

# About Benx

From timber to steel frame, high to low rise, internal to external wall linings and buildings with high weather exposure, Benx offers a solution.



As a leading UK facades supplier, Benx is continuously evolving its portfolio of products and systems in line with changing legislation, new material technologies and increasingly sophisticated building designs.

Furthermore, because we have developed a complete range of products and support services, we can offer you a comprehensive range from sheathing boards, through support structures to façade finishes. A single-source “Golden Thread” for the life of the building.

Our aim is to offer you more choice while reducing your risk in choosing and designing building façades. We believe our approach is the future of façades.



# Our Portfolio

Benx are unique as a designer and supplier of façade systems with a comprehensive portfolio. We offer the complete through-wall solution:

- Façades
- Sheathing board
- Support Frame
- Rainscreen Insulation
- Cavity Barriers
- Airtight Solutions
- Market leader in the supply of external wall insulation

**Rainscreen Insulation**

**Cavity Barriers**

**Airtight Solutions**

**Support Frame**

**Façade Range**

**Sheathing Boards**

<p><b>vwall</b><sup>™</sup></p> <p>Calcium Silicate/Fibre Cement A1 Non-Combustible BBA Approved</p>	<p><b>CEMBOARD</b><sup>™</sup></p> <p>Cement Bonded Particle Board Excellent Mechanical Strength Excellent Acoustic Properties</p>
<p><b>Multipurpose</b><sup>™</sup></p> <p>Cellulose Fibre Cement A Non-Combustible BBA Approved</p>	<p><b>DensGlass</b><sup>®</sup></p> <p>Fibreglass Mat with a Gypsum Core A1 Non-Combustible No. 1 Specified Gypsum Sheathing Board in the US</p>

# About SPSevirowall Wall System 1

We have been supplying external wall insulation systems for over 20 years for the cladding of buildings of all construction types such as masonry, lightweight steel frame and timber frame.

We are market leaders in this type of technology and provide products backed by exceptional technical support.

External wall insulation has been used in the UK since the early eighties and in continental Europe much longer than this. It places insulation where it provides the most benefit in protecting the building structure from moisture and extremes of temperature.

Wall System 1 Provides:

**Thermal Performance** - Our insulated systems, easily achieves high levels of thermal performance through the wall.

**Protection** - Provides weather and thermal protection to the structure of the building.

**Speed of Construction** - Fast to apply and takes the external cladding out of the critical path of construction allowing an earlier start to the interior fit out, shortening the build program.

**Exposure** - High levels of weather protection. No limit to its degree of exposure in the UK. Suitable for high elevations and coastal sites.

**Lightweight** - Typical system less than 8kg/m<sup>2</sup>.

**Colours** - Virtually limitless colour palette to choose from, plus various textures and finishes, including brick.

**Accepted** - By NHBC and TRADA

**Accreditation** - BBA approval & ETA Certification.

**Versatile** - Application to any wall type.

**Durable** - Design life up to 60 years.

## Quality

Our products and systems have been rigorously tested and have extensive track records having been used throughout the UK and Europe for more than 40 years.

## Service

SPSenvirowall is dedicated to providing the highest level of service in our industry. The supply of our products is supported by design guidance and technical site support.

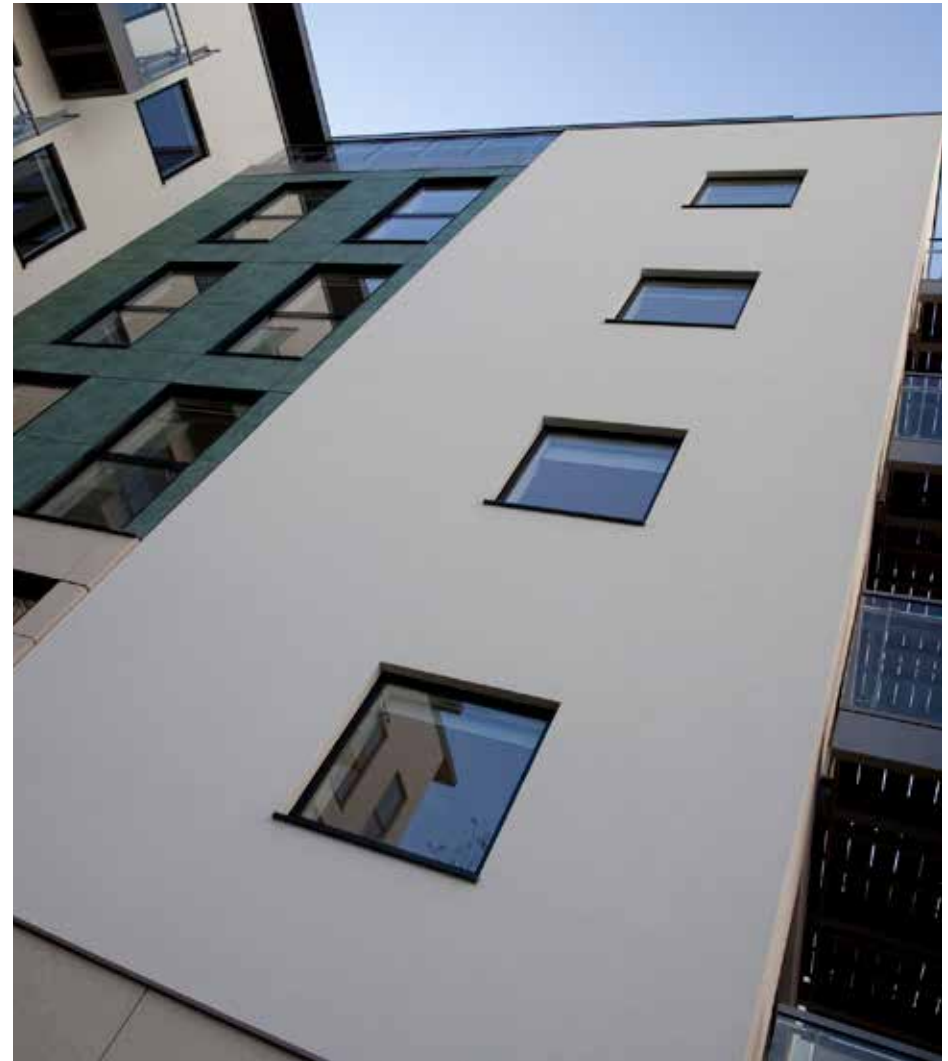
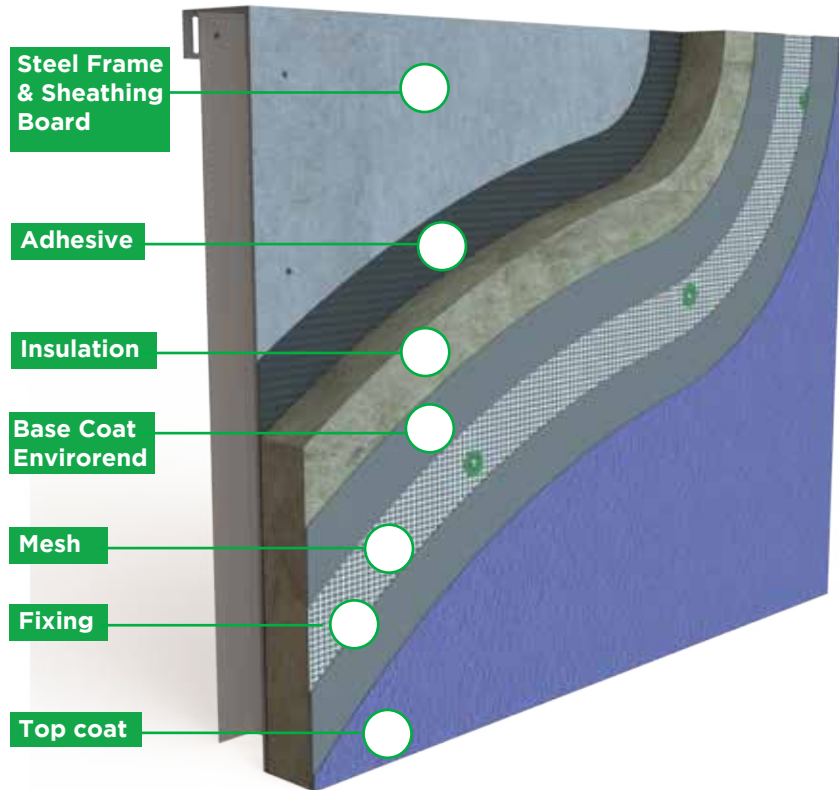
## Value

We are committed to providing the best value. We will never over-specify our systems and always ensure that they are best suited to purpose. We aim to position ourselves as offering the most competitive external wall systems in the market without compromising on quality.





# Wall System 1 Build Up



# Insulation

## Expanded Polystyrene

- 20mm - 300mm thickness
- Age cured fire-retarded polystyrene
- Lambda 0.032 - 0.038w/mK
- Excellent value
- User friendly
- BREEAM Rating A+

## Mineral Wool

- DD Slab 30mm - 200mm
- Façade lamella 30mm - 200+ mm
- High density and compressive strength mineral wool
- Lambda 0.036 - 0.040w/mK
- Non-combustible
- Environmentally friendly
- Thermo-dimensionally stable
- Façade lamella - no requirement for mechanical fixings

## Phenolic

- 20mm - 120mm thickness
- CFC & HCFC free
- Lambda 0.021 - 0.024W/mK
- Excellent thermal performance
- Good fire performance



# Wall System 1 - Applied to Masonry

## Adhesive

### Envirobed

A highly polymer modified OP cement for the adhesion of insulation boards. It offers extremely high levels of strength, adhesion and durability. It can be comb applied 3-5mm thick to the back of the insulation board or for uneven substrates can be applied in dabs up to 20mm thick.

Envirobed should only be used as an adhesive and never as a reinforcing basecoat

## Basecoat

### Envirorend

Highly polymer modified cementitious basecoat applied 3-5mm thick incorporating a plastic coated reinforcing glass fibre mesh.

## Additional Impact Resistance

Additional impact resistance can be imparted to the system by incorporating an extra reinforcing layer with high impact meshes. For the highest level of impact resistance a 9mm rendaclad board or equivalent is fitted on top of the insulation prior to installation of renders.





## Wall System 1 - Applied to Framed Structures

External wall insulation systems are extensively used on lightweight framed structures. The speed at which they can be erected and weatherproofed provides significant benefits to the developer. Removing the cladding from the critical path, bringing forward the internal trades and thereby shortening the contract period and eliminating the problems associated with brick and blockwork construction. This method of construction has proven extremely popular over recent years.

The details that follow demonstrate the use of the SPSenviowall systems on lightweight steel frames although the principle operates equally effectively on timber frame structures.

It should be noted that both the NHBC and TRADA recommend the introduction of a partially ventilated cavity behind the cladding system in timber framed construction, therefore we recommend the rendaClad system for application to timber frame. The SPSenviowall external render systems provide a weather-tight cladding and providing the openings are adequately detailed to provide a weatherseal it is SPSenviowall's opinion that a cavity is not required for steel framed structures.



# Textured Finishes

## Acrylic, Silicone and Granomin textured thin coat finishes.

The Acrylic and Silicone thin coat finishes are through colour, pre-mixed and ready to use organic resin renders which are applied as a decorative final coating. Both renders are used to provide a low maintenance, attractive contemporary finish and are highly water repellent.

The flexibility and ease of application of both the Acrylic and Silicone render finishes, allows for large areas of the facade to be applied, thus matching the demand to complete large volumes of housing schemes within the programme schedule. The render provides an anti-crack finish, ideal for the use on high-rise flats, terraces, solid wall and system built house types.

Widely used by clients who wish to consider their long term maintenance programme of their properties, where a low maintenance regime is desirable.

Both finishes are available in a large range of colour options that contain colour pigments which are mixed in a computer controlled, factory environment using state-of-the-art equipment, thus providing colour consistency when supplying large projects.

Along with a large colour range there is also an opportunity to select differing grain sizes ranging from 1mm-4mm. This offers the client a varying choice of colours and textures.







# Textured Finishes

## EnviroSil - Silicone Finish

A highly water repellent through colour textured finish allowing the façade to maintain its cleanliness, via the natural cleaning process which occurs during rainfall.

The EnviroSil top coat finish contains a safe level of anti-fungicide sufficient to resist the growth of most U.K fungi and algae, thus making the finish remain cleaner for longer periods of time.

EnviroSil is highly vapour permeable making it ideal to use as a finish with all types of insulation, especially Mineral Wool as this allows the system to breathe, reducing the risk of condensation.

Rot resistant, non-swelling, low stress, environmentally friendly, low odour, very high resistance to environment pollutants and micro-organisms and also UV-stable.

## EnviroCryl - Acrylic Finish

A water repellent through colour textured finish offering a low maintenance finish which is waterproof according to VOB, part C, DIN 18363. The EnviroCryl also contains the same safe level of anti-fungicide as the EnviroSil finish, meaning they both have self-cleaning characteristics. Resistant to atmospheric influences, very high resistance to environmental pollutants and micro-organisms, and also UV-stable. An extended range of colour options are available in the EnviroCryl range, enabling deeper colours to be manufactured due to its molecular structure, giving it the ability to retain high pigmented colours.







# Brick Finishes

Many of the UK's Towns, Villages and Cities have a tradition of brick finished housing. At SPSEnvirowall, we are keen to keep that tradition alive. Both the surrounding architecture and the planning requirements can be matched by our extensive range of brick finished systems. Whether it be hi-rise, terraced houses or timber frame we have a brick finish to suit the application and in many instances we can provide a colour matching product range.

SPSEnvirowall have looked at all the requirements for a brick type finish within the market place and have produced a comprehensive range to select from. We believe this guide will provide a "one stop shop" solution to your brick finish requirements.

All the systems in this guide have been rigorously tested to ensure that they deliver exactly what they are designed to do. They are also backed by extensive guarantees providing you with total peace of mind. This extensive range of brick type systems ensures that no matter what your construction type or budget, SPSEnvirowall has the solution.

## Envirobrick

Firstly a basecoat is applied with reinforcing mesh in its upper layer. Once set a coloured Mortar layer is applied. This top layer is then carefully marked out and cut through to expose the mortar layer creating a brick effect. As well as a traditional brick finish the system can be used to create a wide variety of interesting and unique patterned finishes.

Envirobrick can be applied over any SPSEnvirowall base coat and can be used on both insulated and non-insulated systems.

## The Benefits

- Fully tested BBA Approved
- Cost effective method for achieving a brick effect finish
- Crack resistant
- Fully weather resistant
- Large colour range
- No maintenance
- Fully Tested

Envirobrick system has achieved the prestigious Kite mark license to BS EN 998:2003, is ISO9001 approved and conforms to BS5262 Type II. It is also fully BBA approved, providing you with total peace of mind.



# Brick Finishes

## SpeedySlip

SpeedySlip provides the traditional appearance of a brick finished building with technology of a lightweight acrylic brick slip finish. Developed over 25 years ago, the system is an ideal finish for external wall insulation systems. SpeedySlip is ideally suited to high-rise buildings where traditional brick slips would not be recommended.

Each slip is handmade from only the highest quality of raw materials, which ensures the traditional and natural appearance of a brick finish. Its lightweight and flexible compositions opens up the possibility of design and can be easily accommodated as a finish to external wall insulation. Each slip measures only 4-6mm thick and can easily be fixed to basecoat renders with adhesive.

## The Benefits

- Lightweight system
- Cost effective compared to traditional brick slips
- Ideally suited for high-rise applications
- Long life span and no maintenance costs



Kent Yellow Stock



London Multi Stock



London Sanded Cream



Surrey Red Autumn



Thames Yellow Stock



Ashford White Riven



Charnwood Forest Buff



Charnwood Forest Grey



East Midlands Red Stock



South Downs Multi Stock



Staffordshire Blue



Suffolk Red Stock



Staffordshire Face Red



Ashford White Smooth

## BrickStick

The BrickStick system offers the flexibility of a brick slip system with the traditional look, durability and feel of real brick work. Developed to complement the Envirowall Brick Finish package, BrickStick provides a slip system with added durability of real brick slips. The system can be designed to incorporate any type of brick work so allowing the new structure to be perfectly blended into its surroundings.

The system works by adhesive fixing pre-cut brick slips or fired brick slips to a basecoat insulation board that is prefixed to the substrate. There is no need for complicated mesh systems or expensive grooved insulation boards. Unlike many other Brick slip systems on the market, BrickStick is supplied with cut pistol brick slips thus allowing clean and traditional corners to be formed. Fast and simple to install, the system incorporates a unique method of using a rope to ensure even placement of slips. The roped system allows the installer to follow the natural lines of each brick further emphasising the look of a traditional brick facade.

### The Benefits

- Highly durable finish
- Quick and easy to apply
- Can easily accommodate any unevenness in the substrate
- High-impact resistance
- Any brick type can be used





# Wall System 1

## Specification

- Internal Lining
- Lightweight Steel Studs
- SPSEnvirowall Fabrock271
- Cement Particle Board
- 3mm-5mm envirobed adhesive mortar
- Rockwool or EPS with Mineral Wool fire breaks
- 3-5mm enviroend basecoat incorporating
- Plastic coated glass fibre reinforcing mesh
- Silicone or acrylic primer
- envirosil or envirocyl topcoat

## Thermal

- Minimum U-Value 0.15 - 0.35 W/(m<sup>2</sup>K)

## Acoustic

- Minimum sound insulation R<sub>w</sub>dB 45 - 55dB sound reduction

## Fire

- 30 - 90 minutes fire resistance







# Testing & Guarantees

## Testing and Certification

The SPSEnvirowall range of systems has had a successful track record in the UK and continental Europe for over 40 years. They have been used in some of the most exposed sites in Europe without any recorded failures. The systems have undergone a rigorous testing regime in both the UK and Germany with an expected life in excess of 50 years if properly maintained.

The SPSEnvirowall range of systems have been - rigorously tested to German standards. Germany is the largest market for external wall insulation with approximately 30 million square metres being installed annually. Therefore the range of testing facilities in Germany are far greater than that found in the UK.

The SPSEnvirowall range of systems has been assessed by the German Institute of Construction Engineering and has been approved as meeting all the requirements of the German Regional Building Regulations. The individual component parts to the systems have also been independently tested to the Relevant DIN Standard.



## Guarantees

### Materials Guarantee

The SPSEnvirowall range of systems have had a successful track record in the UK and continental Europe for over 30 years. They have been used in some of the most exposed sites in Europe without any recorded failures. The systems have undergone a rigorous testing regime in both the UK and Germany with an expected life in excess of 50 years if properly maintained. Despite this impressive track record our clients are often looking for additional peace of mind. For this reason we are willing to offer additional security with a range of warranty schemes.

## Training

SPSEnvirowall has training facilities at all of their regional depots where one day training courses can be booked in advance. These courses consist of both a theory and practical elements. On completion of the course attendants are provided with identification card indicating they have successfully completed the course. This is then followed up on site where inspections are made whilst carrying out works. Once the inspector is confident of the installer's ability he will issue him with a competent person's card.

## Service

SPSEnvirowall had depots distributed across the country. Here we are able to react to the local needs of our customers. You can collect materials or we can provide next day delivery utilising our own transport, giving a responsive service that is unmatched in the industry.

The depots are staffed by experienced personnel who can provide you advice on the products that they stock.

If more in-depth technical advice is needed we have an internal technical department that can help by providing project specific specifications, details, U-value and condensation calculations.

If it is on site assistance that you require we have a team of site support technicians that will help with application and detailing issues on site.



# Environment

We promote the recycling of plastic, metal and packaging within our technical specification documents, all to encourage responsible behaviour regarding waste on site.

Regular discussions take place with our suppliers to reduce packaging and to implement new designs and features to create better efficiencies within the product range used on site.

As members of INCA and the NIA Associations we actively contribute to regular meetings and technical groups to encourage an Environmental focus within our market place.



All of our UK branch depots operate our Environmental policies regarding recycling waste and logistic efficiencies. We look at the efficiency of deliveries, either direct full load from suppliers or encouraging grouped deliveries.

We have an environmental policy and many other environmental documents ready for issuing to our clients and approved contractor base.

SPSenviowall is committed to the important and worthwhile task of looking after our environment.



**Thank you for taking the time to review our Wall System 1 brochure.  
If you require any further information on our products or services, please contact us.**

**Sales**  **0800 612 4662**  **sales@benx.co.uk**

**Technical**  **0800 488 0531**  **technicalservices@benx.co.uk**  **www.benx.co.uk**



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