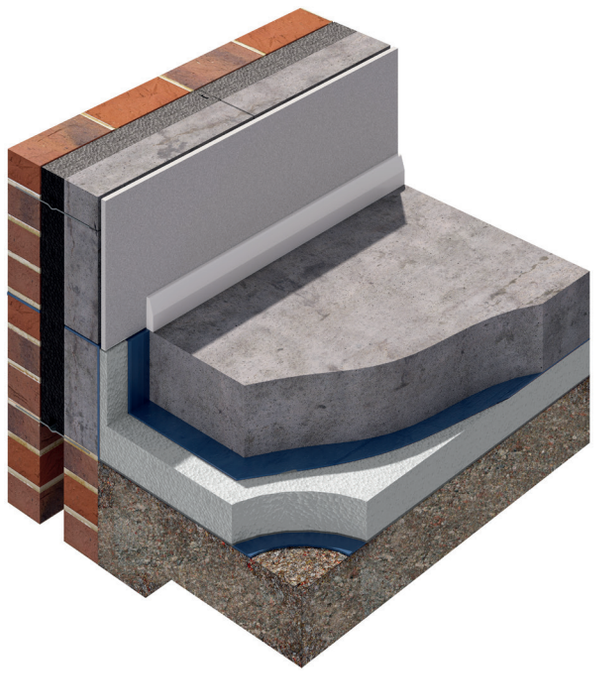
# BEWI Jabfloor (including HP and HP+)

## Technical Datasheet

Jabfloor insulation is for use in ground bearing and suspended floor constructions for both new and existing domestic and commercial buildings. The application and thermal performance targets will determine the grade and type of Jabfloor required for your project.

Typical floor constructions incorporating Jabfloor include below-ground supported slabs and rafts, installations beneath screed or timber board finishes, and use with suspended concrete planks, suspended beam-and-block systems, and suspended timber floors. Additionally, Jabfloor can be applied for perimeter-only insulation and in basement settings, providing versatile insulation solutions for various structural requirements.



**Key Benefits**

- Available in a range of grades and thermal conductivities
- BBA Certified*
- Compliant with Building Regulations
- Easy to handle and install
- Flood resilient
- BRE Green Guide Rating A+
- Available with flame retardant additive
- Fully recyclable

*Certain grades and applications

### Dimensions

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

### TABLE 1 Product Grades & Types

| Jabfloor Product Type | 70* | 100* | 150* | 200 | 250 | 70 HP* | 100 HP* | 150 HP | 70 HP+* | 100 HP+* | 150 HP+ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Compressive strength** | | | | | | | | | | | |
| @ 10% strain (kPa) | 70 | 100 | 150 | 200 | 250 | 70 | 100 | 150 | 70 | 100 | 150 |
| @ 1% strain (kPa) | 20 | 45 | 70 | 90 | 100 | 20 | 45 | 70 | 20 | 45 | 70 |
| **Thermal conductivity** | | | | | | | | | | | |
| (W/mK, at 10°C) | 0.038 | 0.036 | 0.035 | 0.034 | 0.034 | 0.032 | 0.032 | 0.032 | 0.030 | 0.030 | 0.030 |

*BBA Certified Product

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## Technical Datasheet

### Approvals – BBA Certificate 21/5858

| | |
|---|---|
| Jabfloor 70 | Product Sheet 1 |
| Jabfloor 100 & 150 | Product Sheet 2 |
| Jabfloor HP & HP+ 70 & 100 | Product Sheet 3 |

### Reaction to Fire

Jabfloor is supplied as Reaction to Fire Class F to BS EN 13501-1 as standard. Class E material, containing a flame-retardant additive, is available to order.

### Jabfloor Grade Selection

The grade of Jabfloor should be selected in line with the building type and specified floor loadings. Compressive strengths of the various standard grades available are provided in Table 1 and cover domestic and most non-domestic loading requirements. If, however, higher compressive strengths are required BEWI FillMaster will provide the solution.

### Long Term Loads

Compressive creep – (long term load compressive behaviour)

When subjected to a permanent compressive stress of 30% of the 10% compressive strength, creep deformation will be 2% or less after 50 years.

### U-values

The rate of heat loss through a ground floor varies with its construction, size and shape. Additionally, the depth below ground will impact a basement calculation. The thickness of insulation required to meet a given U-value will similarly depend on the size and shape of the floor. Approved Document L, Conservation of fuel & power, guide you to BR 443 (conventions for U-value calculations) as the method for determining floor U-values based on the floor perimeter and 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 areas need not be included. Additionally, a basement floor calculation will include the average depth of the floor below ground level. For buildings such as terraces or blocks of flats and apartments, the measurement should be taken over the total gross ground or basement floor area.

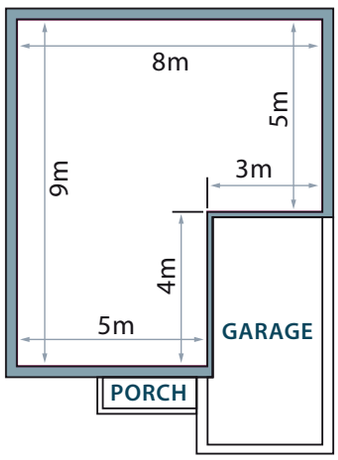
The following tables indicate the required Jabfloor thickness to meet a range common construction types and target U-values.

### Example Detached House

Perimeter (P)
= 8 + 5 + 3 + 4 + 5 + 9 = **34**

Area (A)
= (5 × 4) + (8 × 5) = **60**

P/A Ratio
= 34 ÷ 60 = **0.57**

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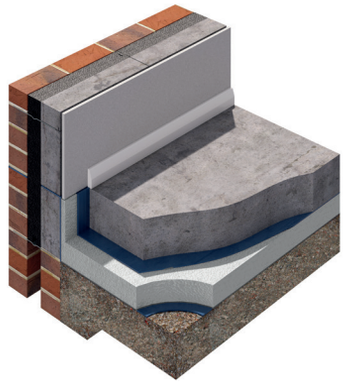
# BEWI Jabfloor (including HP and HP+)

**Technical Datasheet**



## U-Values

### Floor insulation – below ground supported slab

Table 2.1 **U-value 0.20 W/m²K**

| P/A Ratio | Jabfloor 70 | Jabfloor 100 | Jabfloor 150 | Jabfloor 200 & 250 | Jabfloor HP 70, 100 & 150 | Jabfloor HP+ 70, 100 & 150 |
|---|---|---|---|---|---|---|
| 0.7 | 140 | 130 | 125 | 120 | 115 | 105 |
| 0.6 | 130 | 125 | 120 | 120 | 110 | 105 |
| 0.5 | 120 | 115 | 115 | 110 | 105 | 100 |
| 0.4 | 110 | 105 | 100 | 100 | 100 | 90 |
| 0.3 | 100 | 90 | 90 | 85 | 80 | 75 |
| 0.2 | 65 | 60 | 60 | 60 | 55 | 50 |

Table 2.2 **U-value 0.18 W/m²K**

| P/A Ratio | Jabfloor 70 | Jabfloor 100 | Jabfloor 150 | Jabfloor 200 & 250 | Jabfloor HP 70, 100 & 150 | Jabfloor HP+ 70, 100 & 150 |
|---|---|---|---|---|---|---|
| 0.7 | 160 | 150 | 145 | 140 | 130 | 125 |
| 0.6 | 150 | 150 | 140 | 135 | 125 | 120 |
| 0.5 | 150 | 140 | 130 | 130 | 120 | 115 |
| 0.4 | 130 | 125 | 120 | 120 | 110 | 105 |
| 0.3 | 115 | 110 | 105 | 105 | 100 | 90 |
| 0.2 | 85 | 80 | 80 | 75 | 75 | 65 |

Table 2.3 **U-value 0.15 W/m²K**

| P/A Ratio | Jabfloor 70 | Jabfloor 100 | Jabfloor 150 | Jabfloor 200 & 250 | Jabfloor HP 70, 100 & 150 | Jabfloor HP+ 70, 100 & 150 |
|---|---|---|---|---|---|---|
| 0.7 | 200 | 190 | 180 | 175 | 165 | 160 |
| 0.6 | 190 | 180 | 175 | 170 | 160 | 150 |
| 0.5 | 190 | 175 | 170 | 170 | 155 | 150 |
| 0.4 | 170 | 170 | 160 | 160 | 145 | 140 |
| 0.3 | 160 | 145 | 140 | 140 | 130 | 120 |
| 0.2 | 120 | 115 | 115 | 110 | 105 | 100 |

Table 2.4 **U-value 0.10 W/m²K**

| P/A Ratio | Jabfloor 70 | Jabfloor 100 | Jabfloor 150 | Jabfloor 200 & 250 | Jabfloor HP 70, 100 & 150 | Jabfloor HP+ 70, 100 & 150 |
|---|---|---|---|---|---|---|
| 0.7 | 320 | 300 | 300 | 300 | 265 | 250 |
| 0.6 | 320 | 300 | 300 | 275 | 260 | 240 |
| 0.5 | 300 | 300 | 275 | 270 | 255 | 240 |
| 0.4 | 300 | 275 | 275 | 260 | 240 | 230 |
| 0.3 | 275 | 260 | 250 | 240 | 225 | 220 |
| 0.2 | 230 | 220 | 210 | 210 | 195 | 180 |

Standard thicknesses: 25, 30, 40, 50, 60, 75, 100, 120, 150 & 200mm
The above U-values are based on a 100mm standard dense concrete floor slab.

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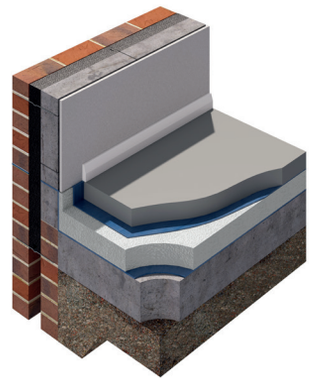
# BEWI Jabfloor (including HP and HP+)

**Technical Datasheet**



## U-Values

### Floor insulation – below screed

Table 3.1 **U-value 0.20 W/m²K**

| P/A Ratio | Jabfloor 70 | Jabfloor 100 | Jabfloor 150 | Jabfloor 200 & 250 | Jabfloor HP 70, 100 & 150 | Jabfloor HP+ 70, 100 & 150 |
|---|---|---|---|---|---|---|
| 0.7 | 135 | 130 | 125 | 120 | 115 | 105 |
| 0.6 | 130 | 125 | 120 | 115 | 110 | 100 |
| 0.5 | 120 | 115 | 115 | 110 | 105 | 100 |
| 0.4 | 110 | 105 | 105 | 100 | 95 | 85 |
| 0.3 | 100 | 95 | 90 | 85 | 80 | 75 |
| 0.2 | 65 | 60 | 60 | 60 | 55 | 50 |

Table 3.2 **U-value 0.18 W/m²K**

| P/A Ratio | Jabfloor 70 | Jabfloor 100 | Jabfloor 150 | Jabfloor 200 & 250 | Jabfloor HP 70, 100 & 150 | Jabfloor HP+ 70, 100 & 150 |
|---|---|---|---|---|---|---|
| 0.7 | 160 | 145 | 140 | 140 | 130 | 120 |
| 0.6 | 150 | 140 | 135 | 135 | 125 | 120 |
| 0.5 | 140 | 135 | 130 | 125 | 120 | 110 |
| 0.4 | 130 | 125 | 120 | 115 | 110 | 105 |
| 0.3 | 115 | 110 | 105 | 105 | 100 | 90 |
| 0.2 | 85 | 80 | 80 | 75 | 70 | 65 |

Table 3.3 **U-value 0.15 W/m²K**

| P/A Ratio | Jabfloor 70 | Jabfloor 100 | Jabfloor 150 | Jabfloor 200 & 250 | Jabfloor HP 70, 100 & 150 | Jabfloor HP+ 70, 100 & 150 |
|---|---|---|---|---|---|---|
| 0.7 | 195 | 185 | 180 | 175 | 165 | 160 |
| 0.6 | 190 | 180 | 175 | 175 | 160 | 150 |
| 0.5 | 180 | 170 | 170 | 160 | 155 | 145 |
| 0.4 | 170 | 160 | 160 | 150 | 145 | 135 |
| 0.3 | 150 | 145 | 130 | 135 | 130 | 120 |
| 0.2 | 120 | 115 | 115 | 110 | 105 | 100 |

Table 3.4 **U-value 0.10 W/m²K**

| P/A Ratio | Jabfloor 70 | Jabfloor 100 | Jabfloor 150 | Jabfloor 200 & 250 | Jabfloor HP 70, 100 & 150 | Jabfloor HP+ 70, 100 & 150 |
|---|---|---|---|---|---|---|
| 0.7 | 320 | 300 | 300 | 280 | 260 | 250 |
| 0.6 | 320 | 300 | 300 | 275 | 260 | 240 |
| 0.5 | 300 | 300 | 280 | 275 | 250 | 240 |
| 0.4 | 300 | 270 | 270 | 260 | 240 | 230 |
| 0.3 | 270 | 260 | 250 | 240 | 225 | 210 |
| 0.2 | 230 | 220 | 210 | 210 | 195 | 180 |

Standard thicknesses: 25, 30, 40, 50, 60, 75, 100, 120, 150 & 200mm
The above U-values are based on a 100mm standard dense concrete floor slab and 65mm screed

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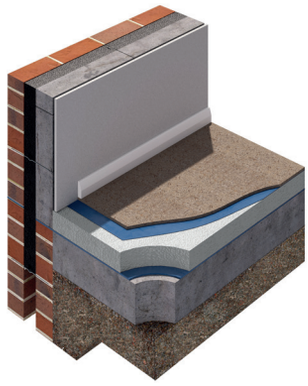
# BEWI Jabfloor (including HP and HP+)

**Technical Datasheet**



## U-Values

### Floor insulation – below chipboard

Table 4.1 **U-value 0.20 W/m²K**

| P/A Ratio | Jabfloor 70 | Jabfloor 100 | Jabfloor 150 | Jabfloor 200 & 250 | Jabfloor HP 70, 100 & 150 | Jabfloor HP+ 70, 100 & 150 |
|---|---|---|---|---|---|---|
| 0.7 | 135 | 125 | 120 | 120 | 110 | 105 |
| 0.6 | 130 | 120 | 115 | 115 | 105 | 100 |
| 0.5 | 120 | 115 | 110 | 110 | 100 | 100 |
| 0.4 | 110 | 105 | 100 | 100 | 90 | 85 |
| 0.3 | 95 | 90 | 90 | 85 | 80 | 75 |
| 0.2 | 65 | 60 | 60 | 60 | 55 | 50 |

Table 4.2 **U-value 0.18 W/m²K**

| P/A Ratio | Jabfloor 70 | Jabfloor 100 | Jabfloor 150 | Jabfloor 200 & 250 | Jabfloor HP 70, 100 & 150 | Jabfloor HP+ 70, 100 & 150 |
|---|---|---|---|---|---|---|
| 0.7 | 160 | 145 | 140 | 140 | 130 | 120 |
| 0.6 | 150 | 140 | 135 | 135 | 125 | 120 |
| 0.5 | 140 | 135 | 130 | 125 | 120 | 110 |
| 0.4 | 130 | 125 | 120 | 115 | 110 | 105 |
| 0.3 | 115 | 110 | 105 | 100 | 95 | 90 |
| 0.2 | 85 | 80 | 75 | 75 | 70 | 65 |

Table 4.3 **U-value 0.15 W/m²K**

| P/A Ratio | Jabfloor 70 | Jabfloor 100 | Jabfloor 150 | Jabfloor 200 & 250 | Jabfloor HP 70, 100 & 150 | Jabfloor HP+ 70, 100 & 150 |
|---|---|---|---|---|---|---|
| 0.7 | 195 | 190 | 180 | 175 | 160 | 150 |
| 0.6 | 190 | 180 | 175 | 170 | 160 | 150 |
| 0.5 | 180 | 170 | 170 | 160 | 150 | 145 |
| 0.4 | 170 | 160 | 160 | 150 | 140 | 135 |
| 0.3 | 150 | 140 | 140 | 135 | 125 | 120 |
| 0.2 | 120 | 115 | 110 | 110 | 100 | 100 |

Table 4.4 **U-value 0.10 W/m²K**

| P/A Ratio | Jabfloor 70 | Jabfloor 100 | Jabfloor 150 | Jabfloor 200 & 250 | Jabfloor HP 70, 100 & 150 | Jabfloor HP+ 70, 100 & 150 |
|---|---|---|---|---|---|---|
| 0.7 | 320 | 300 | 300 | 300 | 260 | 250 |
| 0.6 | 320 | 300 | 300 | 275 | 255 | 240 |
| 0.5 | 300 | 300 | 275 | 270 | 250 | 240 |
| 0.4 | 300 | 275 | 270 | 270 | 240 | 230 |
| 0.3 | 270 | 260 | 250 | 240 | 225 | 210 |
| 0.2 | 230 | 220 | 210 | 210 | 195 | 180 |

Standard thicknesses: 25, 30, 40, 50, 60, 75, 100, 120, 150 & 200mm
The above U-values are based on a 100mm standard dense concrete floor slab and 18mm T&G chipboard.

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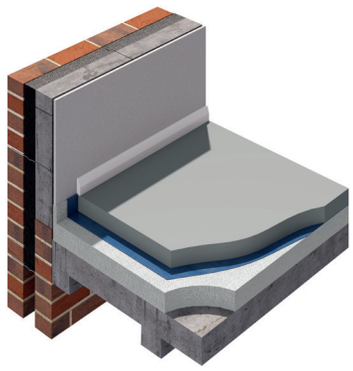

## U-Values

### Floor insulation – beam & block, below screed

Table 5.1 **U-value 0.20 W/m²K**

| P/A Ratio | Jabfloor 70 | Jabfloor 100 | Jabfloor 150 | Jabfloor 200 & 250 | Jabfloor HP 70, 100 & 150 | Jabfloor HP+ 70, 100 & 150 |
|---|---|---|---|---|---|---|
| 0.7 | 115 | 110 | 105 | 105 | 100 | 90 |
| 0.6 | 110 | 105 | 100 | 100 | 95 | 90 |
| 0.5 | 105 | 100 | 100 | 95 | 90 | 85 |
| 0.4 | 100 | 95 | 90 | 90 | 85 | 80 |
| 0.3 | 85 | 80 | 80 | 75 | 75 | 70 |
| 0.2 | 65 | 60 | 60 | 55 | 70 | 50 |

Table 5.2 **U-value 0.18 W/m²K**

| P/A Ratio | Jabfloor 70 | Jabfloor 100 | Jabfloor 150 | Jabfloor 200 & 250 | Jabfloor HP 70, 100 & 150 | Jabfloor HP+ 70, 100 & 150 |
|---|---|---|---|---|---|---|
| 0.7 | 135 | 130 | 125 | 120 | 115 | 105 |
| 0.6 | 130 | 125 | 120 | 120 | 110 | 105 |
| 0.5 | 125 | 120 | 115 | 115 | 105 | 100 |
| 0.4 | 120 | 110 | 110 | 105 | 100 | 95 |
| 0.3 | 105 | 100 | 100 | 95 | 90 | 85 |
| 0.2 | 85 | 80 | 80 | 75 | 70 | 65 |

Table 5.3 **U-value 0.15 W/m²K**

| P/A Ratio | Jabfloor 70 | Jabfloor 100 | Jabfloor 150 | Jabfloor 200 & 250 | Jabfloor HP 70, 100 & 150 | Jabfloor HP+ 70, 100 & 150 |
|---|---|---|---|---|---|---|
| 0.7 | 175 | 165 | 160 | 160 | 150 | 140 |
| 0.6 | 170 | 165 | 160 | 155 | 145 | 135 |
| 0.5 | 165 | 160 | 155 | 150 | 140 | 130 |
| 0.4 | 160 | 150 | 145 | 140 | 135 | 125 |
| 0.3 | 145 | 140 | 135 | 130 | 125 | 115 |
| 0.2 | 120 | 115 | 115 | 110 | 105 | 95 |

Table 5.4 **U-value 0.10 W/m²K**

| P/A Ratio | Jabfloor 70 | Jabfloor 100 | Jabfloor 150 | Jabfloor 200 & 250 | Jabfloor HP 70, 100 & 150 | Jabfloor HP+ 70, 100 & 150 |
|---|---|---|---|---|---|---|
| 0.7 | 300 | 275 | 270 | 260 | 250 | 230 |
| 0.6 | 300 | 270 | 265 | 260 | 240 | 225 |
| 0.5 | 300 | 270 | 260 | 250 | 240 | 225 |
| 0.4 | 275 | 260 | 260 | 250 | 230 | 220 |
| 0.3 | 265 | 250 | 240 | 240 | 220 | 210 |
| 0.2 | 240 | 225 | 220 | 215 | 200 | 190 |

Standard thicknesses: 25, 30, 40, 50, 60, 75, 100, 120, 150 & 200mm
The above U-values are based on a aircrete block with a thermal conductivity of 0.11W/mK and 65mm screed.
Hollow core plank systems vary in thermal resistance, please contact BEWI technical services department for U-value calculations for this type of floor.

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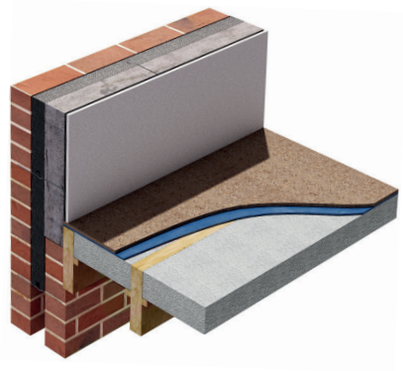

## U-Values

### Floor insulation – suspended timber floor

Table 6.1 **U-value 0.20 W/m²K**

| P/A Ratio | Jabfloor 70 | Jabfloor HP 70 | Jabfloor HP+ 70 |
|---|---|---|---|
| 0.7 | 170 | 150 | 140 |
| 0.6 | 165 | 145 | 140 |
| 0.5 | 160 | 140 | 135 |
| 0.4 | 145 | 130 | 125 |
| 0.3 | 130 | 120 | 110 |
| 0.2 | 105 | 90 | 85 |

Table 6.2 **U-value 0.18 W/m²K**

| P/A Ratio | Jabfloor 70 | Jabfloor HP 70, 100 & 150 | Jabfloor HP+ 70, 100 & 150 |
|---|---|---|---|
| 0.7 | 195 | 170 | 165 |
| 0.6 | 190 | 165 | 160 |
| 0.5 | 185 | 160 | 155 |
| 0.4 | 175 | 155 | 145 |
| 0.3 | 160 | 140 | 135 |
| 0.2 | 130 | 115 | 110 |

Table 6.3 **U-value 0.15 W/m²K**

| P/A Ratio | Jabfloor 70 | Jabfloor HP 70, 100 & 150 | Jabfloor HP+ 70, 100 & 150 |
|---|---|---|---|
| 0.7 | 250 | 220 | 205 |
| 0.6 | 240 | 210 | 200 |
| 0.5 | 230 | 205 | 195 |
| 0.4 | 225 | 200 | 190 |
| 0.3 | 210 | 185 | 175 |
| 0.2 | 180 | 160 | 150 |

Standard thicknesses: 25, 30, 40, 50, 60, 75, 100, 120, 150 & 200mm
The above U-values are based on 18mm T&G Chipboard over 38mm wide timber joists at 400mm centres.

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# BEWI Jabfloor (including HP and HP+)
## Technical Datasheet

### Accreditation

| | |
|---|---|
| **BBA** | Jabfloor insulation has been assessed and approved by the British Board of Agrément as BEWI Floor Insulation for use in ground-bearing and suspended concrete ground-floors. Certificate number 21/5858 Product Sheets 1, 2 & 3.<br>These certificates cover grades 70, 100, 150, 70 HP, 100 HP, 70 HP+ and 100 HP+ |
| **NHBC Accepted** | NHBC accepts the use of BEWI Floor Insulation, provided it is installed, used and maintained in accordance with the BBA Certificate, in relation to NHBC Standards, Chapters 5.1 Substructure and ground bearing floors and 5.2 Suspended ground floors. |
| **CE marking** | BEWI have taken the responsibility of CE marking the product in accordance with harmonised European Standard BS EN 13163. Declaration of Performance is available on request. |
| **Quality** | All BEWI products are manufactured in production facilities which are certified to ISO 9001. |
| **Environmental Responsibility** | All BEWI manufacturing facilities are ISO 14001 certified. |
| **Compliance** | Jabfloor conforms to the required properties as defined in BS EN 13163 – Thermal insulation products for buildings – Factory made expanded polystyrene (EPS) products – Specification. |
| **Fire** | Jabfloor is supplied as non-flame-retardant material as standard.<br>Euroclass E, flame retardant material is available to order. |

Disclaimer: Every effort has been made to ensure the correctness of the information provided in this data sheet and is based on data and knowledge accurate at the time of production. It is designed for experienced professionals in the building and construction industry and does not offer a complete overview of industry practices. Therefore, this cannot guarantee the performance results, as usage and installation conditions are outside our control.
If you have any questions regarding the suitability of the application, please contact us.

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