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05

Polymer Modified Renders & Specialist Finishes

epsirend

wbs.pmr.08/2010.2

Traditionally, render was made up of a simple sand and cement mix which was applied to poor quality substrates such as brick and blockwork to assist with waterproofing and to offer a more decorative external finish to homes and commercial properties.

Advancements in technology mean that traditional renders have come a long way since then. With the addition of specialist additives to the base materials, such as polymers, silicones, acrylics, aggregate reinforcements and anti-crack fibres, renders are a perfect, cost effective solution for a variety of external wall applications and can be applied either directly to the substrate, or alternatively applied as the final finish on an external wall insulation system.

The flexibility of today's renders allows the architect to be more ambitious with their designs and enables them to confidently specify a wide range of colours and specialist detailed features, such as ashlar jointing, brick effect and alternative textures.

Why choose WBS External Renders?

Members of the WBS team have stood at the forefront of the technical development and rigorous testing of external wall insulation systems and through colour renders for in excess of 30 years. The WBS **thermaloc** and **epsicon** brands have been applied extensively in the UK to many types of structure, in various zones of exposure, on coastal, suburban and rural properties.

In addition to our success in supplying high quality materials at cost effective levels, WBS offer a complete **Design & Specifications Advisory Service**, enabling you to gain technical advice based on years of practical on-site experience and provided by qualified building professionals.

Located across the UK, our technical personnel can advise on all aspects of the suitability of materials and systems, provide details, designs and specifications for the application of the products and also supply U-value calculations, condensation risk calculations and display materials for client consultation purposes.

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Polymer Modified Renders – The Benefits

- Exceptional weatherproofing properties.
- Vapour permeable allowing the release of excess condensation.
- High impact strength.
- Excellent adhesion and ease of application.
- Eliminates the need for on-site mixing.
- Eliminates colour inconsistency.
- Ideal for property refurbishment or new build projects.
- Suitable for application onto various substrates, including traditional masonry, concrete, timber, steel frame structures and SIPS panel structures.
- Wide variety of colours and textures allows greater flexibility in design.
- BBA Certified – anticipated lifespan in excess of 30 years.

WBS Basecoats & Scrim Adhesives

WBS Dubbing Render (UF):
A basecoat with excellent workability qualities. Can be sprayed or applied using traditional methods. Ideal as a basecoat for thin-coat acrylic finishes.

WBS Insulation Bedding Adhesive:
WBS Insulation Bedding Adhesive is a flexible adhesive mortar used for adhering and levelling insulation boards to a substrate. Essential on high rise projects where an adhesive and mechanical fixing system is required.

WBS Scrim Adhesive (HP12):
HP12 uses high polymer technology, creating a cost effective basecoat with enhanced adhesion for difficult substrates. HP12 is also widely used for its flexibility and tensile strength for thin coat systems. Incorporation of an alkali resistant fibre mesh is strongly recommended.

WBS Scrim Adhesive (K&A):
K&A adhesive is a mineral based, bonding and reinforcing filler with water repellent & vapour permeable properties. It is ideal for use on all WBS External Wall Insulation Systems, using any type of insulation board. K&A's flexibility and tensile strength is ideal for use with thin coat silicone & acrylic systems. Incorporation of an alkali resistant fibre mesh is always required.

Fibrocem High Impact Basecoat:
Fibrocem High Impact Basecoat has been designed to work in areas where general protection of the walls is a primary requirement. This premium product incorporates a unique fibre technology that gives the material extraordinary tensile strength and durability. Suitable for use where destructive attack and excessive daily wear and tear is likely to occur including internal & external walls in schools, hospitals, factories and public buildings.

FIBROCEM™

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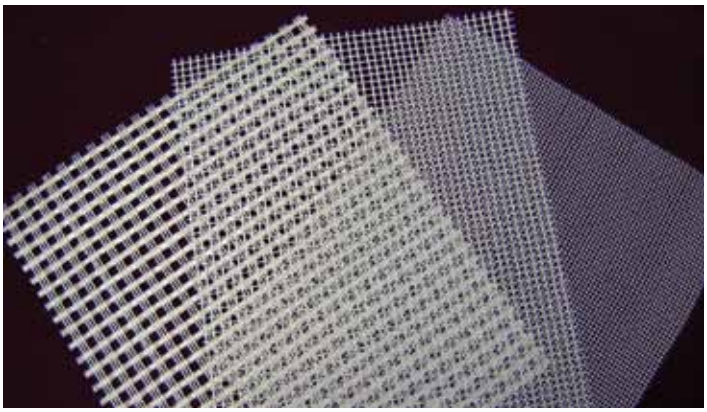

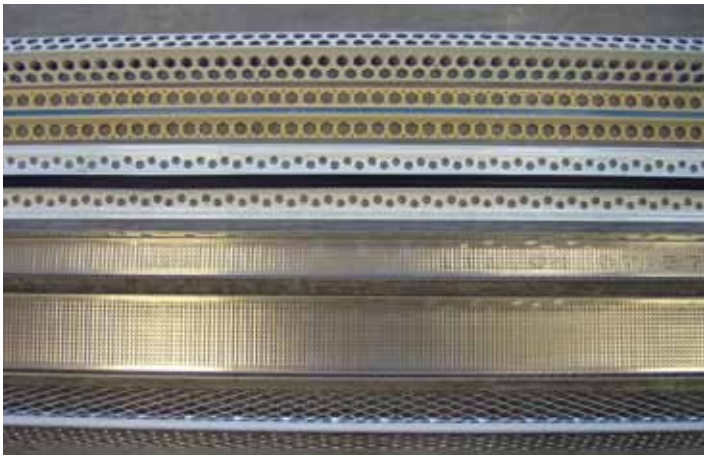

Reinforcements, Beads & Ancillary Products

WBS Alkali Resistant Fibre Mesh: WBS Alkali Resistant Fibre Mesh (also known as scrim cloth) is an ideal reinforcement for render, particularly where the adhesion of the render may be suspect or where delaminating or cracking is evident. In addition to it being an ideal anti-crack reinforcement, it is also widely used on WBS external wall insulation systems. The flexible lattice is made from specially woven glass-fibre strands and offers increased strength to a render system when embedded into wet scrim adhesive. The product is light, economical, tear resistant and easy to use.

WBS Armour Mesh: WBS Armour Mesh acts in exactly the same way as WBS Alkali Resistant Fibre Mesh, but offers a much thicker weave giving extraordinary strength and durability to WBS Render Systems. Ideal for use where footfall levels are higher and increased levels of impact resistance are required such as schools, hospitals and public buildings.

Beads & Trims

WBS supply a wide range of specialist beads and trims for a variety of applications to ensure accurate detailing. All WBS systems offer clean crisp lines and all exposed edges should be protected and watertight.

Beads are available in powder coated galvanised steel (PCGS), stainless steel, aluminium or PVC. PVC beads can be supplied in a range of colours. Nosings in complimentary colours are also available.

WBS technical staff are able to offer advice on the exact beads to use for a particular application and the correct specification for the exposure.

Ancillary Products & Components

In addition, WBS supply a comprehensive range of ancillary products. Full technical details are available on request.

- Beads, trims & flashings
- Mechanical fixings
- Fungicidal treatments
- Stabilising solutions
- Bonding agents
- Sealers & water-proofers
- Anti-graffiti treatments
- GRP canopies & architectural features
- Hand & power tools
- Safety equipment

Traditional Finishes

epsirend
A through coloured, traditional cementitious render. The finish displays an attractive open texture after being scratched back when almost set with a nail float. Can also be smoothed with a damp drylining sponge to offer a smoother finish. Epsirend eliminates the need for external paining and is very easily maintained.

epsirend (WP)
Epsirend WP is a traditional cement based render incorporating polymer technology which gives a higher degree of water repellence to the render surface, whilst still allowing water vapour to pass through the render (enabling the substrate to breathe).

epsirend (FT)
Epsirend FT incorporates polymer technology and provides a fine texture finish. Ideal for projects where the client requires a smoother texture than can be achieved with Epsirend WP. Can also be smoothed with a damp drylining sponge following application to offer an even smoother finish.

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PLEASE NOTE: All Epsirend products are manufactured using natural raw materials and as such subtle texture and colour variations may occur during the application process.

Specialist Finishes

Dry Dash

Used extensively on Social Housing refurbishment projects, WBS Dry Dash gives a fresh, durable finish. The final aesthetic appearance depends entirely on the combination of coloured dashing mortar and aggregate.

Following application of a WBS Basecoat, a layer of WBS Polymer Dashing Mortar is applied at a thickness of 8-10mm. Whilst still wet, a clean dashing grade aggregate is thrown into the mortar in an upward motion, ensuring an even distribution of chippings.

Ashlar Effect

By utilising the 'weathered stone' effect of WBS Epsirend WP Scratch Render, stonework or blockwork can easily be replicated on plinths, corbels or ground floor elevations, by utilising specialist cutting tools.

Recessed joints are cut into the finished render shortly after application enabling the formation of horizontal, vertical and radial recesses.

Brick Effect Render

WBS Brick Effect Render is a versatile alternative to traditional brick-work and is ideal for use on projects where traditional new brick-work or brick slips are impractical.

It is generally applied in two coats. Firstly a wet base coat is applied (coloured to compliment the top coat) followed by a different coloured wet top coat. The top coat is then cut through to expose the base coat 'mortar' layer, creating the brick effect finish. This effect is ideal for use on refurbishment projects and external wall insulation.

WBS Roughcast

WBS Roughcast, also known as Wet Dash, incorporates polymer technology to produce an attractive through-colour render with excellent water resistant properties. A popular alternative to dry dash, a flat basecoat is applied followed by a through-coloured slurry coat which when evenly applied, provides an attractive, watertight, textured finish.

WBS Tyrolean

WBS Tyrolean is a cementitious render incorporating polymer technology. Applied using a hand operated or open-hopper spraying machine, the unique 'honeycomb' texture is built up using several strokes, from different angles, until a finished thickness of 4mm – 6mm is achieved.

Standard Colour Range

Colours available for standard / silicone / spray grade / dashing mortars DA1, DA2, DA3 & DA4

Arran

Buttermilk

Champagne

Cinnamon

Cream

Fintry Stone

Green

Grey

Ivory

Oatmeal

Pewter Grey

Polar White

Powder Blue

Salmon Pink

Sandstone

Sterling White

Stone

Terracotta

White

York

Please note that all full colour images in this brochure are as accurate as the printing process will permit and slight variations in actual colours may occur. We highly recommend that physical samples are obtained from WBS prior to the ordering of materials. All colours subject to availability.

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WBS Dash Receivers

DA1 – Standard Dash Receiver:
This original polymer modified dash receiver, offers good value for dry dashing. Ideal for both new build and EWI refurbishment projects.
Approximate Coverage: 1.5kg / mm thick / m^2

DA2 – High Polymer Dash Receiver:
Offering higher levels of adhesion, impact resistance & durability, DA2 High Polymer Dash Receiver is applied over one of the WBS base coats as a background surface for dry dash or roughcast finishes. Ideal for both new build and EWI refurbishment projects.
Approximate Coverage: 1.5kg / mm thick / m^2

DA3 – Silicone Dash Receiver:
Incorporating silicone technology, DA3 Silicone Dash Receiver offers increased waterproofing properties and can be applied over one of the WBS base coats as a background surface for dry dash or roughcast finishes.
Approximate Coverage: 1.5kg / mm thick / m^2

DA4 – Overcoating Silicone Dash Receiver: Specifically designed for refurbishment, DA4 Overcoating Silicone Dash Receiver is a lightweight product that gives excellent coverage over existing dry dash finishes. Surfaces to be over coated should be free from contamination (algae, oil & paint) and may require priming with liquid acrylic prior to application.
Approximate Coverage: 1.0kg / mm thick / m^2

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Please Note: The coverage rates given above are an approximation only and under no circumstance whatsoever will WBS Ltd guarantee the accuracy of these rates. The rates are given purely as a guide based on site experience, however these rates can and do vary depending on site conditions, operator skills, substrate porosity, wastage etc. All contractors quoting for projects must ensure that coverage figures can be achieved in each particular instance. No responsibility or liability is accepted by WBS Ltd in this regard.

Decorative Aggregates

You would be advised to note that the finished appearance of a dry dash finish will vary dramatically based on the aggregate used in conjunction with the underlying dash receiver. It is advisable to obtain a physical sample before making your purchase. Should you require an additional aggregate not listed here, please contact our **TECHNICAL SUPPORT TEAM** on **08458 382380.**

Classic Spar

Barleycorn

Red & White

Calcined Flint

Westbere

Arcane

Buff Quartz

Cameo

Ashton Cream

Beige Marble

Harvest

Canterbury Spar

Black & White

Snowdrop

Polar White

Derbyshire Spar

Iris

Seville

Honey

Sunset

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Application Guide

Applying the scrim adhesive and mesh reinforcement

Surface Preparation: When applying directly to existing brickwork / blockwork / rendered surface, the substrate should be brushed down to remove any friable material, algae or lichen and a generous coat of fungicidal wash applied.

If an insulation adhesive is not required, any ridges or protrusions should be removed and hollows filled to provide a flat surface.

For Refurbishment & New Build Applications
Stabilising solution may be applied if required to help improve adhesion and offer uniform suction.

Install all beads and trims using approved WBS fixings at a maximum of 300mm centres (depending on the substrate – please consult WBS Technical Department for assistance).

Mix scrim adhesive to a pliable consistency and trowel apply initial coat to substrate, dubbing out to a minimum of 8mm until a level surface is achieved.

Bed in alkali resistant reinforcing mesh into top third of scrim adhesive (if required), ensuring that an overlap of a minimum of 75mm is achieved.

When scrim adhesive is dry, apply additional stress patches and corner reinforcements across all window and door openings at a 45° angle.

Using very light horizontal strokes, gently run a plasterer's scarifier (or similar) over the surface of the scrim adhesive to provide a suitable key for the top coat.

Tidy up base rails and profiles with a damp paint brush or similar to ensure a professional finish.

Note: Renders with a high polymer content should be left to stand for 10-15 minutes and re-mixed to break the initial set.

Creating the desired finish

epsirend

Dry Dash Finish

Apply WBS coloured dashing mortar at a thickness of 8-10mm.

Whilst still wet, throw a complimentary coloured aggregate into the mortar, in an upward motion, ensuring an even distribution of chippings.

Epsirend (WP) Scratch Finish

Apply Epsirend (WP) render to a thickness of 10-12mm ensuring that it is finished proud of all profiles.

A darby or straight edged tool may be used to ensure a relatively uniform thickness, this may then be smoothed out using a plastic float.

Leave render to set so that the surface cannot be depressed with the thumb.

Using a nail float, remove approximately 1-2mm of the surface, in an even circular motion, to achieve the scratched texture finish. Brush off any loose material with a bristle brush.

Application Guide

Brick Effect Render Finish

Apply mortar coat coloured render at a thickness of 8-10mm.

When green (set but not fully hardened) apply brick colour top coat at a thickness of 4-6mm and texture as required.

When topcoat is green, cut through to expose the mortar layer, thus creating a brick effect finish.

Ashlar Effect Finish

Apply render as per scratch finish at a thickness of 16-20mm.

When green (set but not fully hardened), form cuts in the render using an ashlar cutting tool (various types are available).

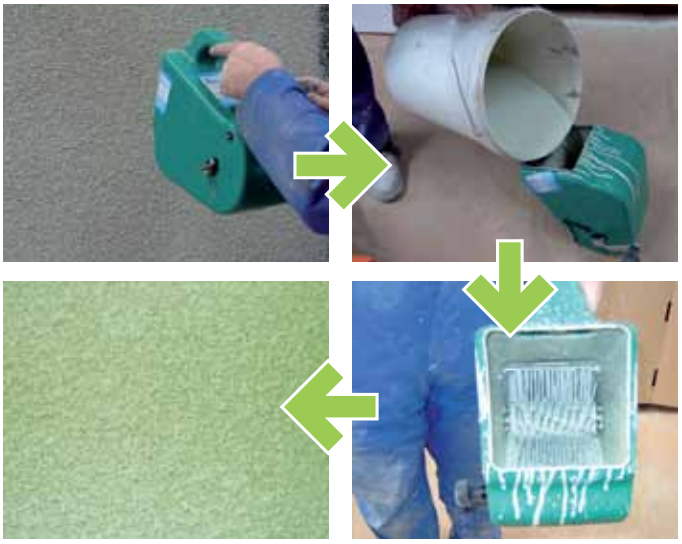
A minimum of 10mm of render should be left between the recessed ashlar joints and the substrate.

Tyrolean Finish

Applied using a hand operated machine, or alternatively an open hopper spray machine, WBS Tyrolean provides an open honeycomb texture.

Tape and cover any surrounding areas not to be rendered to prevent accidental splashes.

Trowel apply an initial basecoat of the Tyrolean finish to a thickness of approx 2-3mm. Then, using the tyrolean gun / spray machine build up the render texture using numerous passes, at random angles, until a thickness of 5-8mm is achieved.



Case Study: Polymer Modified Renders

Project Type:	Residential Refurbishment – Hawksley BL8 Aluminium Bungalows
Location:	Dolphin Road, Abbeydale, Redditch
Client:	Redditch Borough Council
Consulting Engineers:	Michael Dyson Associates
Main Contractor:	Connaught Property Services Ltd
System Installer:	Connaught Property Services Ltd
System Used:	WBS Insulated Render System incorporating 50mm Phenolic Insulation
Finish:	WBS Brick Effect Render

In the early 1980's many defects in design and construction were discovered in a number of non traditional house types that were designed and built before the 1960's.

These designs were designated as defective under the housing defects legislation and although they only form a relatively small proportion of the UK's non-traditional housing stock, Local Authorities and private landlords are now being forced to bring these properties in line with current building regulations in an aim to sustain local communities, improve tenant quality of living and reduce the need for potential demolition.

These Hawksley BL8 Bungalows, built in the late 1940's, were originally fabricated using profiled aluminium sheets and are notorious for damp ingress and condensation problems and are very thermally inefficient.

The use of a WBS Insulated Render System saw the cladding stripped off and a layer of 18mm marine grade plywood affixed to the structure. A layer of 50mm Phenolic Insulation was mechanically fixed to the plywood and finished using WBS Brick Effect Render.

Serious consideration had to be given to adapting the system to accommodate the generous eaves overhang, however the project was a resounding success and the thermal efficiency was suitably upgraded demonstrating a final U-value of 0.34 W/m^{2}K.

Case Study: Polymer Modified Renders

Project Type:	Residential Refurbishment
Location:	Nursery Crescent, Rhymney, Gwent
Client	Caerphilly County Borough Council
Consulting Engineers:	Michael Dyson Associates
System Installer:	Joyner PA (Cymru) Ltd
System Used:	WBS Insulated Render System incorporating 50mm PIR Insulation
Finish:	WBS Dry Dash Finish, Red Dragwire Brick Slips & WBS Woodstock GRP Canopies

A 3 phase external residential refurbishment scheme, on behalf of Caerphilly County Borough Council. This phase consisted of 65 Wates PRC houses in Rhymney, Gwent.

These particular houses were situated on a run down, problematic housing estate. Many of the houses were considered cold, damp and practically uninhabitable, leading to them being boarded up. This left the area almost derelict prior to the refurbishment works commencing.

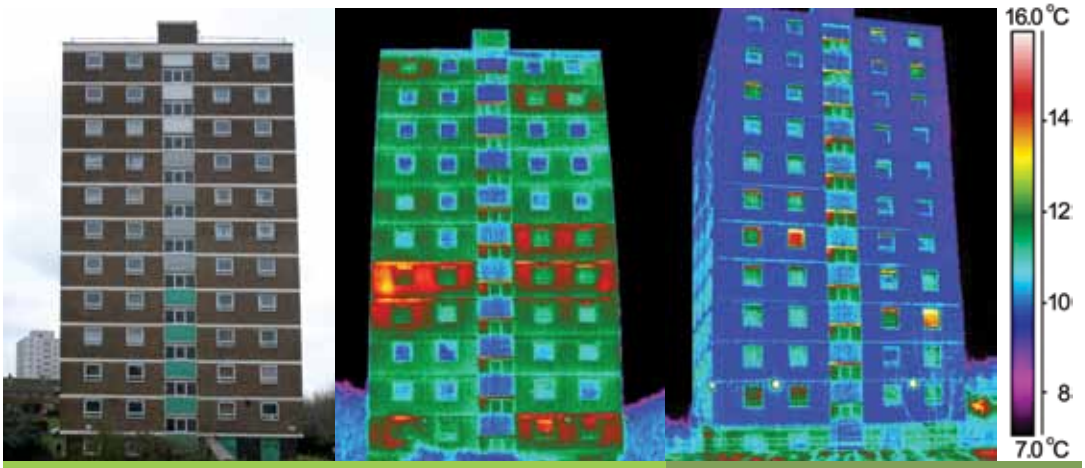
In close collaboration with the system installers, Joyner PA (Cymru) Ltd, the WBS Insulated Render System was used on the outside fabric of the building, incorporating 50mm PIR insulation, 'Red Multi Dragwire' brick slips on the bottom half of the properties and a Dry Dash finish on the top half. To further enhance the aesthetical transformation, WBS 'Woodstock' GRP canopies were also installed over the front doorways.

The Insulated Render System used not only improved the insulation u-values from 1.43 W/m^{2}K (on properties without cavity insulation) to just 0.21 W/m^{2}K, but more importantly will help to reduce heating bills and carbon emissions in the future. As all WBS systems are designed to be strong and weatherproof, water ingress and dampness were also eradicated.

The outcome of this particular scheme was so successful, that a waiting list is now in place for future tenants.

Case Study: Polymer Modified Renders

Project Type: Residential Refurbishment
Location: Brinnington, Manchester
Main Contractor: G&J Seddon Ltd
System Installer: Skyline Construction Services Ltd
System Used: WBS Insulated Render System incorporating 60mm Phenolic Insulation
Finish: WBS Dry Dash Finish



BEFORE AFTER

AFTER

This particular 12 storey block situated on a residential housing estate in Brinnington, Stockport, was just one of seven in total that the Client, Stockport Homes, felt were starting to look old and tired and were in desperate need of thermal and aesthetic upgrading.

As can clearly be seen from our infrared 'before' shot, the amount of heat loss prior to the application of a suitable EWI system is quite astonishing and it is very easy to identify which of the tenants within the block had their heating turned on at the time the photo was taken.

In collaboration with the system installers, Skyline Construction Services Limited, one of WBS's hard-wearing, weatherproof External Wall Insulation Systems was applied to the external façade. This consisted of 60mm of phenolic insulation, which was mechanically fixed to the substrate and thereafter a WBS polymer dashing mortar and a WBS Dry Dash Finish was used in two contrasting colours to form a decorative feature.

The utilisation of this WBS system improved the insulation U-values from 1.43 W/m^{2}K to just 0.21 W/m^{2}K and water ingress and dampness were also eradicated.

The client on this project was highly delighted with the finished results. Not only has the aesthetic appearance been dramatically improved, but as you can see from the 'after' thermal imaging photo the amount of heat escape has now been drastically reduced, which will undoubtedly lead to a healthy reduction in heating bills and carbon emissions both now and in years to come.

WBS Design & Specifications Advisory Service

In addition to our continuing success in supplying high quality materials at cost effective rates, Wetherby offer a complete **Design & Specifications Advisory Service**, enabling you to gain sound technical advice based on years of practical on-site experience.

Located across the UK, our technical personnel can advise on all aspects of the suitability of materials and systems, providing details, designs and specifications for the application of the products and also U-value calculations, condensation risk calculations and physical display samples for client consultation purposes.

- Comprehensive specifications
- Thermal calculations
- Full colour technical drawings in *.DWG or *.PDF format
- On site inspections and professional advice
- Tenant awareness presentations & regular liaison meetings
- Physical product samples
- Accurate budget costs supplied via our network of approved contractors

NBSPlus **Specifications provided in NBS Format**

For further details, please contact
WBS TECHNICAL SUPPORT on **08458 382380.**

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Certification & Accreditation

epsitec External Wall Insulation Systems
B.B.A. Certificate No 09/4625 PS1
For use on sheathed lightweight steel-framed structures. The system incorporates phenolic insulation, specific reinforced renders and provides a 15mm wide drainage cavity. Minimum life expectancy 30 years.

epsiwall External Wall Insulation Systems
B.B.A. Certificate No 09/4625 PS2
For use on walls of solid masonry construction. The system incorporates phenolic insulation and silicone/acrylic reinforced renders. Minimum life expectancy 30 years.

epsicon External Wall Insulation Systems
B.B.A. Certificate No: 03/4058 PS1, PS2, PS3
For use on walls of solid masonry or concrete construction. The system incorporates a variety of insulants, reinforcements and decorative render finishes. Minimum life expectancy 30 years. expectancy 30 years.

thermaloc External Wall Insulation Systems
B.B.A. Certificate Nos: 97/3428 and 99/3564.
Incorporates a variety of insulations and covers standard dash receivers, flat renders and brick effect renders. Min. life expectancy 30 years

Wetherby Silicone & Acrylic Systems
Covered DIBT European Technical Approval which is an EEC wide accepted equivalent to BBA standard.
Certificate Nos: 14-8.04.04-10/02, 14-8.04.04-12/02, 14-8.04.04-105/04

Wetherby Renders are manufactured and certified to ISO9002 - Certificate No 2478 and ISO9001 / ISO-14001 - Certificate No 12 100/1004 16976/2.

ISO9001 / ISO14001
Wetherby Building Systems are certified to Quality Standard ISO-9001 and Environmental Standard ISO-14001, Joint Certificate No UK9000006.

Energy Saving Recommended / Ofgem Approved
Many of our insulated systems are approved by the Energy Saving Recommended Scheme & Ofgem. Please visit our website for further details.

Industry Associations
Full members of the Insulated Render and Cladding Association and the National Insulation Association.

For further details, please contact
WBS TECHNICAL SUPPORT on **08458 382380**

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Insulated Render Systems
// New Build

02

Flexible Silicone & Acrylic Finishes

03

WBS Brick Slip Cladding Systems

04

Insulated Render Systems
// Refurbishment

05

Polymer Modified Renders & Specialist Finishes

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GRP Canopies & Architectural Mouldings

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head office
1 kid glove road
golborne enterprise park
golborne
greater manchester
wa3 3gs

tel: 01942 717100
fax: 01942 717101

scotland
block 14
unit a11 coltness lane
queenslie industrial estate
glasgow
g33 4dr

tel: 0141 766 1767
fax: 0141 766 1768

kidderminster
unit 17a
hartlebury trading estate
kidderminster
worcestershire
dy10 4jb

tel: 01299 251666
fax: 01299 251003

south wales
unit 6
heol ty gwyn industrial estate
maesteg
mid glamorgan
cf34 0bq

tel: 08450 946397
fax: 08450 946398

PEFC
Promoting sustainable forest management

www.wbs-ltd.co.uk
info@wbs-ltd.co.uk