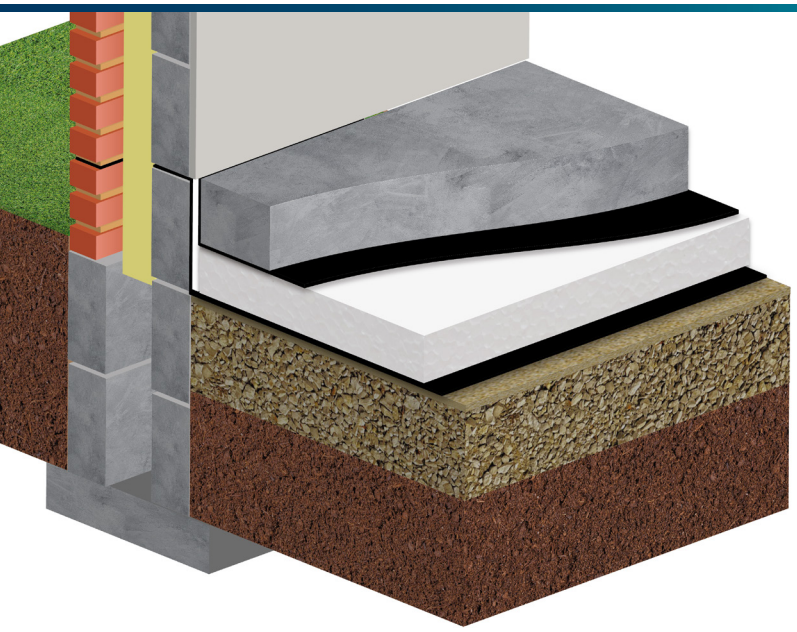
Engineered
Foam Products

Technical Datasheet

Expanded Polystyrene Flooring Insulation



Key Features & Benefits

- Excellent thermal conductivity
- No reduction in performance over its lifetime
- Cost effective choice of insulation
- Quick and easy installation
- Can be used above or below the concrete slab
- Excellent thermal performance
- Lightweight material for on-site handling
- Available in a range of densities & thicknesses
- Grey thermally enhanced EPS available
- A+ BRE Green Guide Rating

Description

Expanded Polystyrene (EPS) is a high performance, cost-effective and energy-efficient, thermal insulation. It is widely used in construction applications, such as a flooring insulation in commercial, industrial and domestic buildings.

Applications

EPS flooring insulation is ideal for both new builds and upgrading the thermal performance of existing floors. It provides a cost effective way of reducing CO2 emissions and complying with Building Regulations/Standards for U-value requirements.

Thermal Performance

Engineered Foam Products flooring insulation boards have a thermal conductivity ranging from 0.038 W/mk to 0.030 W/mK depending on the grade and whether it is white or enhanced grey EPS. The thermal conductivity values for each grade are shown in the table overleaf.

Condensation

EPS has a high vapour resistivity which results in the flooring insulation being effective in preventing surface and interstitial condensation.

Floor Loadings

The correct grade of EPS should be specified to withstand the calculated floor loadings. Typically EPS 70 & 100 are used in domestic applications. EPS 100 and above are used in commercial & industrial floors. Compressive strength figures are provided in the table overleaf.

Dimensions

Engineered Foam Products flooring insulation boards are available in the following standard sizes:

Width: 1200mm

Length: 2400mm

Thickness: 25mm, 50mm, 75mm, 100mm, 150mm*

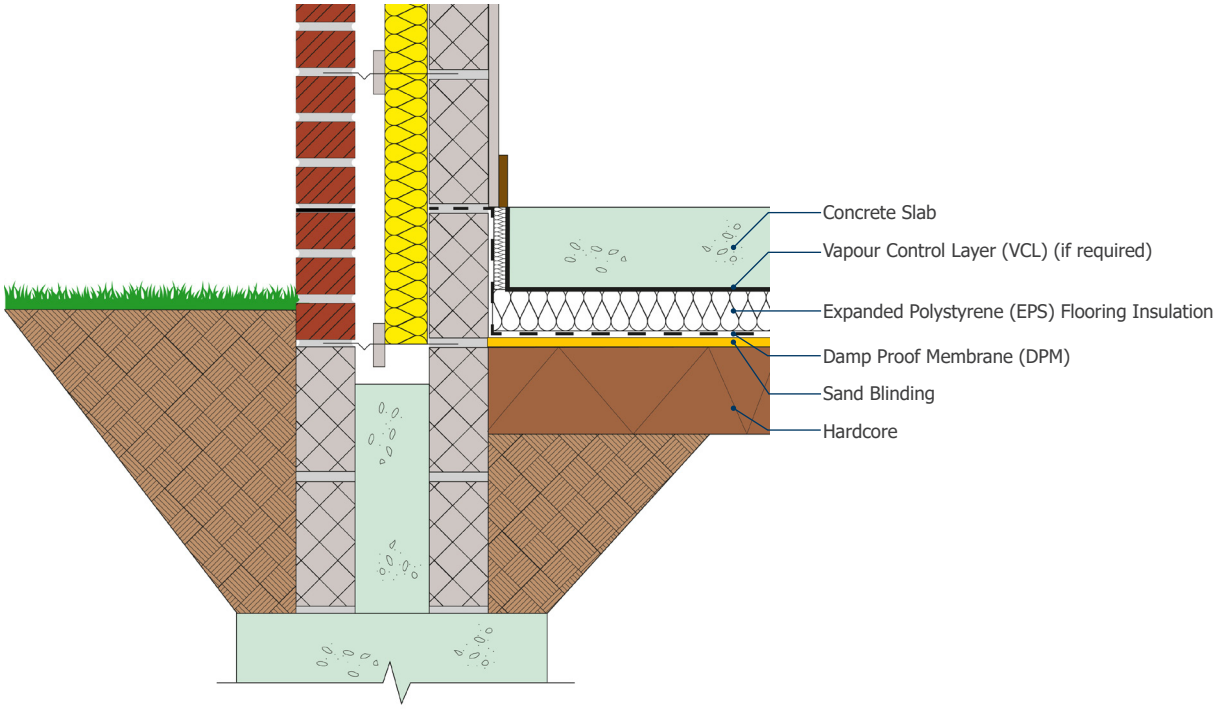
Area: 2.88m^2

*Other thicknesses on request.

Technical Specification

Physical Properties BS EN13163:2016	EPS 70	EPS 100	EPS 150	EPS 70 Grey	EPS 100 Grey
Thermal Conductivity (W/mK) (Lambda 90/90)	0.038	0.036	0.034	0.032	0.030
Length Tolerance	L2	L2	L2	L2	L2
Width Tolerance	W2	W2	W2	W2	W2
Thickness Tolerance	T2	T2	T2	T2	T2
Flatness Tolerance	P5	P5	P3	P5	P5
Squareness	S1	S1	S1	S1	S1
Bending Strength (kPa)	115	150	200	115	150
Fire Classification	Euroclass E	Euroclass E	Euroclass E	Euroclass E	Euroclass E
Water Vapour Permeability (mg Pa.h.m)	0.015 - 0.030	0.009 - 0.02	0.009 - 0.020	0.015 - 0.030	0.009 - 0.020
Dimensional Stability	DS (N) 5	DS (N) 5	DS (N) 5	DS (N) 5	DS (N) 5
Compressive Strength at 10% (kPa)	70	100	150	70	100
Compressive Strength at 1% (kPa)	20	45	70	20	45
Nominal Density (kg/m3)	15	20	25	15	20

Concrete Slab Overlay



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