGEMENT SYSTEM - ISO 9001:2008

This is to certify that:

Jablite Limited
Boothferry Works
Howden
Goole
DN14 7EA
United Kingdom

Holds Certificate Number: FM 01260

and operates a Quality Management System which complies with the requirements of ISO 9001:2008 for the following scope:

The manufacture of expanded polystyrene bead, block, board and shaped moulded products, including laminated sheet for use within the construction industry with the exception of RDN grade. Products can be to British, in house or customer specifications.

For and on behalf of BSI:

Gary Fenton, Global Assurance Director

Originally registered: 01/08/1987 Latest Issue: 19/12/2013 Expiry Date: 10/01/2016

...making excellence a habit.™

003

Certificate No: FM 01260

Location	Registered Activities
Jablite Limited Boothferry Works Howden Goole DN14 7EA United Kingdom	The manufacture of expanded polystyrene bead, block, board and shaped moulded products, including laminated sheet for use within the construction industry with the exception of RDN grade. Products can be to British, in house or customer specifications.
Jablite Limited Belvedere Works Anderson Way Belvedere DA17 6BG United Kingdom	The manufacture of expanded polystyrene block, board and shaped moulded products, including laminated sheet for use within the construction industry with the exception of RDN grade. The products can be to British, in-house or customer specifications.

Originally registered: 01/08/1987 Latest Issue: 19/12/2013 Expiry Date: 10/01/2016

Certificate of Registration

ENVIRONMENTAL MANAGEMENT SYSTEM - ISO 14001:2004

This is to certify that:

Jablite Limited
Boothferry Works
Howden
Goole
DN14 7EA
United Kingdom

Holds Certificate Number: EMS 559414

and operates an Environmental Management System which complies with the requirements of ISO 14001:2004 for the following scope:

Manufacture and supply of expanded polystyrene products.

For and on behalf of BSI:

Gary Fenton, Global Assurance Director

Originally registered: 02/08/2010 Latest Issue: 09/07/2013 Expiry Date: 02/08/2016

...making excellence a habit.™

Certificate No: EMS 559414

Location	Registered Activities
Jablite Limited Boothferry Works Howden Goole DN14 7EA United Kingdom	Manufacture and supply of expanded polystyrene products.
Jablite Limited Belvedere Works Anderson Way Belvedere DA17 6BG United Kingdom	Manufacture and supply of expanded polystyrene products.

Originally registered: 02/08/2010 Latest Issue: 09/07/2013 Expiry Date: 02/08/2016

Vencel Resil Limited
Infinity House
Anderson Way
Belvedere
Kent DA17 6BG
Tel: 020 8320 9100 Fax: 020 8320 9110
e-mail: technical@vencel.co.uk
website: www.vencel.co.uk

BBA APPROVAL INSPECTION TESTING CERTIFICATION
TECHNICAL APPROVALS FOR CONSTRUCTION

Agrément Certificate
87/1796
Product Sheet 1

VENCEL RESIL JABFLOOR BOARDS

JABFLOOR 70

PRODUCT SCOPE AND SUMMARY OF CERTIFICATE

This Certificate relates to Jabfloor 70, an expanded polystyrene beadboard for use as thermal insulation in domestic concrete floors.

AGRÉMENT CERTIFICATION INCLUDES:

- factors relating to compliance with Building Regulations where applicable
- factors relating to additional non-regulatory information where applicable
- independently verified technical specification
- assessment criteria and technical investigations
- design considerations
- installation guidance
- regular surveillance of production
- formal three-yearly review.

KEY FACTORS ASSESSED

Thermal performance — the product can contribute to enabling a building to achieve the requirement of notional target carbon emission rates. The thermal conductivity ($\lambda_{90/90}$ *value*) of the product is declared by the Certificate holder (see section 5).

Condensation — the product can adequately limit the risk of surface condensation on floors (see section 6).

Behaviour in relation to fire — the product will be contained within the floor by the overlay until the overlay itself is destroyed (see section 7).

Floor loading — the product, covered with a timber-based board or screed overlay, can support design loadings for self-contained dwelling units as defined in BS 6399-1 : 1996 without undue compression deflection (see section 8).

Durability — the product, when installed with the overlays specified, will remain effective as an insulating material for the life of the building in which it is incorporated (see section 11).

The BBA has awarded this Agrément Certificate to the company named above for the product described herein. This product has been assessed by the BBA as being fit for its intended use provided it is installed, used and maintained as set out in this Certificate.

On behalf of the British Board of Agrément

Date of First issue: 12 August 2009

Originally certificated on 12 January 1987

Chris Hunt
Head of Approvals — Physics

Greg Cooper
Chief Executive

The BBA is a UKAS accredited certification body — Number 113. The schedule of the current scope of accreditation for product certification is available in pdf format via the UKAS link on the BBA website at www.bbacerts.co.uk

British Board of Agrément
Bucknalls Lane
Garston, Watford
Herts WD25 9BA
tel: 01923 665300
fax: 01923 665301
e-mail: mail@bba.star.co.uk
website: www.bbacerts.co.uk

Vencel Resil Limited
Infinity House
Anderson Way
Belvedere
Kent DA17 6BG
Tel: 020 8320 9100 Fax: 020 8320 9110
e-mail: technical@vencel.co.uk
website: www.vencel.co.uk

BBA APPROVAL INSPECTION TESTING CERTIFICATION
TECHNICAL APPROVALS FOR CONSTRUCTION

Agrément Certificate
87/1796
Product Sheet 2

VENCEL RESIL JABFLOOR BOARDS

JABFLOOR 100 AND 150

PRODUCT SCOPE AND SUMMARY OF CERTIFICATE

This Certificate relates to Jabfloor 100 and 150, expanded polystyrene beadboards for use as thermal insulation in non-domestic concrete floors.

AGRÉMENT CERTIFICATION INCLUDES:

- factors relating to compliance with Building Regulations where applicable
- factors relating to additional non-regulatory information where applicable
- independently verified technical specification
- assessment criteria and technical investigations
- design considerations
- installation guidance
- regular surveillance of production
- formal three-yearly review.

KEY FACTORS ASSESSED

Thermal performance — the products can contribute to enabling a building to achieve the requirement of notional target carbon emission rates. The thermal conductivity ($\lambda_{90/90}$ *value*) of the products are declared by the Certificate holder (see section 5).

Condensation — the products can adequately limit the risk of surface condensation on floors (see section 6).

Behaviour in relation to fire — the products will be contained within the floor by the overlay until the overlay itself is destroyed (see section 7).

Floor loading — the products, covered with a timber-based board or screed overlay, can support design loadings for self-contained dwelling units as defined in BS 6399-1 : 1996 without undue compression deflection (see section 8).

Durability — the products, when installed with the overlays specified, will remain effective as an insulating material for the life of the building in which it is incorporated (see section 11).

The BBA has awarded this Agrément Certificate to the company named above for the products described herein. These products have been assessed by the BBA as being fit for their intended use provided they are installed, used and maintained as set out in this Certificate.

On behalf of the British Board of Agrément

Date of First issue: 12 August 2009

Originally certificated on 9 June 2000

Chris Hunt
Head of Approvals — Physics

Greg Cooper
Chief Executive

The BBA is a UKAS accredited certification body — Number 113. The schedule of the current scope of accreditation for product certification is available in pdf format via the UKAS link on the BBA website at www.bbacerts.co.uk

British Board of Agrément
Bucknalls Lane
Garston, Watford
Herts WD25 9BA
tel: 01923 665300
fax: 01923 665301
e-mail: mail@bba.star.co.uk
website: www.bbacerts.co.uk

For more information about Jablite:

0870 600 3666

@jablite

sales@jablite.co.uk

www.jablite.co.uk

Jablite

INTELLIGENT INSULATION