

## Technical Datasheet

### *Beamshield Suspended Floor Insulation*

Beamshield Plus and Platinum Beamshield Plus EPS blocks for use as thermal insulation in conjunction with precast concrete beams, masonry closure and coursing blocks, and structural concrete toppings as a suspended concrete ground floor system (over a sub floor void) in domestic, residential and commercial buildings.

### Sustainability

Springvale advocate responsibility to the environment as part of their Environmental policies and Environmental Managements System to BS EN ISO 14001 and as members of the British Plastics Federation (BPF), participates in the recycling post-construction EPS scheme.

### Expanded Polystyrene (EPS)

Expanded polystyrene (EPS) is an excellent choice for use as insulation and other applications, consisting of 98% air means only 2% of any product is polystyrene material.

With its outstanding thermal insulation qualities EPS is a first choice material for numerous construction applications. Using EPS can reduce CO<sub>2</sub> emissions by up to 50%, offsetting its small carbon footprint and giving maximum return for minimal resource and can also make a significant contribution to reducing fossil fuel use for heating and cooling of buildings which in turn, helps reduce SO<sub>2</sub> and SO<sub>3</sub> emissions, a major cause of acid rain.

Using less than 0.1% of global oil consumption to manufacture EPS, it can save up to 200 times its own resource in thermal energy saving, bringing considerable energy and resource-saving benefits.

The amount of carbon monoxide and particulates given off by EPS during combustion is a small fraction of that emitted by wood or cardboard.



The manufacture of EPS is safe for the environment as only steam is used during the manufacture process. There is no waste in the process as all off-cuts are re-cycled back into the production process.

EPS uses Pentane as its blowing agent and is HFC, CFC and HCFC free. Pentane has a low Global Warming Potential (GWP) of less than five and the EU does not register pentane as a substance hazardous to human health or the environment.

The lightweight nature of EPS helps to minimise environmental impacts and costs associated with the movement of heavier alternative materials.

The inert and non-toxic nature of EPS provides stability in landfill because it does not biodegrade and leach chemicals into the water system or gases into air that could contribute to global warming.

Life-cycle analyses demonstrate that EPS has exceptional qualities as a construction material. It has a Zero Ozone Depletion Potential (ODP) and a low Global Warming Potential (GWP) and achieves the highest possible A-Plus summary rating in the BRE Global Green Guide to Specification.



## Highly Durable

A durable, inert, non-toxic, rot proof and 100% recyclable product, the performance of EPS is expected to last at least the life time of the building in which it is used.

## Excellent Thermal Performance

Using Beamshield Plus EPS units as an alternative to concrete blocks in a suspended floor will reduce ground floor heat loss, requiring no secondary insulation.

Platinum Beamshield Plus can achieve U Values as low as 0.06 W/m<sup>2</sup>K depending on the floor layout. Contact our Technical department for further information.

Beamshield Plus can contribute to improvements in linear thermal bridging values (psi values) & improvement of the default values used in SAP assessments.

## Freedom of Design

The range of units are available in white or Platinum EPS to give higher insulation value where needed and include starter/end, full and half width units in varying thickness and toe lengths to accommodate various beam types and beam layout configurations.

# Technical Data

	Beamshield Plus	Platinum Beamshield Plus
Type & Class (BS EN 15037-4)	R1a	R1a
Thermal Conductivity (W/m-K)	0.038	0.030
Mechanical Resistance (kN)	1.5	1.5
Unit Size (mm)	Full Unit Half Unit Starter / End Units	1200 x 540 1200 x 270 1200 x 300 (Max Width)
Thickness (mm)	228-450	228-450

## Certification

Springvale Beamshield Plus and Platinum Beamshield Plus have a third party BBA accreditation certificate 07/4411. and is manufactured to the requirements of BS EN 15037-4, under an ISO 9001 certified quality management system.

[www.beamshield.co.uk/downloads](http://www.beamshield.co.uk/downloads)

## Quick & Easy Installation

The lightweight units can be cut using a handsaw and do not require grouting to secure the units into position, helping to reduce manual handling issues and installation time.

The product should be installed in accordance with the BBA certificate and the installation guide.

Beamshield Plus and Platinum Beamshield Plus should not come in direct contact with hot water pipes and electrical cables should be enclosed in suitable conduit e.g. rigid PVC.

## Handling & Storage

Beamshield must be stored in dry conditions, protected from prolonged exposure to sunlight and must not be exposed to open flame or other ignition sources. Care must be taken to avoid contact with solvents and materials containing organic components.

## Want to know more?

Contact Technical or Sales for more information.

Phone - **01457 863 211** or Email - [technical@springvale.com](mailto:technical@springvale.com)

