TS Rail
An External Wall Insulation System for New Build Housing
About SPSenvirowall

At SPSenvirowall, we lead the way in the supply of external wall insulation systems and high-quality decorative renders to the construction industry.

Suitable for both low-rise and high-rise buildings our extensive range of innovative insulation systems are perfect for a decorative uplift to new construction and refurbishment alike.

Our products, which have been rigorously tested by the BBA, CERAM and BRE have been used throughout the UK and continental Europe for over 30 years.

Our partnership approach is to assist you from the specification process right through to contractor selection, product application and completion of the works.

We’ll make sure that the products not only suit their purpose but also provide the best possible value for your project. We will also assist with the selection of experienced and approved contractors, monitoring their work and ensuring that the application of our products are undertaken to the highest standard.

Contractor, specifier or architect, you can expect exceptional service and the best technical support throughout your project.
The TS Rail System is extensively used on lightweight framed structures. The speed at which it can be erected and weatherproofed, provides large 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.

It consist of a pre-engineered insulation board that sits within a PVC rail framework mechanically fixed to a sheathing board providing a drainage cavity behind the insulation system. A proprietary base coat render is applied with a reinforcing plastic coated glass mesh prior to application of various finishes. (See fig 1.)

Although SPSenvirowall would argue that properly detailed, a drainage cavity is not required when applying render protected insulation to lightweight steel frames. The drainage cavity the TS rail incorporates behind the insulation provides an additional precaution against water ingress. It is a prerequisite of most building insurers including the NHBC.
The Benefits

- BBA certified
- NHBC approved
- Takes cladding out of the critical path by quickly weatherproofing the building
- Low-cost cladding solution
- Full scale fire tested. Compliant BS8414Part II
- EPS system compliant Over 18 metres
- Fast Application
- Tried and Tested
- Wide range of colours and finishes including brick
- Overcomes variations of line and level of substrate
- Easily achieves high levels of insulation performance
- Highly durable and weather resistant
- Crack resistant

Typical Specification

- Internal lining
- Lightweight steel studs
- SPSenvirowall Fabrock 271
- Cement Particle Board
- 15mm drainage gap
- Rockwool or EPS with Mineral Wool fire breaks
- 3-5mm Envirorend basecoat incorporating plastic coated glass fibre reinforcing mesh
- Silicone or acrylic primer
- Top coat
- Thermal u-value 0.1 to 0.28 W/m²
The System

1. Lightweight Steel Frame
2. Cement Particle Board or Calcium Silicate Board
3. Rockwool Facade Lamella Fire Break
   1000mm* 200*mm. Rockwool insulation slabs.
4. Rail System
   Running horizontally and vertically. PVC generally but
   aluminium at firebreaks. Fixed on 15mm spacer.
5. EPS Polystyrene Rail System Insulation
   500mm* 500mm. Engineered to fit into rails.
6. Reinforced Base Coat
   Envirorend high polymer base coat, minimum
   3-5mm, with 8mm tooth trowel incorporating glass fibre
   reinforcement mesh.
7. Primer & Top Coat or Acrylic Slip Finish
   1.5-3mm grain Envirosil/Envirocryl finish. Different
   textures available. Trowel applied, thickness
determined by grain size.
The Finishes

Textured Finishes - Acrylic, Silicone and Enviromin 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 an 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 façade to be applied quickly, thus matching the demand to complete housing schemes within the programme schedule. The render provides an anti-crack finish, ideal for the use on high-rise apartments and terraces. Widely used by clients who wish to consider their long term maintenance programme of their properties, where a low maintenance regime is desirable.

All the finishes are available in a large range of colours that contain colour pigments which are mixed in a computer controlled, factory environment using high specification 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 to 4mm. This offers the client a varying choice of not only colours but also textures.
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 UK fungi and algae, thus allowing 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, allowing the wall to breathe and reducing the risk of condensation. It is rot resistant, non-swelling, low stress, environmentally friendly, low odour, very high resistance to environmental 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 microorganisms, 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.

Enviromin – Mineral Finish

The Enviromin product comes in a bagged powder format including the 1.5mm grain which is mixed on site with clean water and subsequently applied by the same technique as the pre mixed EnviroSil and EnviroCryl products. The appearance of the 1.5mm grain size is similar to acrylic and silicone finishes. The Enviromin system is a synthetic mineral hybrid based product and can be applied directly onto the basecoat (a primer is recommended). Its advantage in the UK climate, where the weather is unpredictable, is that the pre-determined setting process allows for the application to be less reliant on weather conditions and ensures a consistency of curing on site. This makes Enviromin an ideal option for those periods of the year where other finishes may be less practical. It is one of the few mineral finishes that does not require painting and is supplied in a range of pastel colours.
Nanosil – Equalising finish

NanoSil façade paint brings you strength, cleanliness, luminosity, breathability and bonding in one unique and unrivalled product. The unique make up of NanoSil means that your façade will stay looking better for longer. Applied to Enviromin it will provide a performance equal to or greater than Silicone render finishes.

NanoSil’s nano-quartz technology involves the bonding together of inorganic quartz particles with pure organic acrylic tendons. The result is a three-dimensional paint structure which is tough and resistant to dirt yet at the same time breathable and hard wearing. The three-dimensional structure of NanoSil means that each quartz particle is joined to the next by a tough yet flexible acrylic bridge, effectively forming a protective and solid grid pattern which attaches itself firmly to the render.

The NanoSil finish prevents dirt and spores from attaching themselves to the façade at the same time as bonding itself to the underlying render with unrivalled strength.

It is resistant to expansion even in the most extreme summer temperatures, NanoSil’s impenetrability means it repels dirt build-up on the façade. This dirt repulsion is brought about by NanoSil’s ever so slightly coarse surface which enables the formation of a polyhedral film of water allowing fine dust, dirt particles and spores to be simply washed away by rainfall or blown away by the wind. But that’s not all…NanoSil’s unique breathable make up allows water vapour from inside the building to escape, resulting in dry walls. And dry walls mean better heat retention and better thermal performance. Perfectly suited to residential or commercial façades, big or small.
SpeedySlip – lightweight brick finish

Speedyslip is a lightweight acrylic brick slip ideally suited for high-rise applications. It is extremely durable with no maintenance cost and once fitted appears identical to real bricks. SpeedySlip provides the traditional appearance of a brick finish but with the technology of a lightweight acrylic brick slip.

Speedyslip has a range of 11 standard colours to match the majority of brick finishes in the UK. A colour matching service is available upon request providing a limitless range of finishes. Each individual pack contains different natural shades and textures for each design. Corner slips are also available ensuring a totally realistic brick finish. It has a lightweight, flexible composition 4-6mm thick. Once fitted it is difficult to recognise it from traditional clay bricks.

- Lightweight
- Fast semi-skilled application
- Ideally suited for high-rise buildings
- Highly durable
- Zero maintenance
- Cost effective
Maintenance

Our render systems EnviroSil, EnviroCryl and Enviromin topcoat finishes have a long lifespan but should there be a requirement they can all be easily redecorated at any stage of their lifetime making them very versatile. This offers the opportunity to change the appearance of the facade easily whilst still maintaining the performance of the system. All of these finishes are applied onto a basecoat incorporating reinforcement mesh resulting a robust and impact resistant system.
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