



**The complete guide to
EWI Pro renders, insulation and installation**

Table of contents

About Us	4
Our Services	6
Why Choose EWI Pro	8
Thin Coat Renders	10
Traditional Finishes	12
Masonry Paints	13
Heritage Range	14
OCDC One Coat Dash Cover	16
Adhesives Basecoats	18
Primers	20
Insulation Materials	22
Beading and Mesh	24
Verge Trims	26
Mechanical Fixings	28
EWI Pro Build-Ups	30
Material Coverage Guidelines	34
Acoustic and Thermal Performance of EWI Systems	36
The EWI Pro Loyalty Scheme	38
Thin Coat Render Install Guide	40
Thick Coat Render Install Guide	46
Dry Aggregate Dash Install Guide	49
EWI Install Guide	52

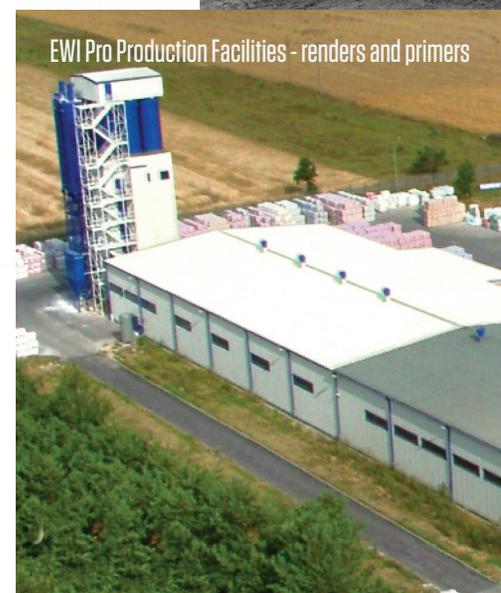
About Us

EWI Pro aims to improve the external appearance of properties throughout the UK with our advanced range of render solutions. We have built our render-only and EWI systems to suit the needs of the UK market; we believe in providing homes and businesses with improved external appearance, increased thermal performance and reduced energy bills.

In order to do this, we have worked hard to develop comprehensive render and EWI systems. Our materials are therefore at the heart of what we do here at EWI Pro. Having attained BBA approval, we continue to be a trusted provider of external wall insulation and render-only systems for homeowners, installers and architects. And we don't just stop there, we are committed to providing our technical expertise and support throughout the entire installation process.

Our systems have a long and successful history. Originating in Germany in the late 1960's, we have continued to build and develop due to the increasing demand for high quality render and insulation products. The Kreisel systems have acted as the building blocks for EWI Pro. We have utilised their 40 years of experience in improving the look of millions of domestic and commercial properties, in order to refine our own systems and provide our customers with a performance guarantee for years to come.

If you are looking for a quality render or EWI system, then call 0800 1337072 or visit www.ewipro.com.



EWI Pro Production Facilities - renders and primers



EWI Pro Production Facilities - adhesives

Our Services

Here at EWIPRO we take pride in our wide range of services which cater to the needs of all our installers

- Extensive range of BBA approved, premium quality products
- High-performance, industry leading EWI systems
- Broad UK wide network of EWIPRO approved installers
- EWI solutions for a vast range of properties
- Comprehensive suite of online services
- Unrivalled training, monitoring and technical support network for all of our installers
- Site visits and assessments
- Comprehensive manufacturer-backed warranty
- Available throughout Europe

EWIPRO Training Courses

- Basic render system training
- Basic EWIPRO system training
- Additional training offered in the following areas:
 - Finishes - brick slips and wood-effect render
 - Scratch coat and specialist renders
 - Render spray machine training





EWI Pro CPD's

Our CPD courses have been in the making for a while. We have developed an impressive new specification journey, using the RIBA Plan of Work to help participants at each stage; from Strategic Definition to In Use.

The EWI Pro CPD's have been technically designed to be uniquely informative, focussing on different substrates with fit-for-purpose solutions on offer. The idea is to relieve the architect's workload when it comes to developing a through-wall solution.

EWI Pro offer a range of CPD's, looking at external renders and finishes based on modern substrates.

Get in touch to learn more!
0800 1337072

Why Choose EWI Pro ?

Highest Quality

EWI Pro only manufacture the best, BBA approved renders and external wall insulation materials. Our through-coloured renders won't scratch or fade over time, our specialist beads ensure strength, and our insulation materials are the highest-performing available. We can also offer 25-year warranties on our EWI products, giving you a fantastic sales tool for your clients.

Whole-System Approach

At EWI Pro, we always take a whole-system approach when it comes to external wall insulation and render-only systems. That means primer, basecoat, mesh, insulation materials and render.

Increased Thermal Efficiency

The EWI Pro external wall insulation systems help to seal the property's thermal envelope, which limits heat loss. It has also been designed specifically to alleviate issues relating to thermal bridging. Importantly, EWI Pro insulation systems can be retrofit onto existing buildings to bring them in line with today's building regulation requirements.

Improved Aesthetics

We offer a huge range of render solutions to suit every taste. Our Monocouche Render comes in a variety of shades, while our thin coat renders can be custom mixed to create any colour. All of our render systems are designed to be high performance and durable, while dramatically improving the overall look of a property.

- waterproof and frost proof
- good mechanical resistance
- high elasticity
- high vapour permeability
- high durability
- resistant to UV rays
- hydrophobic

SILIKOTYNK 030

STYLAEP 120

EPS
BASECOAT
EWI-220
25 kg



* Please see terms and conditions of the loyalty points scheme on the website www.ewipro.com

EWI Pro External Wall Insulation Systems is comprised of a comprehensive range of BBA-approved products

There is no corner-cutting with EWI Pro; we pick only the best materials to make up our insulation and render-only systems. We are so confident in our products that we are happy to provide a 25-year warranty on finished jobs by trained installers. Our systems are available in thousands of different finishes, to fit all tastes and budgets, so you can be sure your customer will get the result they desire.



Thin Coat Renders

Our through-coloured thin coat renders are flexible, breathable and durable. Here at EWI Pro, we offer thousands of different colours of our thin coat render systems, or we can custom match any NCS colour. You can also choose from a range of grain sizes to get the texture and finish that you desire, including 1mm, 1.5mm, 2mm and 3mm. Choosing thin coat render technology is choosing a render system that will keep performing for years and years to come.

Coloured Renders

Nano Drex Silicone Render

Our Nano Drex Silicone Render is our most advanced, high technology silicone-based render - it is extremely hydrophobic, offering unrivalled performance. Rather than settling on the surface of the render and creating damp and mould, any water that comes into contact with the render will form droplets which are then repelled from the surface. Nano Drex Silicone actively prevents problems with organic growth on the external walls of your home, ensuring a perfect and lasting render finish for years to come.



Premium Bio Silicone Render

Our Premium Bio Silicone Render is one of our leading silicone-based coloured renders. It's elastic and durable with advanced self-cleaning agents, which work to actively attack and break down organic growth on the surface of the render. This render is perfect if the building is situated in areas of high vegetation or if there is a risk of high exposure to organic matter. The silicone technology actively helps it retain its appearance even in the most trying conditions.



Silicone Render

Silicone Render is our flagship silicone-based render. Renowned for being long lasting and aesthetically pleasing, this render is the classic choice for homeowners and businesses alike. With hydrophobic properties, the Silicone Render has self-cleaning capabilities and also increased resistance to biological growth. It's a customer favourite because once it's installed it requires minimal upkeep and continues to look fantastic.



Silicone-Silicate Render

Silicone Silicate Render is our most popular hybrid silicone render, offering great performance and great value. Silicone Silicate is fantastically versatile, providing the key benefits of a thin coat render with the added boost of self-cleaning and breathability that the silicone technology provides. Silicone Silicate is perfect for a standard classic finish that will maintain its brilliance in the long term.



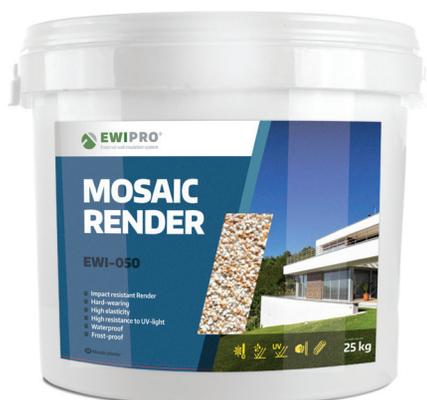
Acrylic Render

Acrylic Render is our best value render. It is impact resistant and is most well-known when it comes to coloured render as it retains the colour pigment even after extended exposure to UV. Acrylic Render achieves a vibrant, stand out finish. This is the perfect render if strength, crack resistance and long-lasting colour are key priorities.



Mosaic Render

Mosaic Render is a ready-to-use decorative render. It contains 1.8mm quartz aggregate and is therefore known for being particularly strong, durable and waterproof. This makes it ideal for below the DPC, where impact resistance and splash proofing are essential, or simply as a decorative feature. Available in white, black and grey, the Mosaic Render offers a textured finish and not only looks fantastic but offers high performance and a long lasting finish.



Mineral Render

Mineral Render is a dry-mix, thin coat render, most often used in the winter for ease and convenience. This is the most effective render choice if you live in a cold or rainy climate owing to its extremely fast drying time and excellent performance. Mineral Render requires painting afterwards with our Silicone Paint to seal the system and protect it against the elements.



Traditional Finishes

Monocouche Scratch Render

Monocouche Scratch Render is a dry-mix, one coat, polymer modified render. The render comes in a choice of 18 colours and, once scratched back, the finish produced is pitted with a sandstone-like texture. It provides an aesthetically pleasing finish that will survive the test of time.



Dash Receiver

EWI-235 Dash Receiver is a one-coat pebbledash adhesive. It is highly durable and breathable, ensuring a long lasting and reliable finish. The EWI Pro Dash Receiver can be used to create a dashed surface for render-only systems, as well as in external wall insulation systems.



Masonry Paints

Silicone Paint

EWI Pro Silicone Paint can be tinted to create thousands of colours !

Our standard colour chart offers a broad range of appealing options, but if you're looking for something in particular we can match NCS and RAL colours.

We understand that finding the right colour to paint your home is essential; that's why we use logical colour systems so that communicating colour is easy.

Silicone Paint is ready to use and creates a highly breathable, waterproof finish. Ideal for both internal and external use, this paint creates a stand-out finish that looks brand new.

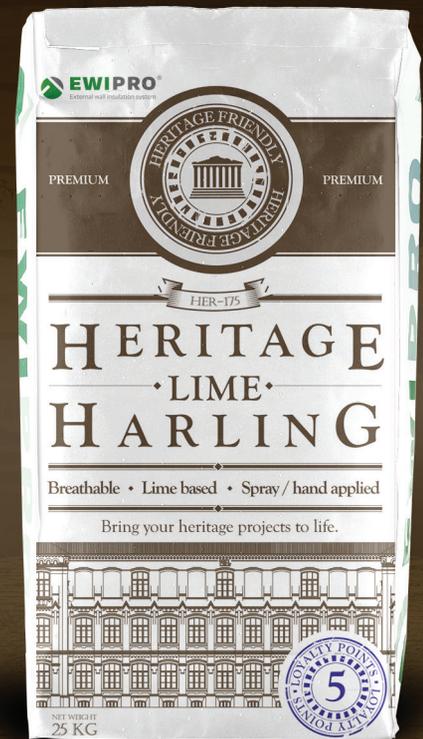


New Heritage Range



Heritage Lime Basecoat

The Heritage Lime Basecoat is intended for use as a basecoat layer on substrates with a low or medium salt content. This basecoat is excellent for use as part of a breathable render-only system and works effectively when used in conjunction with our Heritage Lime Render. Because of the presence of lime within the basecoat it has a high porosity which allow for vapour permeability.



Heritage Lime Harling

The Heritage Lime Harling is intended for creating a breathable 'harl' coat. The Lime Harling offers a roughcast finish, providing a mechanical key for further materials i.e. Heritage Lime Render and Heritage Lime Basecoat to bind to.

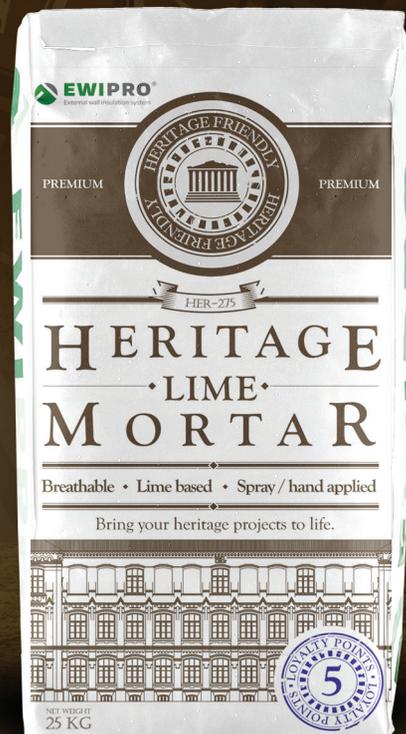
Bring your heritage projects to life!

Our new Heritage range is designed with breathability in mind. We have combined modern technology with traditional lime-based materials in order to create products that offer a high level of functionality. Our Heritage range is ideal for heritage renovation projects where breathability is essential for preservation and maintenance of structural integrity. Lime is also a natural resource, therefore offering an aspect of environmental friendliness.



Heritage Lime Render

The Heritage Lime Render is a cement-free, breathable render intended for use as a decorative finish within a render-only system. Due to the presence of lime within the mixture, the render has unparalleled vapour permeability which makes it perfect for renovation or restoration projects on older properties, where breathability is vital to ensuring continued structural stability.



Heritage Mortar

The Heritage Mortar is a lime-enhanced, fibre-reinforced mortar intended for use as a putty and for renovation/restoration of decorative features to fill cavities and cracks within a façade. Because of the presence of reinforcing fibres within the mortar, it offers high grip and quick adhesion to a universal variety of surfaces.

OCDC One Coat Dash Cover

Banish Pebbledash with our
One Coat Dash Cover!

...can be applied directly on top!

Breathable, lightweight and flexible, OCDC is the simple solution to covering over pebbledash.

—
No need to hack off the existing render, OCDC can be applied directly on top.



With its thermal properties, high air content and excellent tensile strength, OCDC offers stability and durability, allowing the underlying pebbledash to breathe while providing a protective, insulating layer. OCDC can be applied up to 25mm thick in one pass, creating a smooth surface that is ready to be painted or rendered.

The result is a complete transformation, with a decorative finish that will stand the test of time. If you're looking to give your pebbledashed property a facelift, then OCDC is the ideal product.



Adhesives & Basecoats

Premium Basecoat

As our strongest and most flexible basecoat, the Premium Basecoat can be utilised in two ways. Used in render-only systems, it makes a strong and stable basecoat. In external wall insulation systems, the reinforcing fibres in the basecoat activate to attach either our Mineral Wool or Wood Fibre insulation boards to the wall. Once the basecoat has dried it provides unparalleled strength and flexibility. We therefore recommend the use of the adhesive as a basecoat layer when applying 'render only' systems to substrates.



EPS Adhesive

The EPS Adhesive is our classic adhesive, best for mounting EPS boards onto common substrates as part of external wall insulation systems. It is a quick drying, reliable and capable adhesive which ensures strength and flexibility of EWI systems. The EPS Adhesive is waterproof, frost proof and vapour permeable, ensuring that your EWI system remains stable and structurally sound for years to come.



EPS Basecoat

The EPS Basecoat Adhesive is designed to be a dual-purpose adhesive. Firstly, it can be used to attach EPS boards to the wall, as a stronger substitute for the EWI-210 EPS Adhesive. It can also be used within the mesh reinforcement layer of our EWI Pro EPS thermal insulation system. Because the EPS Basecoat Adhesive offers the benefits of both a basecoat and an adhesive, it allows installers to have only one type of bag on site - meaning less waste of materials.



Lightweight Basecoat

EWI-269 Lightweight Basecoat is a highly breathable basecoat which compliments both old and new builds. Once dry, the adhesive provides a strong, flexible and waterproof layer. The Lightweight Basecoat is designed for use internally or externally on high performance blockwork, solid brick walls and more. One of the unique characteristics of our Lightweight Basecoat is that it can be applied at a thickness of up to 25mm in one pass without compromising breathability.



Levelling Mortar

The EWI-260 levelling mortar can be used on walls to produce a smooth surface before a basecoat or EWI system can be applied. The levelling mortar can be used to fill and repair holes and other imperfections up to a maximum thickness of 50mm, and can be applied on various different walls and substrates, including existing pebbledash, concrete as well as different types of block or brick work.



Winter Adhesive

EWI-221 Winter Adhesive can be used both for the basecoat reinforcement layer and for fixing EPS boards on to the substrate. The difference between the Winter Adhesive and our other adhesives is that it can be used at temperatures down to zero degrees. It is therefore suitable for use 365 days a year, allowing maximum efficiency and limiting the amount of time gone to waste due to poor weather.



Primers

Mineral and Acrylic Primer

Designed for final preparation of a substrate prior to applying the EWI Pro Mineral, Acrylic and Mosaic Renders. While strengthening the substrate, the EWI-330 actively balances its absorptivity, facilitating ease of render application and creating an enduring and stable finish. The EWI-330 can be tinted to match the colour of the render to create a seamless coloured finish.



Silicone Primer

The Silicone Primer is a high-quality render primer which is intended for use to prepare the basecoat before applying the EWI Pro Silicone Render. Used to help create a strong and secure render finish, Silicone Primer aids the adhesion of the render and enables ease of application. EWI-332 can be pigmented to match the colour of the render.



SiSi Primer

The Silicone Silicate Primer is a deep-penetrating render primer, designed to prepare the basecoat prior to applying EWI Pro silicone silicate render. SiSi Render Primer facilitates the application of render coats and enhances its adhesion to the substrate, creating a long-lasting finish that will withstand the test of time. EWI-333 can be coloured to match the render.



Universal Primer

Universal Primer boosts the adhesion of materials to the substrate. An integral product for smooth substrates where an artificial key is required for binding the materials, the universal primer contains quartz aggregate to create a textured surface onto which the adhesive layer can bind easily. It is tinted red to enable ease of application and is perfect for ensuring a robust finish.



Water Based Primer

An essential primer for preparing the wall before installing EWI or render only systems. The Water Based Primer dries completely colourless and works by limiting the amount of water that the substrate absorbs from the adhesive, thereby ensuring effective application of materials. It provides enhanced adhesion and enables a dependable and durable finish.



Fungicidal Wash

Our Fungicidal Wash is perfect for helping to prepare a substrate prior to applying our EWI or render systems. The Fungicidal Wash takes just 24 hours to kill all microorganisms on the substrate, including algae, mould and lichen. The wash can be applied using either a brush, sponge or cloth.



Render Accelerator

Ready-to-use additive to speed up the drying time of our Silicone Silicate, Silicone and Acrylic Renders. Perfect for rendering in the winter, or in cold weather.



Insulation Materials

We are proud to offer a range of insulation materials to provide EWI solutions for a wide variety of properties. All of our insulation materials are installed with a double fixing method of both adhesive and mechanical fixings.

Expanded Polystyrene (EPS)

The focal point of our external wall insulation systems is Expanded Polystyrene (EPS). EPS is a high-performing and cost efficient insulation material. When installed on a property, EPS very easily upgrades the thermal properties of the building - improving U-values and reducing the risk of water penetration and condensation.

EPS boards can be used on masonry and system-built properties as well as with our range of EWI Pro render systems. It is designed to be applied externally using EWI Pro adhesive and mechanical fixings.

EWI Pro EPS boards are available in a large range of thicknesses (from 20mm to 200mm - going up in 10mm increments).

- Great value
- Easy to work with
- Lightweight but durable
- Dense material – low thermal conductivity
- Low moisture absorption
- Non-degrading



Mineral Wool

Rockwool insulation features as part of our Mineral Wool insulation system. Mineral Wool offers both improved thermal conductivity and acoustic insulation. One of the most appealing aspects of Mineral Wool is that it offers outstanding fire resistance, because Mineral Wool is non-combustible. This means that it acts as a fire barrier, helping to slow down the rate of flames without contributing to the fire. Mineral Wool systems are a premium system because of their breathability. The presence of fibres and moisture repelling compounds help to wick moisture through the material and away from the substrate.

Mineral Wool boards are made up of two different density layers of wool – the outer layer being the most dense and therefore providing a firm surface on which to apply the basecoat and render.

Rockwool external wall insulation boards require metal pin mechanical fixings as well as adhesive to tie them to the wall (a minimum of 7 fixings are required per m²).

- Breathable
- Non-combustible
- Unparalleled thermal performance
- High acoustic insulation performance

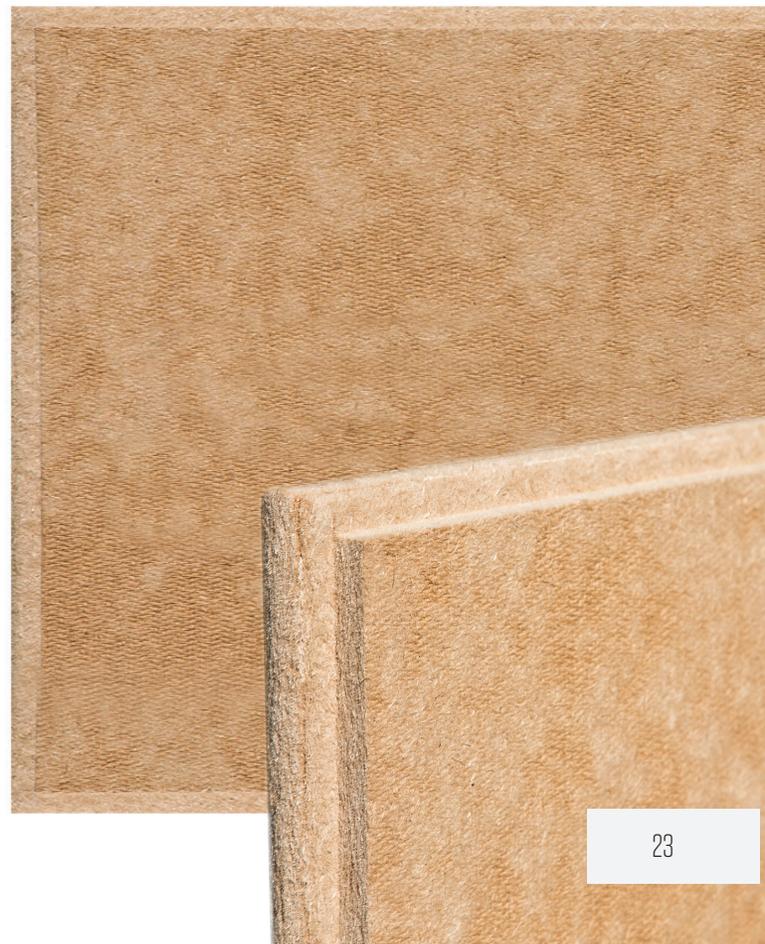


Wood Fibre

Wood Fibre insulation operates as part of our most sustainable system. It is a highly breathable insulating material, providing an outstanding level of thermal comfort within the home. Not only does Wood Fibre insulation offer superlative insulating properties, it also has the credential of being an environmentally friendly material (the Wood Fibre insulation that we offer is NaturePlus certified).

The Wood Fibre Insulation will regulate the passage of water through the building structure, allowing for the diffusion of moisture and preventing any moisture build-up within the property and the EWI system. When used in conjunction with our highly breathable silicone render, the Wood Fibre Insulation system offers unbeatable performance.

- Breathable
- Sustainable
- Excellent thermal performance
- Ideal for timber frame properties



Beading & Mesh

Beading and mesh is essential in an EWI or render system to reinforce weak points within the structure. Here at EWI Pro, we offer a vast range of high quality beading to suit every possible need, including corner bead, bellcast bead, stop bead and more.

Starter Track

Starter Track allows insulation to be installed upon a solid footing. The starter track is 2.5m in length and is attached to the wall using screws and a spirit level to ensure it is installed flat.

Clip-on Profile

The Clip-on Profile ties in the fibreglass reinforcement mesh with the starter track, ensuring you have the most professional finish possible.

Corner Bead with Mesh

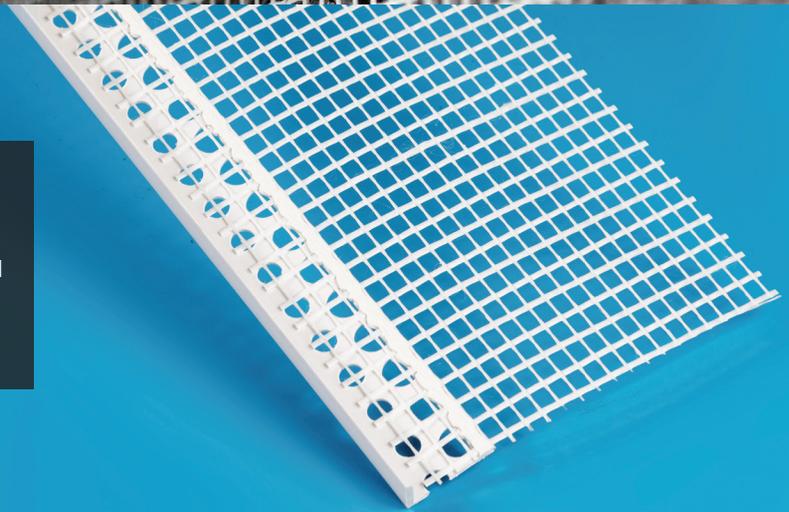
Corner Bead is used for reinforcing 90° angles in the building structure. Corner Beading is crucial for strength, crack resistance and clean lines around windows, corners and door frames.

Fibreglass Mesh

EWI-66640 Fibreglass Mesh (50m² coverage) is a high quality, heavy-duty grade fibreglass reinforcing mesh. It gives strength and flexibility to external wall insulation and render-only systems, to ensure they stay free of cracks for years to come!

Stop Bead

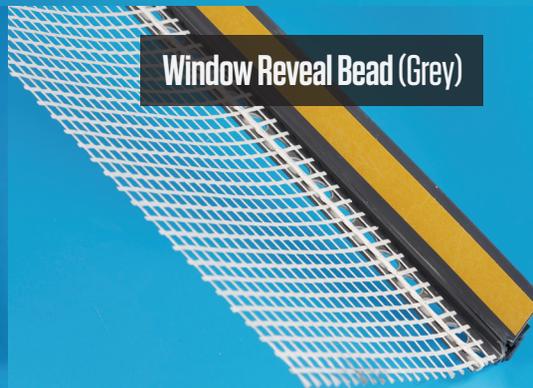
Stop Bead is used to ensure a clean, sharp finish at the edges of EWI and render systems. The Stop Bead comes with a 100mm wing of fibreglass mesh that is embedded within the basecoat layer.



Window Reveal Bead



Window Reveal Bead (Grey)



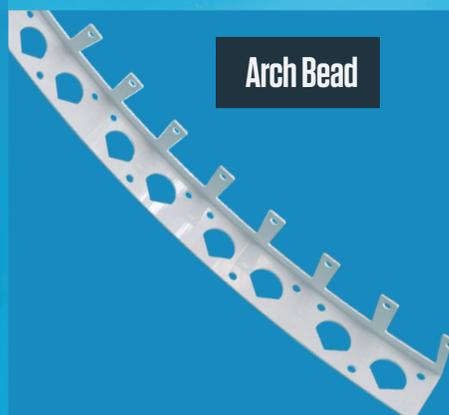
Window Head Bead



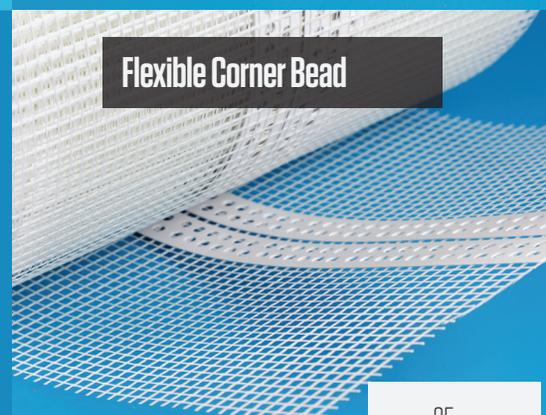
Movement Bead



Arch Bead



Flexible Corner Bead

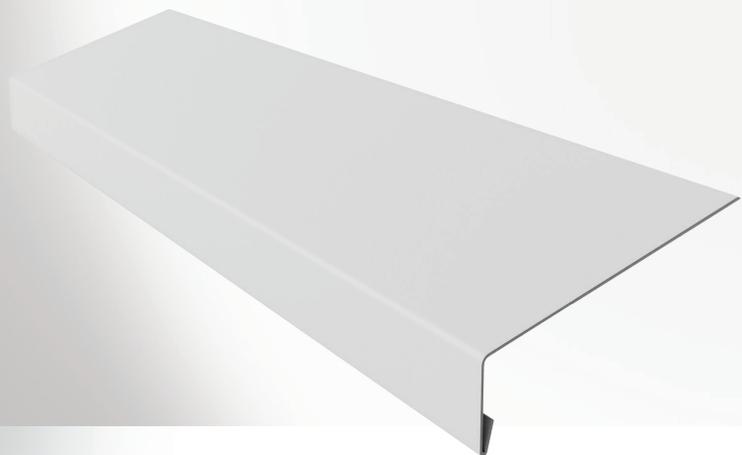
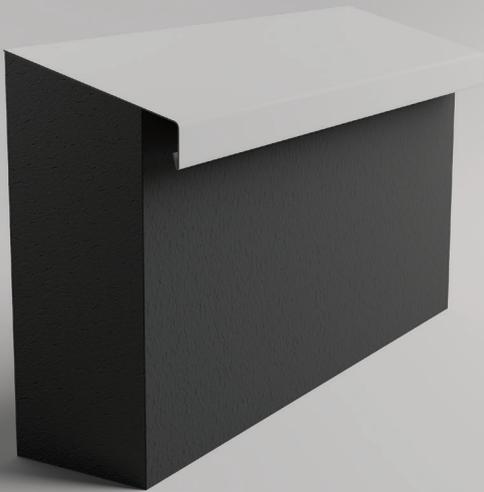


Verge Trims

All of our Verge Trims are made from powder coated aluminium, designed for ensuring the external wall insulation system is completely waterproof. Verge Trims redirect water away from the system, ensuring that the back of the insulation is protected against water ingress. We offer Verge Trim in a variety of shapes and sizes to provide a solution for every property and insulation system.

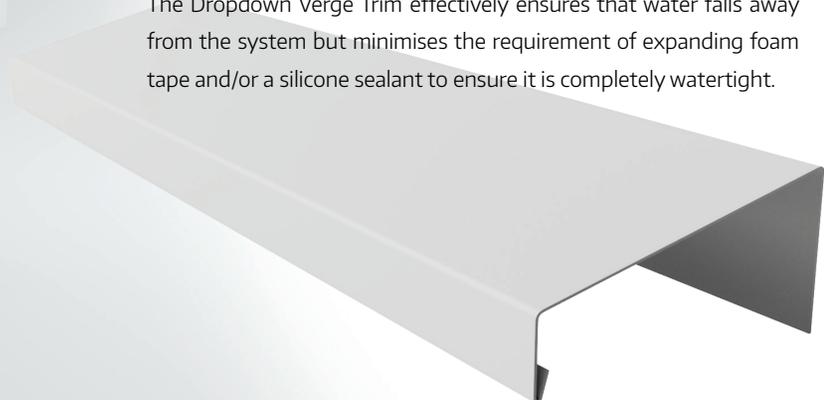
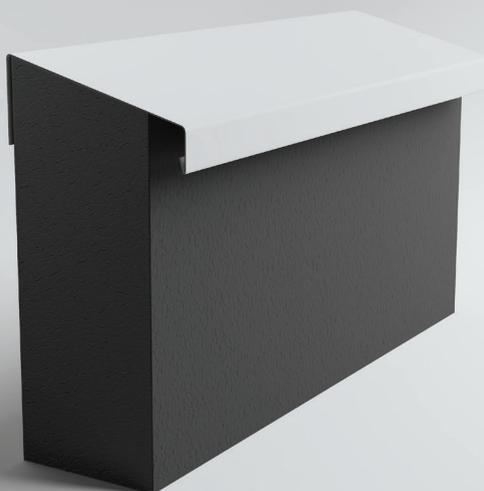
Over-sill Verge Trim

The Over-sill is designed to extend the length of an existing window sill, ensuring that it overhangs the insulation. The purpose of this particular type of Verge Trim is to prevent water ingress behind the insulation, which can cause serious damage.



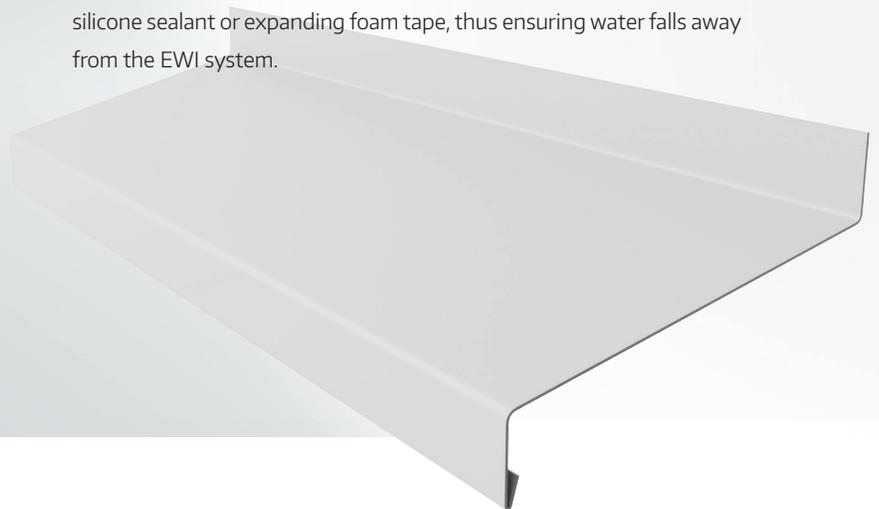
Dropdown Verge Trim

Dropdown Verge Trim is designed to go under sills, soffit boards and applications that require fixing from below. This verge trim is available in various different widths to house different thicknesses of insulation. The Dropdown Verge Trim effectively ensures that water falls away from the system but minimises the requirement of expanding foam tape and/or a silicone sealant to ensure it is completely watertight.



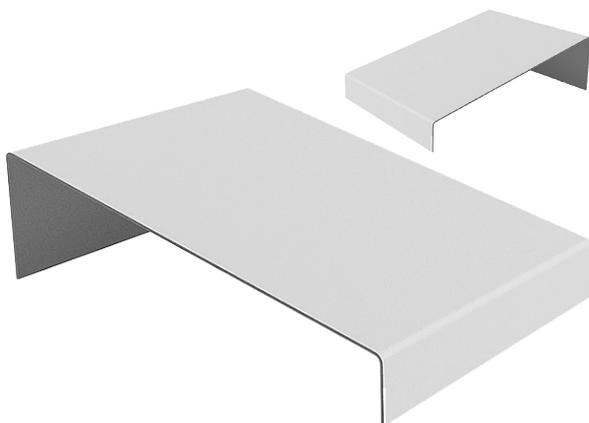
Upstand Verge Trim

Upstand Verge Trim is designed to be used in applications where you are fixing from above, such as the connection to a flat roof or where the upstand can slide up behind the fascia board. It is available in various different widths for different thicknesses of insulation. The Upstand Verge Trim creates a completely waterproof seal without the need for silicone sealant or expanding foam tape, thus ensuring water falls away from the EWI system.



Verge Trim Connectors

A Verge Trim Connector is used to secure the joint where continuous lengths of Verge Trim are installed. The connectors ensure effective waterproofing around all joints.



Verge Trim End Caps

Our Verge Trim End Caps come as a pair and are used to create a secure and aesthetically pleasing finish to the Verge Trim or the Over Sill. They also add additional protection for the EWI system against weathering and water ingress.



Mechanical Fixings

The EWI Pro external wall insulation systems are dual-fix systems. This means that the insulation boards are secured to the substrate using adhesive and mechanical fixings to further anchor them to the wall. As a result, EWI Pro systems offer unbeatable stability and durability.



Metal Lamella Firebreak Fixings

Metal Lamella Firebreak Fixings are made of stainless steel and are the mechanical fixing of choice when used in conjunction with firebreaks since they will not succumb to high temperatures. This fixing type offers a higher fire protection than other fixing types when used with mineral wool external wall insulation systems.



Metal Pin Hammer Fixings

Our Metal Pin Hammer Fixings come in various sizes and are ideal for professional installation of the insulation boards onto the substrate. Made from plastic bodies and metal rods, they reduce thermal bridging to a minimum, ensuring that the system stays as effective as possible. Because the rod is metal, they provide a huge amount of strength (Metal Pin Fixings are suitable to support our Mineral Wool insulation systems).

Metal Pin Screw Fixings

Metal Pin Screw Fixings are screwed in rather than hammered in. The screw fixings come in 8 different lengths depending on the thickness of the insulation materials used. The fixing anchor should always travel at least 35mm into the substrate. Made from plastic bodies and metal screws, they reduce thermal bridging to a minimum.



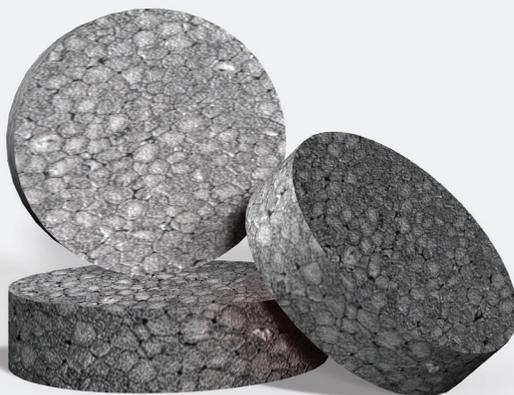
Plastic Pin Hammer Fixings

Our Plastic Pin Hammer Fixings are designed to be hammered into the system and come in several of lengths. They are ideal for securing EPS insulation boards onto the substrate. Made entirely from plastic, they reduce thermal bridging and ensure that the system is effective and secure in the long term.



Thermo Dowel Caps for EPS

EWI-740 Thermo Dowel Caps for EPS Polystyrene help reduce thermal bridging when using metal fixings. The fixings get countersunk into the EPS and these caps fit tightly on top.

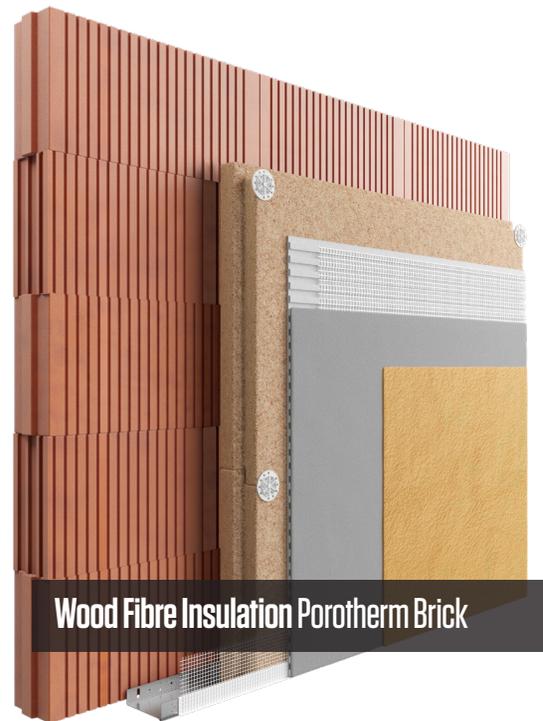


EWI Pro System Build-Ups

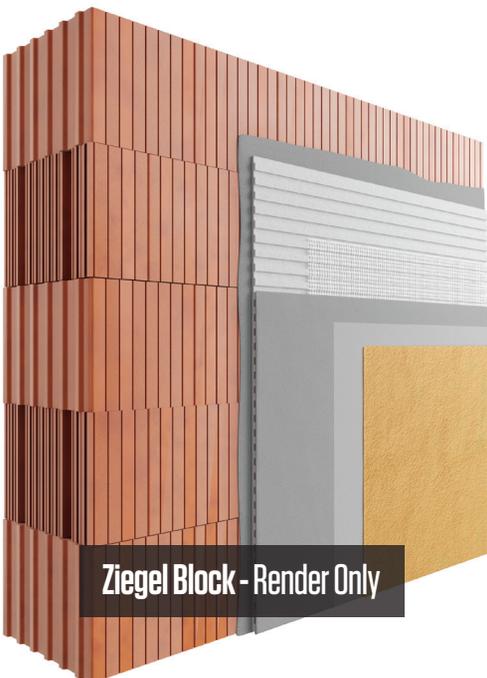




New Blockwork Render Only



Wood Fibre Insulation Porotherm Brick



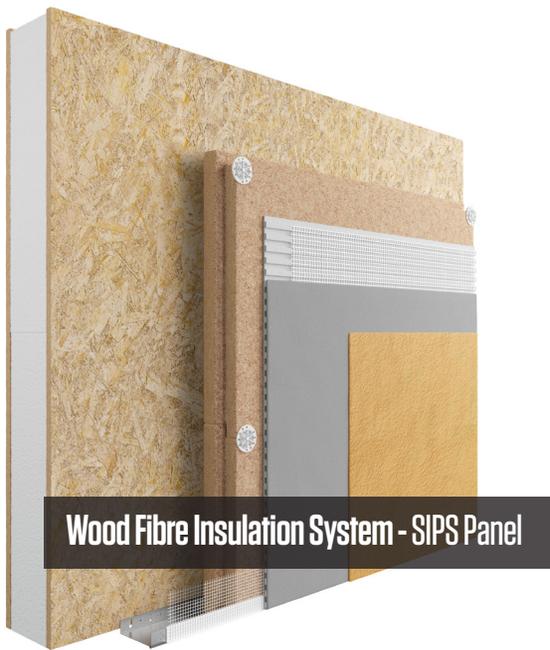
Ziegel Block - Render Only



Mineral Wool Insulation - Porotherm Brick



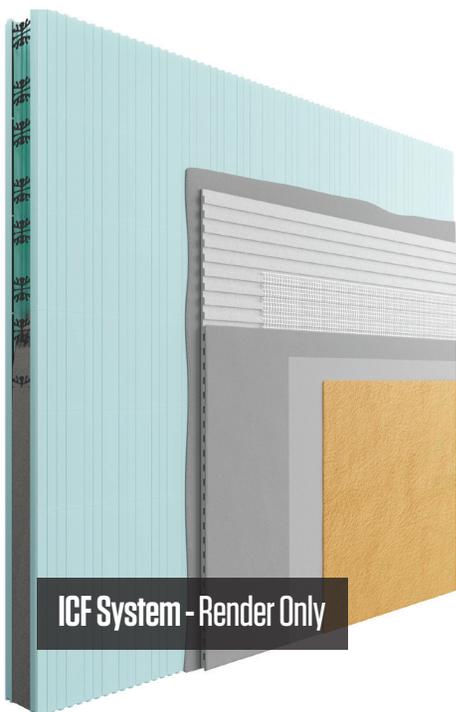
One-Coat Dash Cover - Re-rendering



Wood Fibre Insulation System - SIPS Panel



**Wood Fibre Insulation System
- Therma Holz 100 Blocks**



ICF System - Render Only



Timber frame construction - better living system



Mineral Wool Insulation System- Sheathing Board



**Ventilated System onto Stainless Steel
- Render Only**



Ventilated System onto Timber Construction - Render Only



EPS Insulation System Sheathing Board

Material Coverage Guidelines

This document specifies the amounts of materials you will need for your project. These numbers have been compiled using the factory guidelines. Please note: the actual coverage may vary from project to project due to the variability of site conditions.

Substrate Primers

- EWI-301 Water Based Primer (5L): ideal for preparing walls prior to painting or application of render. Goes onto brick or rendered surfaces. Coverage - between 15m² to 30m², depending on the substrate.
- EWI-310 Universal Primer (20kg): ideal for preparing substrate surfaces prior to insulation or render application. Great for bonding surfaces or loose pieces of render as well as cracks. Coverage - between 50m² to 70m², depending on the substrate.

Adhesives and Basecoats

EWI-220 EPS Basecoat (25kg): has a dual purpose: one, sticking the EPS onto the wall; two, sinking the fibreglass mesh layer on top of the insulation.

Coverage:

- For adhesion and basecoat: each bag - 2.8m²
- Basecoat for rendering only: each bag - 4.5m²

EWI-225 Premium Basecoat (25kg): has a dual purpose: one, sticking the Mineral Wool onto the wall; two, sinking the fibreglass mesh layer on top of the insulation.

Coverage:

- For adhesion and basecoat: each bag - 2.8m²
- Basecoat for rendering only: each bag - 4.5m²

Mechanical Fixings

The mechanical fixings either come with plastic or metal rods, or they are self-rotary (Eco Drive). Fixings comes in different lengths (135mm, 155mm or 175mm).

- EWI-720 Plastic Fixings: come in boxes of 200 - coverage is typically 7 per m² or 5 per insulation board.
- EWI-730 Metal Fixings: come in boxes of 200 - coverage is typically 7 per m² or 5 per insulation board.
- EWI-710 Eco Drive Fixings: come in boxes of 100 - coverage is typically 7 per m² or 5 per insulation board.



Mesh

- 610 Fibreglass Mesh: used to embed into the EWI-220 Basecoat and as part of the reinforcement layer. A 50m² roll will cover 42.5m² when overlapped.

Render Primers

Render primers are designed to bond to the dried basecoat or reinforcement layer and help with the pre-application of the topcoat.

- EWI-330 Acrylic & Mineral Render Primer: coverage - 20m² for a 7L bucket, or 60-70m² for a 21L bucket.
- EWI-332 Silicone Render Primer: coverage - 20m² for a 7L bucket, or 60-70m² for a 21L bucket.
- EWI-333 Silicone Silicate Primer: coverage - 20m² for a 7L bucket, or 60-70m² for a 21L bucket.

Renderers and Topcoats

Renderers are sold either in pre-mixed buckets (Silicone, Silicone Silicate or Acrylic) or in bags for mixing (Mineral, Monocouche or Dash Receiver). Renderers are sold in different grain sizes with 1.0mm and 1.5mm as the most popular grain sizes on the market.

1.0mm grained renderers: coverage - 10m² (+) depending on application.

- EWI-010 Acrylic Render
- EWI-040 Silicone Silicate Render
- EWI-075 Silicone Render

1.5mm grained renderers: coverage - 7-10m² depending on application.

- EWI-010 Acrylic Render
- EWI-040 Silicone Silicate Render
- EWI-075 Silicone Render

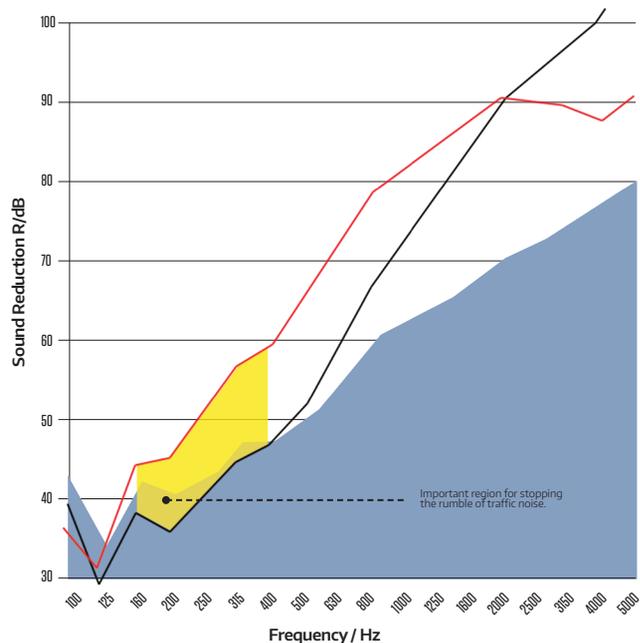
Mineral render needs to be pre-mixed with water and painted with Silicone Paint.

- EWI-060 Mineral Render - coverage - 8-10m² depending on application
- EWI-005 Silicone Paint - coverage - 60-70m² (1 coat only).

Acoustic and Thermal Performance of EWI Systems

One element of EWI Pro’s customisable solid wall insulation system is the choice of insulating materials. Aside from providing thermal insulation, one might also consider installing EWI to help limit the impact of noise pollution. In this chapter we will briefly detail the impact of our solid wall insulation systems and their ability to reduce airborne sound.

Rockwool is the best choice from a noise-reduction point of view. Research carried out by the Italian company Materiacustica illustrates the impact of adding 100mm of Rockwool insulation to an external wall, as shown on the table below.



System	Rw
Base wall (160mm concrete)	56
Rockwool (100mm)	60
EPS (100mm)	51

system uses EPS (expanded polystyrene) as the insulation material. In order to meet building regulations 90mm of EPS is required - this takes the U-value of the wall down to just 0.3w/m2k.

The open pore structure of stone wool means that it is highly efficient against noise pollution. As sound energy travels through fibres in the material, trapped air molecules move back and forth inside and dissipate sound energy as tiny amounts of heat.

In contrast, EPS actually proliferates sound in the lower frequency range (125 - 500Hz), although it does have a more positive impact on higher frequency noise - this is the result of its closed cell structure.

Energy Savings and EWI Pro

Our EWI Pro systems not only improve the look of the property; they also vastly improve thermal efficiency, resulting in lower energy bills.

With ever-increasing energy prices, it may come as a pleasant surprise that our insulation system can be retrofitted on older properties; we can bring the thermal efficiency of the building fabric up to modern day efficiency standards.

Unsurprisingly, the thicker the insulation used in the external wall insulation system, the bigger the energy savings. Our most cost-effective external wall insulation

U-value (w/m ² k)	Thickness of insulation (mm) attached to 215mm solid wall brickwork				Requirement
	EPS (mm)	Mineral Wool (mm)	XPS (mm)	Wood Fibre (mm)	
0.30	90	110	110	120	Refurbishment
0.28	100	120	120	140	Extensions
0.18	170	200	200	220*	New Build
0.15	210	270*	250*	260*	PassivHaus

*Made up of 2 layers of insulation

The table illustrates the required thickness of different insulation materials when looking to achieve specific U-values.

Cavity wall insulation versus external wall insulation

In the UK, there are a huge number of properties with cavity walls - these are built from two skins of brick with a space between them. The original reason for the gap was to help prevent moisture crossing the wall structure. As time went on, the cavity provided another purpose - it could be filled with insulation to improve the thermal efficiency of the wall and help reduce energy demand. The process is well established and involves drilling cavity walls and injecting insulation into the cavity. The issue, however, is that older cavities tend to be very narrow. This means the amount of insulation that can be injected is very limited - potentially just 40-50mm.

Compare this to external wall insulation, where space is not a limiting factor. Our installers tend to use 90mm EPS as a minimum, but up to 250mm insulation has been used in the past. This means that energy bills can be lowered further than with cavity wall insulation.

Thermal conductivity variations between insulation materials

Insulation Type	Thermal Conductivity (W/mK)
Grey EPS 70	0.032
Rockwool DD Insulation	0.036
XPS	0.038
Wood Fibre	0.038-0.043

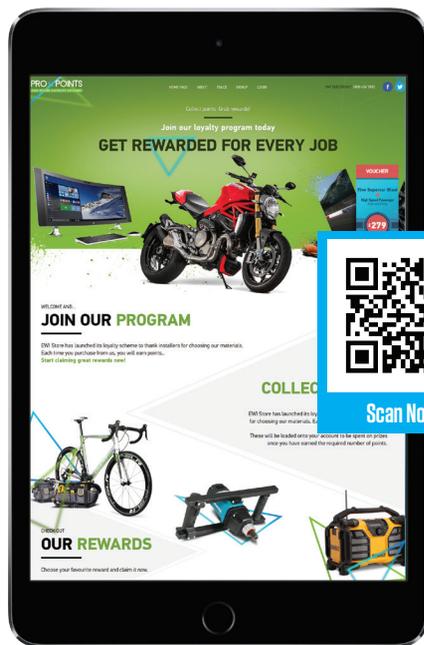
Pro Points

The EWI Pro Loyalty Scheme

EWI Pro has launched its Pro Points scheme to reward installers for choosing our products!

Pro Points is the EWI Pro loyalty scheme, designed to reward our installers with tools and gadgets for continuing to use our materials. Once signed up, our installers will be rewarded points for every bag, bucket or roll bought from one of our suppliers.

The points are added to your account, and every month we send a breakdown of the points earned during the month - allowing you to save up and claim big rewards!

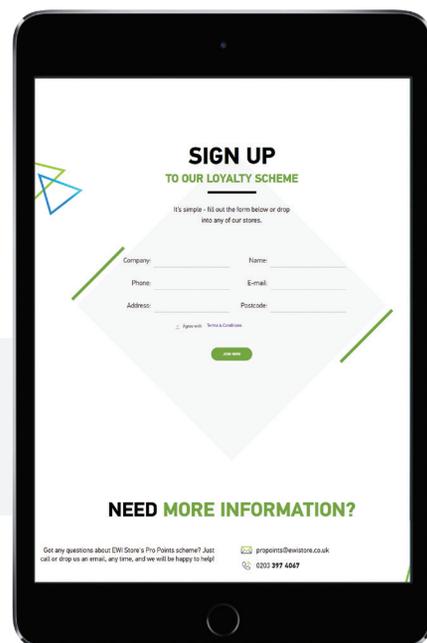


Visit www.ewistore.co.uk/pro-points

1

2

Sign up and start collecting points.





PRO POINTS
EWI PRO LOYALTY SCHEME

Pro Points is the EWI Pro loyalty scheme
designed to reward our installers





EWI Install Guide

Thin Coat Render

STEP 1 Substrate Preparation

As with any construction project, preparation is extremely important. Before applying any insulation to the substrate, it needs to be examined and checked. The substrate must be clean, dry and dust-free. If applicable, it also needs to be cleaned of paint and other substances which may affect the way the basecoat will perform. One of the best ways to achieve a clean and ready surface is to use a high-pressure water-jet or prepare the wall manually using a wire brush.

STEP 2 Levelling an Uneven Substrate (EWI-260)

If the existing surface is very uneven, then a coat of EWI-260 Levelling Mortar should be applied to the uneven surface area to level it. Simply mix with clean, potable water at a ratio of 4L per 25kg bag. The Levelling Mortar must be allowed to dry for at least 48 hours before any further work is carried out.

STEP 3 Priming the Wall before Rendering

Once the substrate has been cleaned and levelled, it then needs to be primed before any Basecoat Adhesive can be applied.

We recommend priming the substrate with EWI-301, which is a deep-penetrating water-based primer. It works in a similar manner to PVA primer, by helping seal porous surfaces prior to carrying out any works.

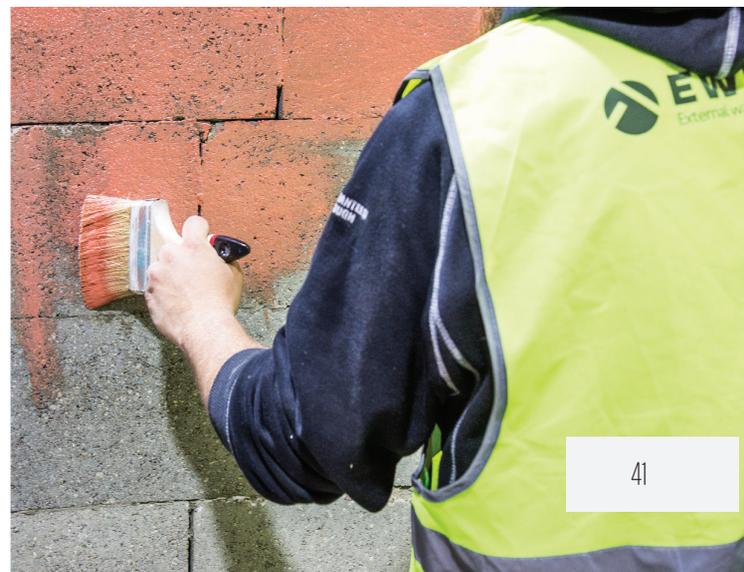
If the substrate requires increased adhesion (on very smooth surfaces for example), then we recommend using our EWI-310 Universal Primer. This contains silicate, which provides a mechanical key to aid adhesion of the basecoat adhesive.

The amount of priming and volume of primer required will depend on how absorbent the underlying substrate is, but typically this can be anywhere from 50-300ml per m².

The primers will take approximately 4 hours to dry. However, additional coats may be required depending upon how absorbent the substrate is. 24 hours should be left between primer coats.

MATERIALS REQUIRED

EWI-301 Water Based Substrate Primer (5 litres)
EWI-310 - Universal Primer (20 litres)



STEP 4 Applying Beading

Beading is used in our EWI Pro thin coat render systems to reinforce areas that are likely to experience impact (e.g. external corners) and also to try to direct water away from the surface of the render by providing a drip. All of our beading is uPVC and therefore will not rust. Cut beads to the required length and embed them into the basecoat layer.

CORNER BEADS

Corner Bead should be used on every external corner to help reinforce this area. The corner bead also helps achieve a consistent 90 degree angle at the corner.

STOP BEADS

Stop Bead is used to achieve a defined termination point where the render comes to an end, for example between mid-terrace properties.

BELLCAST BEADS

Bellcast Beads are used to provide a drip at either the bottom of the render system or above openings to help mechanically drive water away from the surface of the render system.

MOVEMENT BEADS

Movement Beads are installed within the basecoat directly above expansion joints within the masonry to achieve a neat and consistent enclosing detail. They can also be used where there is a particularly long run of render to try and help reduce the risk of cracking (typically every 7 linear metres of render a movement bead should be installed).

FLEXIBLE UPVC ARCH BEAD

Flexible uPVC Arch Bead is used to form perfect arches by matching the contours of the arch. The bead sits within the basecoat layer and provides sharp clean edges as well supporting the angles against accidental impacts.



Corner Beads



Stop Beads



Bellcast Beads



Movement Beads



Flexible uPVC Arch Bead



FLEXIBLE CORNER BEAD

Flexible Corner Bead allows you to reinforce angles that are not 90°. The corner bead comes in long 25-metre strips, and when cut to size, helps provide the additional strength in areas that tend to encounter more knocks than average.



Flexible Corner Bead

WINDOW REVEAL BEAD

The Reveal Bead is used around windows to help provide a tidier finish. The bead is used on vertical reveals, as well as the top reveal where the mesh is tied into the reveal using the basecoat adhesive. The mesh can also be cut depending upon the size of the reveal. The reveal bead has a removable tab, so once the final top coat has been applied, you can simply remove the tab, leaving a tidy finish. (Available in white or grey).



Window Reveal Beads

WINDOW HEADER BEAD

Prevents water travelling back along the reveal at the top of window frames. The drip on the bead ensures that water travelling vertically down the wall towards a window will be directed onto the window sill. The bead has two mesh wings, which are embedded into the basecoat layer – ensure that you install the bead in the correct orientation.

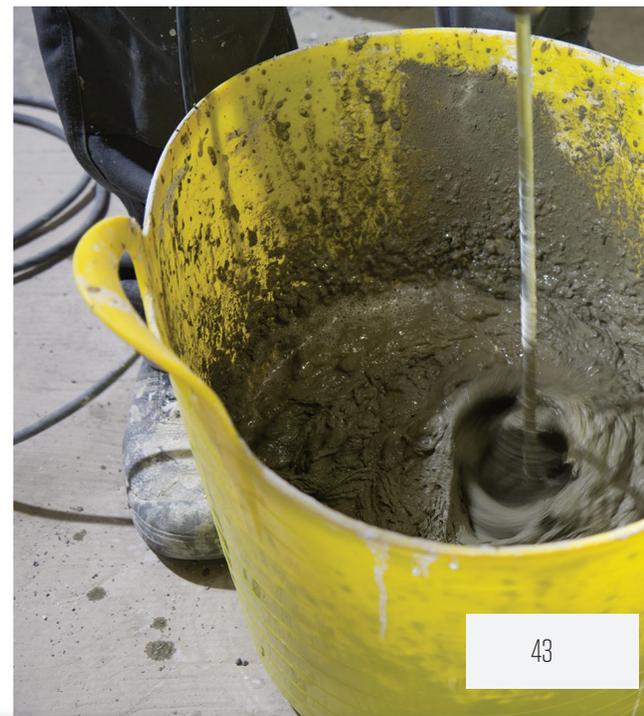


Window Header Bead

STEP 5 Preparing the Basecoat Layer

Once the beading is in position, then the basecoat reinforcement layer is installed (remember the beads are completely embedded within the basecoat so are not visible). For this stage you can use either the EPS Basecoat Adhesive, or the Premium Basecoat for extra strength and longevity.

Correct preparation of the EPS Basecoat Adhesive is important. EWI-220 EPS Basecoat should be mixed with clean, potable water at a ratio of 5.5L per 25kg bag. Alternatively, The EWI-225 Premium Basecoat should be mixed with clean, potable water at a ratio of 6.5L per 25kg bag. Both should be mixed using a heavy-duty power plaster mixer on a slow rotating setting. Freshly mixed compound should be left for approximately 5 minutes and then re-mixed for a short period of time before use. Bucket life is approximately 1 hour, although this is dependent upon the weather conditions.



STEP 6

Applying the Basecoat Layer

The Basecoat can be applied as either a one-coat or two-coat system:

One coat system

The one coat system should be applied with a notched trowel to the substrate at a thickness of 6-8mm. The mesh is then embedded within the basecoat in vertical strips using the flat edge of a notched trowel. Each strip of fibreglass mesh should overlap its neighbouring strip by approximately 10-15cm.

Two coat system

The two coat system should be applied with a notched trowel to the substrate - this layer needs to be between 3-4mm. The mesh is then placed on to the basecoat in vertical strips and embedded using the flat edge of a notched trowel. Another coat of basecoat should be applied onto the mesh at a thickness of 3-4mm before the first coat has gone off.



STEP 7

Priming before Rendering

Once the basecoat reinforcement layer has dried for a period of 24-48 hours (depending upon the weather conditions), it needs to be primed prior to applying the render. The Primer is simply painted on top of the basecoat reinforcement layer and should be selected based upon which type of render is going to be used. It will need to be left to dry for 12-24 hours prior to rendering.

STEP 8 Rendering the Walls

Using a trowel, apply a thin layer of the render to the primer surface. With granulated thin coat renders, remember to match the thickness of the render application to the grain size - so with a grain size of 1mm the render will need to be applied at a 1mm thickness.

Once the render has been applied, smooth it out using a trowel, removing any excess off the wall to ensure an extremely thin layer. Using a PVC float, work the render in circular movements - this will provide a textured finish. Remember to have enough tradesmen on-site to ensure that whole sections of the walls can be done at the same time. If you attempt to do 'half a wall' at a time, you will notice scarring where the two render sections meet.

Mineral render

Unlike our ready to use renders, Mineral Render comes as a white dry mix. The Mineral Render therefore will need to be painted with a Silicone Paint to get your desired colour. Mineral Render dries far quicker than liquid renders, therefore it is often used when installing in colder/humid climates.

Mineral Render requires 6.5L of water per 25kg bag. The compound should be mixed using a heavy-duty power plaster mixer on a slow rotating setting to produce a smooth, even white plaster prior to application. Leave for 24 hours drying time before applying EWI-003 Silicone Paint.





EWI Install Guide

Thick Coat Render



- One coat for fast application
- Through-coloured
- Water resistant
- Suitable for Spray Application

The EWI-090 Monocouche Scratch Render is a one-coat, weather resistant decorative render. It is easy to use, as it requires only the addition of water. We recommend that you attend one of our regular training sessions before attempting to install our Monocouche Scratch Render.

STEP 1 Surface Preparation

Before applying any render to the substrate, it needs to be checked. All damage to the substrate from frost attack, salt or corrosion must be repaired. Damaged bricks or blocks must be replaced, and any holes or insufficiently-filled joints repaired. One of the best ways to achieve a clean and ready surface is to use a high-pressure water jet or prepare the wall mechanically with a wire brush.

It is recommended that one coat of EWI-360 Fungicidal Wash is applied to the entire surface, by roller or knapsack spray, and allowed to dry. All organic growth must be removed by a stiff bristle brush. The Fungicidal Wash takes just 24 hours to kill all microorganisms on the substrate. The wash can be applied using either a brush, sponge or cloth. A 5L tub will cover 20-30m², depending upon the absorptivity of the substrate.

If the existing surface is very uneven, then a coat of EWI-225 Premium Basecoat should be applied to the uneven surface area to level it. EWI-66640 Fibreglass Mesh should be embedded into this basecoat, and the strips should overlap by 10cm. Each roll of fibreglass mesh is 50m long by 1m wide. The Premium Basecoat must be allowed to dry for at least 24 hours before any further work is carried out.

Before application on painted walls, a preliminary coat of EWI-225 Premium Basecoat should be applied to the whole of the painted substrate. EWI-66640 Fibreglass Mesh should be embedded within the basecoat and 4 mechanical fixings per square metre should be applied. The Premium Basecoat must be allowed to dry for at least 24 hours before the application of the EWI-090 Monocouche Scratch Render.

STEP 2 Surface Priming

Once the substrate has been prepared, it will need to be primed before the Monocouche Render can be applied. We recommend using the EWI-301, which is a deep penetrating, water-based primer. The amount of primer required will depend upon the absorptivity of the substrate - this can typically be anywhere from 50-300ml per m². EWI-301 Water Based Primer will take approximately 4 hours to dry, however, additional coats may be required. Leave to dry completely before applying the render.

STEP 3 Applying Beading

Beading is used in our EWI Pro Monocouche system to reinforce areas that are likely to experience impacts (e.g. external corners) and to try to direct water from the surface of the render by providing a drip. We offer different sizes of beading depending on whether it is applied before the first pass of render or after the first pass. If applying beading directly to the prepared substrate, the 16mm beading is required, but if applying the beading after the first pass of render please use the 10 / 11mm beading.

All of our beading is uPVC and the bead edges will be visible after the render is scraped back – therefore visibility of the bead edges must be accepted as part of the finish.

CORNER BEADS – Corner Bead should be used on every external corner to help reinforce this area. The corner bead also helps achieve a consistent 90° angle at the corner.

STOP BEADS – Stop Beads are used to achieve a defined termination point where the render comes to an end, for example between mid-terrace properties.

BELLCAST BEADS – Bellcast Beads are used to provide a drip at either the bottom of the render system or above openings to help mechanically drive water away from the surface of the render system.

MOVEMENT BEADS – Movement Beads are installed within the render coating directly above expansion joints within the masonry to achieve a neat and consistent enclosing detail. They can also be used where there is a particularly long run of render to try and help reduce the risk of cracking (typically every 7 linear metres of render a movement bead should be installed).



Movement Beads



Bellcast Beads



Stop Beads



Corner Beads

All of our beads are available in white and ivory as standard.

STEP 4 Preparing the Render

The Monocouche Scratch Render is prepared by adding the dry render to clean, potable water at a rate of approximately 5.5L of water to 25kg of EWI Monocouche Scratch render. Each bag of render, when applied at a thickness of 19mm, will cover 1m². Mix the render thoroughly using a traditional mixer or in a tub with a mechanical paddle, for a minimum of 5 minutes until the render achieves the correct consistency.

Apply using a hand trowel or spray machine. The render will be workable for approximately 1 hour after mixing and must not be re-mixed after it begins to set.

STEP 5 First Pass

Apply the Monocouche Scratch Render starting from the top of the walls, gradually working downwards. This will avoid staining and dripping. The first coat of EWI Monocouche Scratch Render should be applied at a thickness of 9-10mm. After applying the first coat, EWI-66640 Fibreglass Mesh should be embedded within the first layer for reinforcement. A scratch render scarifier should then be used to scratch the first coat of render to produce a 'key'.

STEP 6 Second Pass

After allowing the first pass to begin curing but before it dries fully, the second coat of render should be applied at a thickness of 8mm. This will take the total thickness up to 17/18mm. After approximately 24 hours, once it has gone off, the render scratch float should be used to create the desired texture. The render should then be scratched back by 2mm. After rendering, the render will need a minimum of 48 hours to go off depending upon the weather.

EWI Install Guide

Dry Aggregate Dash System

EWIPRO[®]
External wall insulation system

**DASH
RECEIVER**

EWI-235



- ❖ Polymer modified
- ❖ Through-coloured
- ❖ Suitable for one coat application
- ❖ Suitable for spray application

25 kg

Dry Dashing is an attractive traditional render technique which is used to provide a low-maintenance and impact-resistant finish. Dry aggregate dash systems are cost-effective and provide a robust finish. A large selection of Dash Receiver/aggregate colour combinations are available.

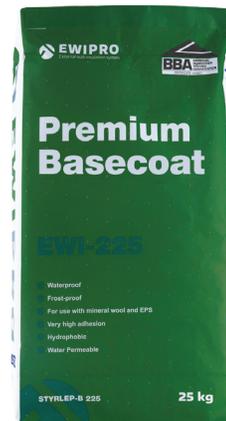
STEP 1 Surface Preparation

Before applying any render to the substrate, the substrate needs to be checked. All damage to the substrate from frost attack, salt or corrosion must be repaired. Damaged bricks or blocks must be replaced and any holes or insufficiently-filled joints repaired. One of the best ways to achieve a clean and ready surface is to use a high-pressure water jet or prepare the wall mechanically with a wire brush.

It is recommended that one coat of EWI-360 Fungicidal Wash is applied to the entire surface, by roller or knapsack spray, and allowed to dry. All organic growth must be removed by a stiff bristle brush. The Fungicidal Wash takes just 24 hours to kill all organic growth on the substrate. The wash can be applied using either a brush, sponge or cloth. A 5L tub will cover 20-30m², depending upon the absorptivity of the substrate.

Using Premium Basecoat EWI-225

If the existing surface is particularly uneven, then a coat of EWI-225 Premium Basecoat should be applied to the affected area or the whole of the existing surface to level it. EWI-66640 Fibreglass Mesh should be embedded into this adhesive for extra strength, and the strips should overlap by 10cm. Each roll of Fibreglass Mesh is 50m long by 1m wide. When installing a Premium Basecoat layer, your beading should also be embedded within the Adhesive. The Premium Basecoat must be allowed to dry for a minimum of 24 hours before the application of the Dash Receiver.



STEP 2 Surface Priming

Once the substrate has been prepared, it will need to be primed before the Dry Dash can be applied. The amount and type of primer required will depend upon the absorptivity of the substrate - this can typically be anywhere from 50-300ml per m². For rendering directly onto the wall, we recommend using the EWI-301 Water Based Primer before rendering. It will usually take approximately 4 hours to dry, however additional coats may be required depending upon the absorptivity of the substrate. Water Based Primer must be Left to dry completely before applying the Dash Receiver.

STEP 3 Applying Beading

Beading is used in our EWI Pro Dry Dash Aggregate system to reinforce areas that are likely to experience impacts (e.g. external corners) and also to try to direct water from the surface of the render by providing a drip. All of our beading is uPVC and therefore will not rust.



Movement Beads



Bellcast Beads



Stop Beads



Corner Beads

CORNER BEADS – Corner Bead should be used on every external corner to help reinforce this area. The corner bead also helps achieve a consistent 90° angle at the corner.

STOP BEADS – Stop Beads are used to achieve a defined termination point where the render comes to an end, for example between mid-terrace properties.

BELLCAST BEADS – Bellcast Beads are used to provide a drip at either the bottom of the render system or above openings to help mechanically drive water away from the surface of the render system.

MOVEMENT BEADS – Movement Beads are installed within the render coating directly above expansion joints within the masonry to achieve a neat and consistent enclosing detail. They can also be used where there is a particularly long run of render to try and help reduce the risk of cracking (typically every 7 linear metres of render a movement bead should be installed).

All of our beads are available in white and ivory as standard.

STEP 4

Mixing the EWI-235 Dash Receiver

The render should be added to clean water at a ratio of approximately 5.5L of water to 25kg of EWI-235 Dash Receiver. Each 25kg bag of EWI-235 Dash Receiver when applied correctly at a thickness of 8-10mm will cover 2m². EWI-235 Dash Receiver should be thoroughly mixed using a traditional mixer or in a tub with a mechanical paddle for a minimum of 5 minutes until the correct consistency is achieved. Do not over-mix or over-trowel as this may reduce its adhesive capabilities. Apply the Dash Receiver by hand trowel or spray machine. It will remain workable for approximately 1.5 hours after mixing and must not be re-mixed after it begins to set.

STEP 5

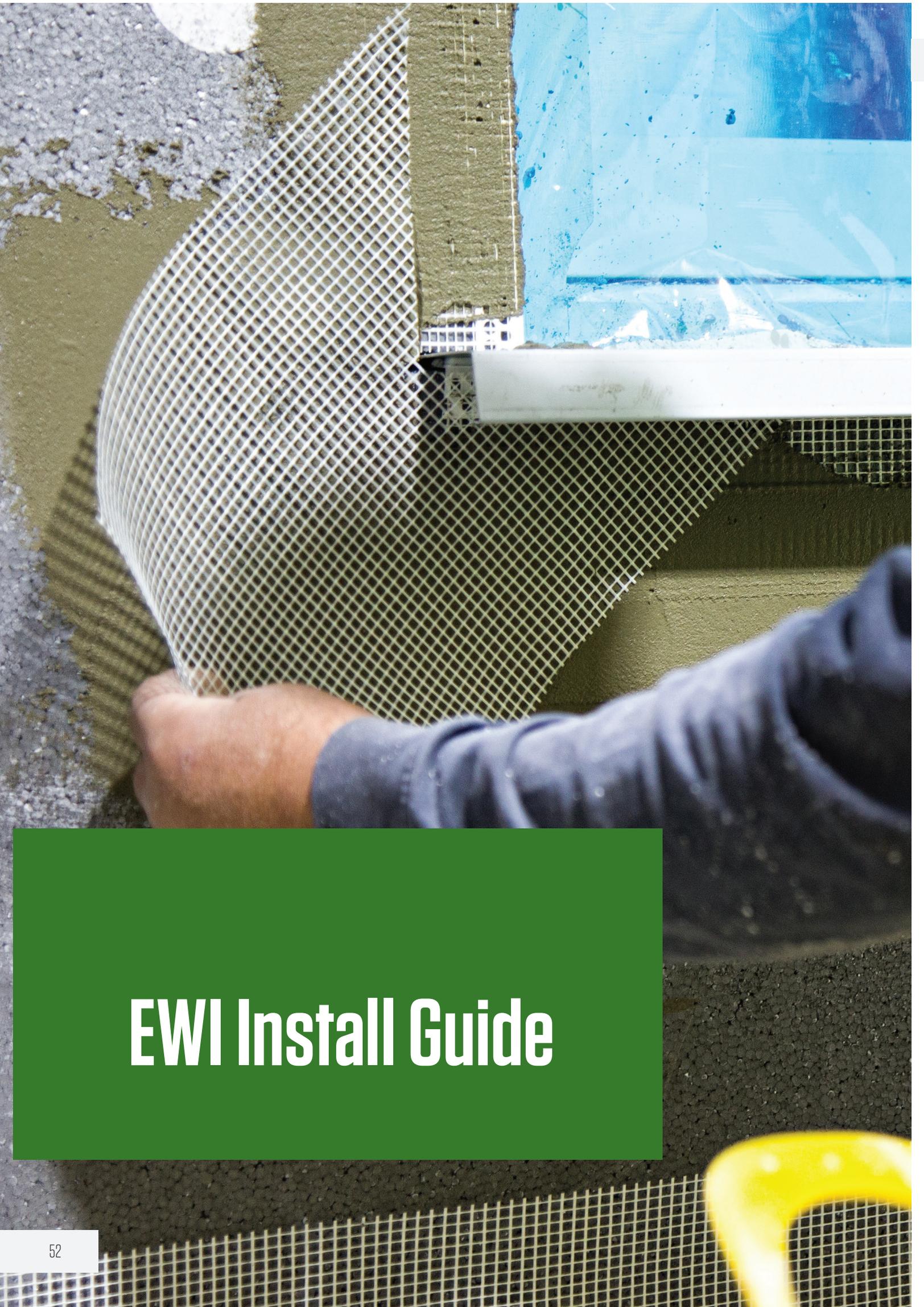
Applying EWI-235 Dash Receiver to the wall

The Dash Receiver system should be applied at a thickness of 8-10mm, starting at the top of the wall working downwards to prevent dripping and staining. Once applied, the Dash Receiver will then be ready to receive the dash aggregates. The EWI-235 Dash Receiver will reach optimal strength after 28 days. This is because the rate at which it dries is dependent upon the environment and the humidity.

STEP 6

Applying Dash Aggregates onto EWI-235 Dash Receiver

Make sure the dash aggregates are clean. Hold the bucket or tray of dash aggregates below the wall and scoop up some aggregates with a scoop or trowel. Throw the aggregates at the wall. Some will stick to the Dash Receiver whilst others will fall. Continue to throw the dash aggregates at the wall until you get an even coverage from top to bottom. Lightly press the dash aggregates into the wall with the flat edge of the trowel and leave to dry for 24 hours.



EWI Install Guide

STEP 1 Surface Preparation

As with every other job, preparation is extremely important. Before applying any insulation to the substrate, it needs to be examined and checked. The substrate must be clean, dry and dust-free. If applicable, it also needs to be cleaned of paint and other substances which may affect the way the EPS Adhesive will perform. One of the best ways to achieve a clean and ready surface is to use a high-pressure water-jet or prepare the wall mechanically using a wire brush.

STEP 2 Substrate Suitability Check

Prior to commencing any project it is recommended that pull-out tests for the specified fixings are undertaken. In order to do this you need to use a Hydrajaw fixing tester (or equivalent). This piece of kit allows you to test the strength of the substrate and ensure it is strong enough to hold the solid wall insulation system to the wall. It is recommended that the substrate is tested in 15 places per project, although on larger projects you may wish to carry out more. At EWI Pro we offer independent testing from one of our field based operatives if you are unfamiliar with the process.



STEP 3 Surface Priming

Once the substrate has been prepared, it then needs to be primed before any EPS/adhesive can be applied.

We recommend priming the substrate with EWI-301, which is a deep-penetrating Water Based Primer. It works in a similar manner to PVA primer, by helping seal porous surfaces prior to carrying out any works.

If the substrate requires increased adhesion (on very smooth surfaces for example), then we recommend using our EWI-310 Universal Primer. This contains silicate, which provides a rougher surface on which to mount the adhesives/insulation boards.

The amount of priming (and therefore volume of primer required) will depend on how absorptive the underlying substrate is, but typically this can be anywhere from 50-300ml per m².

The primers will take approximately 4 hours to dry. However, additional coats may be required depending upon the absorptivity of the substrate. 24 hours should be left between primer coats.

MATERIALS REQUIRED

EWI-301 Water Based Substrate Primer (5 litres)
EWI-310 - Universal Primer (20 litres)



STEP 4

Starter Track Installation

Once the walls are primed, Starter Track needs to be installed. The starter track is attached to the substrate above the DPC. This not only provides a level surface for easy installation of the insulation; it also protects the bottom of the surface of the insulation against weather, damp and other damage.

We offer either a uPVC Starter Track or an Aluminium Starter Track. The uPVC Starter Track is our premium product and helps minimise thermal bridging. Aluminium Starter Track requires a uPVC starter track connector, which provides a layer of mesh that helps to tie the system together with the insulation when the reinforcement layer is added. Both types of starter tracks are fixed to the substrate using rawlplugs, fixed at 300mm centres to ensure the Starter Track is held securely in place.



STEP 5

Applying Adhesive to EPS Insulation Boards

(ready to apply to substrate)

The graphite EPS insulation boards are attached to the substrate with one of our adhesives. We normally recommend using EWI-220 EPS Basecoat as the adhesive for attaching the EPS to the substrate/wall because it means that on-site, only one type of adhesive is required (EWI-220 is the adhesive also used in the reinforcement layer) - you can however use EWI-210 if you prefer.

Correct preparation of EPS adhesive is absolutely crucial. EWI-220 EPS Basecoat adhesive should be mixed with clean water at a ratio of 2.8-5.3L per 25kg bag. The compound should be mixed using a heavy-duty power plaster mixer on a slow rotating setting. Freshly mixed compound should be left for approximately 5-10 minutes and then re-mixed for a short period of time before use. Bucket life is approximately 1 hour, although this is dependent upon the weather conditions.

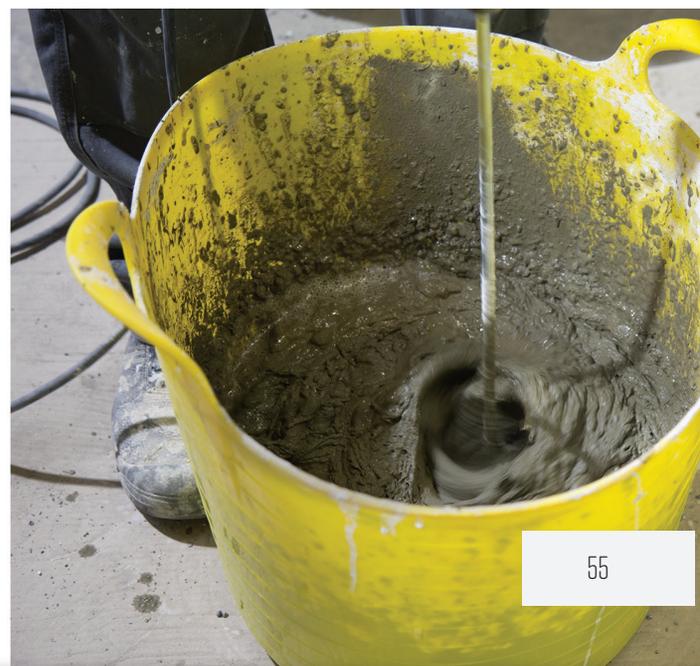
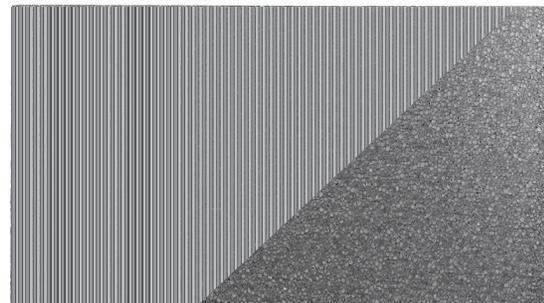
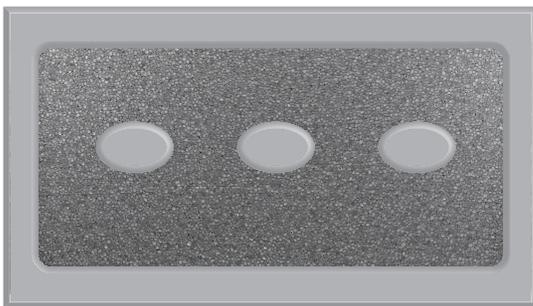
We recommend applying the adhesive onto the EPS insulation boards using a modified 'dot and dab' method. The EPS adhesive needs to be applied to the perimeter of the EPS board and 3 large dabs should be applied in the centre of the board.

Using a trowel, you need to apply adhesive evenly around the edges of polystyrene (3-4cm wide track) and inside that area, Dot and Dab adhesive spots (approximately 3 of them). In general, EPS adhesive should cover no less than 40% of the surface of the insulation sheet. It is also perfectly acceptable to use a notched trowel to apply a layer of the adhesive to the entirety of the EPS board, and this is preferable if the wall is flat.

The amount of adhesive used by either of these methods should be approximately the same - each 25kg bag should be able to mount approximately 8-10m² of boards to the substrate - although this does vary depending upon the quality of the surface on which the boards are being mounted (a flat wall will use less - an undulating wall will use more).

MATERIALS REQUIRED

EWI-210 EPS Adhesive or EWI-220 EPS Basecoat
EWI-410 Graphite EPS boards (1200x600mm)



STEP 6

Applying the EPS to the Substrate

The insulation boards should be attached to the wall in a staggered formation. At the corners, it is important to interlink the insulation from the two sides. When installing EPS insulation around window and door openings, it is important that the joints between boards are not in line with these openings. This will prevent cracks appearing in the future. For best results and ease of installation we recommend the use of Lintel Mesh Corner, which helps strengthen this area.



STEP 7

Level Control and Filling Gaps Between EPS Insulation Boards

It is important to ensure the EPS insulation boards (EWI-410) are aligned properly when attached to the substrate. These need to be aligned correctly both horizontally and vertically and this is best achieved using a spirit level.

Where there are gaps between the EPS boards and these are larger than 2mm, these need to be filled with polystyrene strips (cut from the insulation boards). The common mistake is to use EPS Adhesive for filling these gaps, but this can lead to a formation of cold-bridges and cracks around the joints between the boards.



STEP 8

Mechanical Fixings

Mechanical fixings are used as an additional fixing mechanism to tie the EPS to the substrate. The mechanical fixings help to make for an even more secure installation. Drilling the holes for fixings should take place at least 2-3 days after the EPS boards have been attached to the substrate with the EPS Adhesive and prior to adding the reinforcing fibreglass mesh layer.

We recommend using 4 mechanical fixings in every corner of each EPS board as well as at least another 2 further fixings in the middle of the boards. Depending upon the fixing that is used, they can either be hammered into place or - in the case of the EcoDrive fixings - they can be driven straight into the insulation with a power tool.

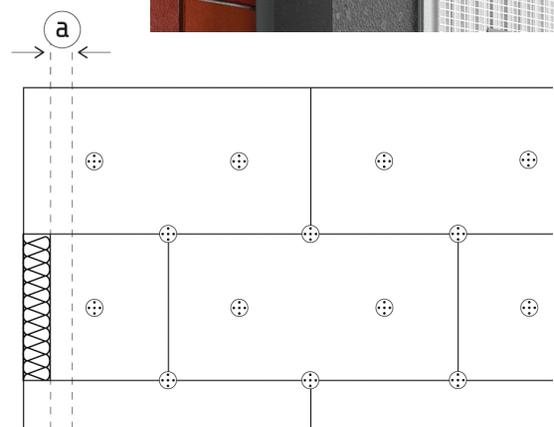
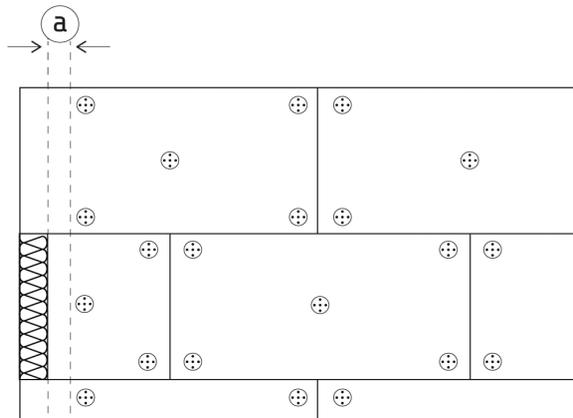
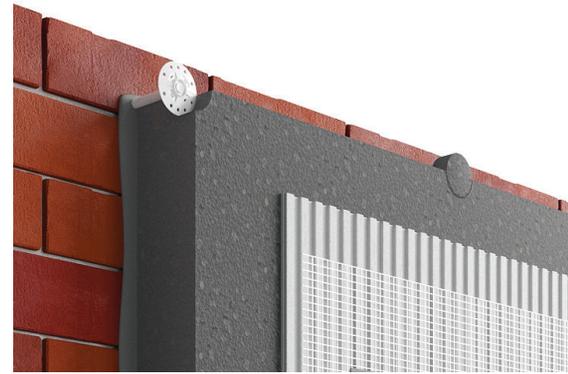
The mechanical fixings used can be seen in the photo to the right. As a general rule of



thumb, the mechanical fixings need to be a minimum of 40mm longer than the thickness of the insulation.

If Metal Pin Mechanical Fixings are used, then we recommend using EPS dowel caps to minimise thermal bridging. These are held in place using the EWI-220 Adhesive and the result is that once the system is dry, you will not be able to see any hint of the mechanical fixings coming through.

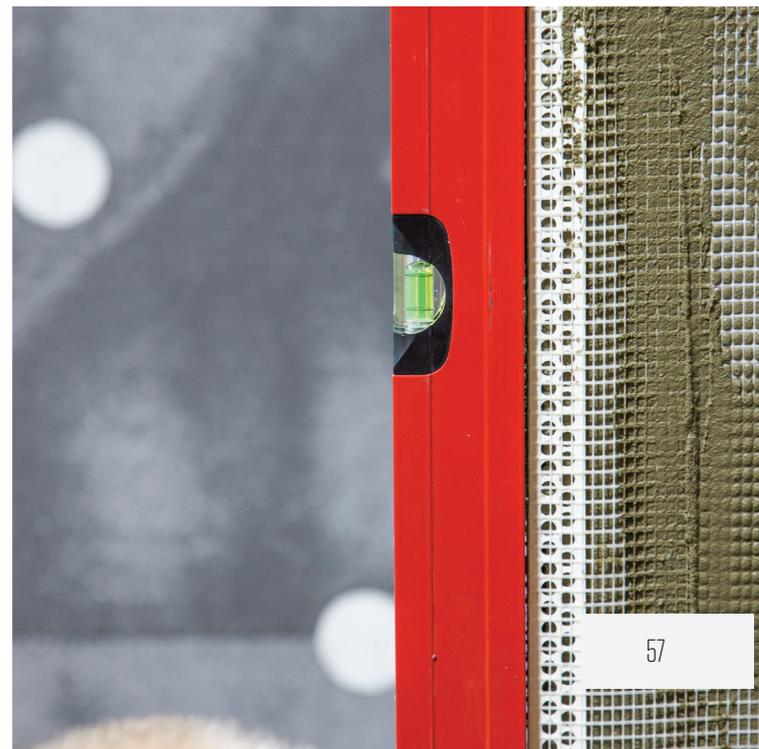
Note: if you use the EcoDrive fixings the last step will not be necessary as they come with a dowel cap already. Likewise, the plastic pin fixings don't require EPS Dowels as very little thermal bridging occurs through the plastic core.



STEP 9

Smoothing and Levelling the Facade

The surface of the EPS boards must be smooth and level throughout the facade. All uneven areas should be made good prior to applying the reinforcement layer. For this job a polystyrene rasp needs to be used that will remove the outer surface of the graphite EPS boards. Smoothing of EPS boards should take at least 1-2 days after they have been installed to ensure the EPS Adhesive has had sufficient time to go off.



STEP 10

Installing the Basecoat Reinforcement Mesh Layer

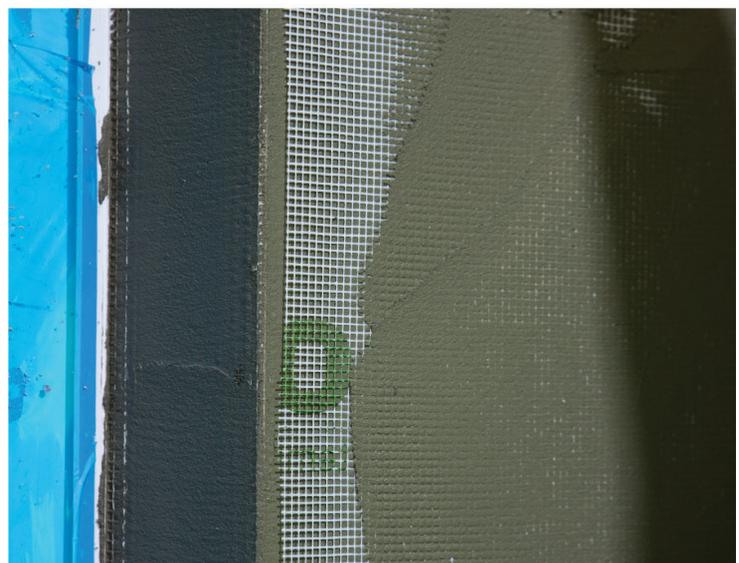
For the reinforcement layer please use the EWI-220 EPS Basecoat. The preparation of EWI-220 is covered in Step 5 of this guide.

The basecoat is applied with a notched trowel to the top of the EPS insulation boards - this layer needs to be between 5-6mm. The mesh is then placed onto the basecoat in vertical strips and embedded into the adhesive using the flat edge of a notched trowel.

Each vertical strip of Fibreglass Mesh should overlap its neighbouring vertical strip by approximately 10-15cm.

MATERIALS REQUIRED

EWI-220 EPS Basecoat
EWI-640 Fibreglass Reinforcement Mesh (50m²) - 150/m



STEP 11

Priming the Wall before Rendering

Once the reinforcement layer has dried for a period of 24-72 hours (depending on the weather conditions), it needs to be primed prior to applying the render.

The primer to be used depends on the top coat render, but provided the correct primer is used, the application process is the same. The primer is simply painted on top of the basecoat reinforcement layer.

This primer needs to be left 12-24 hours to dry prior to adding the final layer of render.

MATERIALS REQUIRED

EWI-330 Mineral/Acrylic Primer
EWI-332 Silicone Primer
EWI-333 Silicone Silicate Primer



STEP 12

Rendering the Wall

The renders listed are all ready to use straight from the bucket - if a coloured render is being used, ensure the colour matches your order.

Using a trowel apply a thin layer of the render to the primer surface - remember these are all thin coat renders, so your finished render layer may just be 1mm thick (if using the 1mm granulate renders). Once the render has been applied, smooth it out using the trowel, taking out the excess off the wall (to ensure an extremely thin layer). Using a PVC float, work

the render by moving it in circular movements - this will provide the textured finish of the render. Although at first it may seem complicated, the application procedure is in fact easy and straightforward. We recommend practicing on a small area at first. Remember to have enough tradesmen on site to ensure that whole sections of walls can be done at the same time. If you do attempt to do 'half a wall' at a time, you will notice scarring where the two sections of render meet. Natural breaks in render surfaces include corners and where render ends.

MATERIALS REQUIRED Ready to use renders

EWI-010 Acrylic render
EWI-040 Silicone Silicate Render
EWI-075 Silicone Render



MATERIALS REQUIRED Dry mix Mineral Render

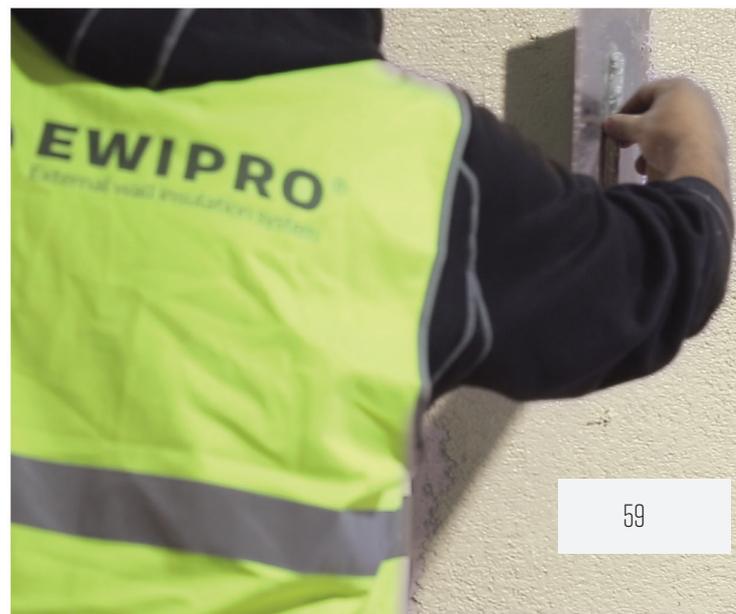
EWI-010 Acrylic render
EWI-040 Silicone Silicate Render
EWI-075 Silicone Render



Unlike the ready to use renders, Mineral Render comes as a white dry mix. This is then painted with a Silicone Paint to give the desired colour for the client.

The dry mix Mineral Render dries far quicker than the ready to use liquid renders and therefore is often used when installing in colder/humid climates. The Mineral Render requires 6.5L of clean water per 25kg bag. The compound should be mixed using a heavy-duty power plaster mixer on a slow-rotating setting to produce a homogenous white plaster prior to application.

Give the render at least 24 hours drying time before applying the EWI-003 Silicone Paint. For a full and detailed guide to installing our renders, please see our thin coat and thick coat render install guides.



EWI Pro External Wall Insulation System

Unit 1 Kingston Business Centre,
Chessington, Surrey, KT9 1DQ

0800 1337072

info@ewipro.com



www.ewipro.com