

insulation
that exceeds
expectation

sb

expanded
polystyrene

Product Handbook Floor Insulation



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EPS 70 Flooring

S and B EPS flooring boards are designed for the insulation of ground floors in a variety of applications. The product is a CFC and HCFC free, lightweight, closed cell material which is easy to install. It has a high insulation value and allows for rapid dry construction methods to be used in new and renovated dwellings and is available in either square edge or tongue and grooved profile.

Features

S and B EPS flooring offers excellent thermal performance providing savings in energy costs and higher comfort levels in dwellings.

Maintains its thermal efficiency throughout the life of a building.

Highly cost effective floors.

Rapid construction: no specialised equipment or trades required.

Saves up to a week in building time when used in an all-dry system with flooring grade chipboard.

Can be used under screeds, in heated floor slabs, below suspended slabs or between joists.

Available in a variety of thicknesses.

Non-toxic, non-irritant, moisture resistant, easy to cut and fix.

Grade

S and B EPS 70 as standard for use under screeds to insulate all ground floors.



Quality standards



Dimensions

Standard board sizes 2400 x 1200 thickness 25, 40, 50, 60, 75, 80, 90 and 100mm with non-standard sizes supplied to order.

Tongue and grooved boards 1200 x 600 thickness 40, 50, 60, 75, 80, 90 and 100mm with non-standard sizes supplied to order.

Durability

S and B EPS Flooring is moisture resistant and rot proof and is unaffected by bacteria, fungi or molds. It is non-toxic and odorless and provides no nutrients for insects or vermin.

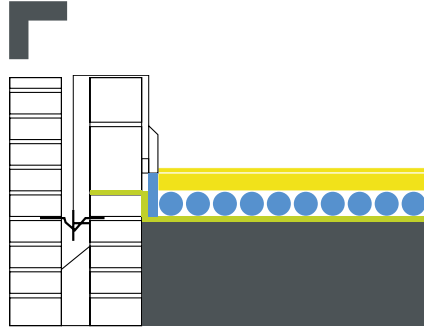
Compatibility

S and B EPS flooring is compatible with timber, cement, concrete, brick masonry and mortars. It is compatible with bitumen based membranes but should not be used with membranes based on coal tar pitches.

Plasticised PVC electrical cables can react with EPS when in direct contact. This reaction does not affect the performance of the EPS or the insulation properties of the cables. However it is recommended that PVC cables be run in conduit wherever possible.

S and B EPS flooring is manufactured from expanded polystyrene conforming to BSEN 13163.

S and B EPS Flooring has been assessed by the BBA, certificate number 02/3943 and copies of our accreditation can be downloaded from our website www.sandbeps.com or from S and B EPS Limited.



EPS flooring overslab with screed finish

- EPS grade 70
- Perimeter insulation
- Damp proof membrane
- Sub-base
- 65mm screed and float finish



The waste EPS produced during manufacture is reground and recycled back into the manufacturing process. Any additional waste can be easily recycled or used in a variety of products.

EPS 100 Flooring

S and B EPS 100 flooring grade is recommended when high floor loadings are likely to be encountered in commercial applications and is suitable for use with either a solid or suspended ground floor and will meet the current building regulation U value requirements.

The product is CFC and HCFC free lightweight closed cell material which is easy to install. It has a high insulation value and allows for rapid dry construction methods to be used in new or renovated dwellings and is available in either square edge or tongue and grooved profile.

Features

S and B EPS flooring offers excellent thermal performance providing savings in energy costs and higher comfort levels in buildings.

Maintains its thermal efficiency throughout the life of a building.

Highly cost effective floors.

Rapid construction: no specialised equipment or trades required.

Saves up to a week in building time when used in an all-dry system with flooring grade chipboard.

Can be used under screeds, chipboard, in heated slabs and below suspended slabs.

Available in a variety of thicknesses.

Non-toxic, non-irritant, moisture resistant, easy to cut and fix.



Grade

S and B EPS 100 as standard for use under chipboard and under screeds to insulate all commercial ground floors.

Dimensions

Standard board sizes 2400 x 1200 thickness 25, 40, 50, 60, 75, 80, 90 and 100mm with non-standard sizes supplied to order.

Tongue and grooved boards 1200 x 600 thickness 40, 50, 60, 75, 80, 90 and 100mm with non-standard sizes supplied to order.

Durability

S and B EPS flooring is moisture resistant and rot proof and is unaffected by bacteria, fungi or molds. It is non toxic and odorless and provides no nutrients for insects or vermin.

Quality Standards



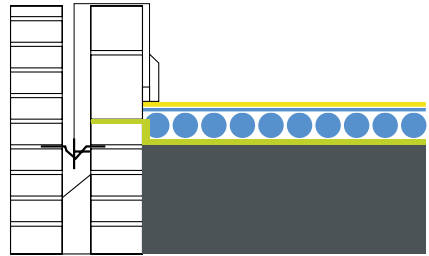
Compatibility

S and B EPS flooring is compatible with timber, cement, concrete, brick masonry and mortars. It is compatible with bitumen based membranes but should not be used with membranes based on coal tar pitches.

Plasticised PVC electrical cables can react with EPS when in direct contact. This reaction does not affect the performance of the EPS or the insulation properties of the cables. However it is recommended that PVC cables be run in conduit wherever possible.

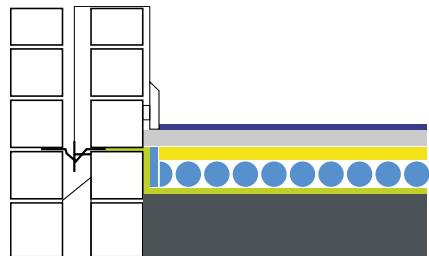
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EPS flooring overslab with chipboard finish

- 18mm flooring grade chipboard
- Vapour control layer
- EPS grade 100
- Damp proof membrane
- Sub-base



EPS flooring below concrete oversite

- Screed and finish
- Concrete overslab
- Slab
- EPS grade 100
- Perimeter insulation
- Damp proof membrane
- Blinded hardcore



EPS 150/200 Flooring

S and B EPS 150/200 flooring grade is ideal for use in applications where high floor loadings such as cold stores are present. Its higher compressive strength can be used to provide higher load bearings coupled with higher levels of insulation, reducing thermal transfer from the surrounding sub-base.

The product is a CFC and HCFC free lightweight closed cell material which is easy to install, has a high insulation value and allows for rapid dry construction methods to be used in new or renovated dwellings and is available in either square edge or tongue and grooved profile.

Features

S and B EPS flooring offers excellent thermal performance, providing savings in energy costs and higher comfort levels in buildings.

Maintains its thermal efficiency throughout the life of a building.

Highly cost effective floors.

Rapid construction; no specialised equipment or trades required.

Saves up to a week in building time when used in an all-dry system with flooring grade chipboard.

Can be used under screeds, chipboard, in heated slabs and below suspended slabs.

Available in a variety of thicknesses.

Non-toxic, non-irritant, moisture resistant, easy to cut and fix.

Grade

S and B EPS 150/200 as standard for use under chipboard and under screeds to insulate all commercial ground floors.

Dimensions

Standard board sizes 2400 x 1200 thickness 25, 40, 50, 60, 75, 80, 90 and 100mm with non-standard sizes supplied to order.

Tongue and grooved boards 1200 x 600 thickness 40, 50, 60, 75, 80, 90 and 100mm with non-standard sizes supplied to order.

Durability

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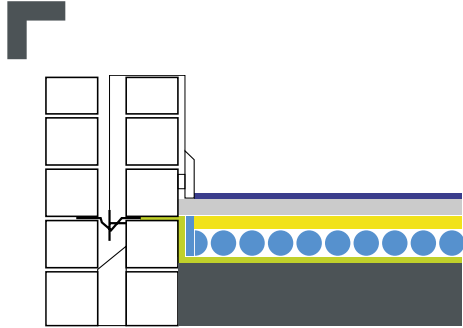
Compatibility

S and B EPS Flooring is compatible with timber, cement, concrete, brick masonry and mortars it is compatible with bitumen based membranes but should not be used with membranes based on coal tar pitches.

Plasticised PVC electrical cables can react with EPS when in direct contact. This reaction does not affect the performance of the EPS or the insulation properties of the cables. However it is recommended that PVC cables be run in conduit wherever possible.

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EPS flooring below concrete oversite

- Screed and finish
- Concrete overslab
- Slab
- EPS grade 150/200
- Perimeter insulation
- Damp proof membrane
- Blinded hardcore



Quality Standards

Lambdatherm

S and B EPS Lambdatherm is a specially designed EPS that contains tiny chemically modified particles that reflect heat radiation and gives the material its silver–grey colour.

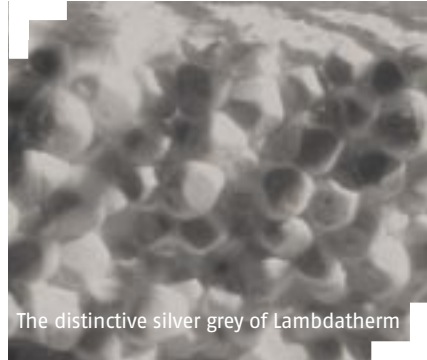
These infrared absorbers and reflectors lower the thermal conductivity of the material offering a reduction of about 20% on standard white EPS.

S and B Lambdatherm are designed for the insulation of ground floors in a variety of applications including domestic and commercial applications.

Compatibility

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Dimensions

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Tongue and Grooved boards 1200 x 600 thickness 40, 50, 60, 75, 80, 90 and 100mm with non-standard sizes supplied to order.

Common Applications

Cavity wall
Structural insulated panels [SIPS]
External wall
Ground floors
Pre-stressed concrete beams

Grades Supplied

S and B Lambdatherm 90:
0.030 w/mk (thermal conductivity can be obtained)

S and B Lambdatherm 70:
0.032 w/mk (thermal conductivity can be obtained)



The waste EPS produced during manufacture is reground and recycled back into the manufacturing process. Any additional waste can be easily recycled or used in a variety of products.



Quality Standards



Suspended Floor Modules

We offer a wide range of CFC and HCFC bespoke rigid insulation modules manufactured from lightweight closed cell expanded polystyrene laid between pre-stressed concrete beams finished with a self levelling concrete topping.

Given that EPS is rot, moisture and draft proof it eliminates the problems associated with part C of the building regulations relating to site preparation and resistance to contaminants and moisture.

S and B EPS suspended floor panels can be installed in conjunction with underfloor heating systems meeting the demand for more environmentally sound homes whilst reducing heating costs.

The use of S and B EPS suspended modules in conjunction with pre-stressed concrete beams are a highly effective, thermally efficient way of achieving and exceeding the thermal requirements of part L of the building regulations without the need for additional insulation.



Grades

S and B EPS suspended floor modules are available in EPS 70, EPS 90, EPS 100, EPS 120, EPS 150, EPS 200 and Lambdatherm.

Advantages

Speed of laying application

Thermal properties

Interlocking panels to stop cold bridging

Can be laid in wet conditions

Excellent thermal properties



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Quality Standards



S and B Flooring Identification Table

New Identification / colour coding of products manufactured to BSEN 13163		
EPS 70	2 x brown stripes	■ ■
EPS 70E	2 x brown stripes & 1 red stripe	■ ■ ■
EPS 100	1 black stripe	■
EPS 100 E	1 black stripe & 1 red stripe	■ ■
EPS 120	2 x green stripes	■ ■
EPS 120 E	2 x green stripes & 1 red stripe	■ ■ ■
EPS 150	1 yellow stripe	■
EPS 150 E	1 yellow stripe & 1 red stripe	■ ■
EPS 200	2 x black stripes	■ ■
EPS 200 E	2 x black stripes & 1 red stripe	■ ■ ■

Specification Data

Property	Conditions	Grades					Lambdatherm	
		EPS 200	EPS 150	EPS120	EPS100	EPS70	90	70
Water [tabulated values]								
Vapour diffusion resistance factor μ 1		40–100	30–70	30–70	30–70	20–40	30–70	20–40
Vapour permeability δ mg [pa.h.m]		0.007 to 0.018	0.010 to 0.024	0.010 to 0.024	0.010 to 0.024	0.018 to 0.036	0.010 to 0.024	0.018 to 0.036
Heat								
Thermal conductivity [K] value W/mk Max	10°C mean	0.034	0.035	0.036	0.036	0.038	0.030	0.032
Strength								
Compressive strength kPa Min	at 10% compressive strength	200	150	120	100	70	90	70
Cross breaking strength kPa Min		250	200	170	150	115	150	115
Safe working load kPa	at 1% nominal compression	90	70	45	45	21	45	21

For further information on these products and others within the S and B EPS range please get in touch.

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