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Alumasc

## External Wall Insulation & Render Systems

Refurbishment - Swisslab and Swisspan



## Maintaining a Flow of Information

[www.alumascfacades.co.uk](http://www.alumascfacades.co.uk)

The Alumasc Facades website provides a wealth of information on all aspects of External Wall Insulation, Render systems and compatible products. Also included are FAQs, file downloads for NBS specification clauses, COSHH information, a CAD library, colour selector and much more.



premium products + proven solutions

# Alumasc facade systems

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**External Wall Insulation & Render Systems**

Alumasc is a specialist in the design and development of thermally efficient, insulated render systems which allow a wide range of silica, mineral and polymer modified decorative render finishes.

The company's proven experience in new built and refurbishment, coupled with BBA certified systems, technical knowledge and full warranty packages, ensures engineered solutions of any scale.

**NBS Specification**

A library of NBS Specifications is available on the website.

**Material safety data sheet**



### Technical Support

Alumasc Facade Systems are backed-up by comprehensive technical literature and by hands on project support starting with technical and design advice, and extending through site installation to recommendation of appropriate maintenance regimes. Implementation is led by the Alumasc Facades Manager appointed to the project.

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Also available, External Wall Insulation Systems - New Build (Swistherm and Swisrail).

For further information see pages 58 and 59.



## Alumasc - an Introduction

Alumasc Exterior Building Products is part of the Alumasc Group plc. The Group has over 800 employees, generating turnover of around £93 million. The aim is to focus on high quality, environmentally responsible building products within the construction arena in order to deliver first class customer service, long-term solutions and lasting relationships.

### About Alumasc

Alumasc Exterior Building Products (Alumasc) is a leading supplier of premium products and systems for specification, generating an annual turnover in excess of £30 million. The Company has been a major force in the UK construction industry for over 35 years, during which time Alumasc products and systems have been used on some of Europe's most prestigious buildings.

Alumasc ensures a high quality of product specification and installation, delivering risk-free, zero-defect solutions. The Company's commitment to making ongoing improvements is demonstrated through its accreditation to the ISO 14001: 2004 Environmental Management Standard.

By pursuing sustainable building products, systems and manufacturing processes, Alumasc aims to offer specifiers a wide choice of design alternatives, with long-term peace of mind. Recognised brands such as Harmer, Apex, Derbigum, ZinCo, Hydrotech, Firestone and M.R., together with Alumasc's well-known architectural rainwater range have been independently certified, and in some cases have a lifespan in excess of 60 years or for the life of the building.

Alumasc brands are divided into distinct but interrelated groups:

- Rainwater
- Drainage
- Waterproofing
- Façades

### Services and Support

Alumasc leads the way in the field of construction product and system manufacture and the delivery of proven solutions. This success is founded on four key areas:

#### Premium Products

A constantly evolving range of quality proven, world class products and systems, fully accredited to UK, European and North American Standards.

#### Technical Support

Comprehensive data for specification and use of all products and systems is available in published form, and on the company website. This is backed up by proactive support on a project basis, led by specialist area managers and using the latest CAD and calculation technology.

#### Approved Contractors

A rigorously trained and monitored installation network for each specialist system to ensure correct application on site.

#### Warranties

A comprehensive choice of Alumasc warranties, giving protection for up to 20 years, with the additional option of a pre-paid insurance-underwritten warranty, ensuring long-term peace of mind.



## Quality and Sustainability

In addition to complying with environmental legislation, Alumasc is committed to developing its own measures to limit the adverse effects of its activities on the environment. To this end, Alumasc operates an environmental policy that fully integrates all aspects of company activities.



### Quality

Alumasc operates a quality management system which is independently audited to BS EN ISO 9001: 2008. Alumasc extends this quality management to its network of approved installers, for single source accountability and peace of mind.

#### ISO 9001: 2008

The ISO 9001 framework governs the management of many aspects of Alumasc support services, manufacturing and transport operations.



Alumasc is committed to continual development and, along with the ISO 14001: 2004 Environmental Management Standard, ISO 9001 provides the tools to monitor and feed back information from all areas of the business to ensure a first class service is maintained.

#### BBA Certification

Individual Alumasc Facades products and systems are certified by the British Board of Agreement.



### Sustainability

Alumasc actively pursues sustainability in the full range of products and systems it offers through its accreditation to the ISO 14001: 2004 Environmental Management Standard. Alumasc, its partners and its suppliers are committed to putting consideration for the built and wider environment at the core of all aspects of their current business and future development.

#### ISO 14001: 2004

Alumasc's manufacturing sites at St Helens and Burton Latimer are independently audited to the ISO 14001: 2004 Environmental Management Standard.

Alumasc is committed to achieving improvements, not only as a good neighbour to the surroundings of their manufacturing plants, but in the responsible sourcing of raw materials and monitoring of the impact on the environment as a whole.



#### Development

Alumasc has within its portfolio a bedrock of environmentally sound products.

Development of these existing products and practices is central to the success of Alumasc and key to the way in which it provides its proven solutions. Equally, the basis for any new and innovative development is grounded in the knowledge and experience Alumasc has of its core manufacturing materials.

#### BREEAM Standards

BREEAM points, as a framework for analysis and scoring, allow easy comparison of the relative merits of different construction types and also comparisons between different construction product groups. The BREEAM points system promotes the use of materials with a proven sustainable message and allows designers to differentiate between products with true ecological credentials and those not achieving the benchmark.

Indicative ratings for building materials given in the BRE Green Guide to Specification also allows designers to choose those products or construction methods that will be most beneficial in contributing to a high BREEAM points score.

In the Guide, all insulated render systems on a 140mm solid blockwork external wall achieved the highest A+ rating. Alumasc EWI systems achieve equally high ratings when used to upgrade existing dwellings and are highly rated in the responsible sourcing of materials.

## External Wall Insulation for Refurbishment

Alumasc External Wall Insulation systems are suitable for refurbishment and upgrading applications where the structure provides continuous support for the insulation slabs, or for overcladding existing properties where the possibilities for mechanical fixing are restricted to structural elements - typically structural frames with non loadbearing steel or concrete infill panels and non-traditional house types.



### The Decent Homes Standard

The Government believes that everyone should live in a decent home, which means warm, weatherproof and with reasonably modern facilities. The aim of the Standard is to make all council and housing association housing decent. By 2010, 95% of all social housing in the UK will need to be of a minimum standard, and the remainder improved soon after.

Alumasc External Wall Insulation systems are an efficient and cost effective way of improving thermal standards and increasing the comfort of residents with minimal disruption. External wall insulation is ideal for the refurbishment of non-traditional housing and indeed any 'difficult to treat' construction that requires upgrading.

### Typical Refurbishment Applications & Compatible Systems

Construction Types	Swisslab	Swisspan
<b>Traditional Construction</b>		
Solid Masonry	✓	-
Concrete Panels (NLB)	✓	-
No Fines Concrete	✓	-
Masonry with Cavity	✓	-
<b>Non Traditional Construction</b>		
BISF	✓	✓
Orlit	✓	✓
Wates	✓	✓
Cruden	✓	✓
Athol	✓	✓
Unity	✓	✓
Airey	-	✓
Cornish	✓	✓
Woolaway	-	✓
Hawthorne Leslie	-	✓

### Solid Wall Construction

In circumstances where the structure provides continuous support the Swisslab system is the ideal overcladding solution. The system is suitable for unrestricted use on buildings up to six storeys and for high rise applications, subject to Alumasc's high rise policy. Insulation materials are mechanically fixed direct to a continuous substrate and are faced with M.R. Polymer modified renders for a traditional appearance, or thin-coat Silicone or Mineral renders for a more contemporary look.

### Problematic Substrates

For substrate where suitable mechanical fixings positions are limited, Swisspan system is recommended. Typical applications include structural frames with non-loadbearing steel or concrete infill panels and non-traditional house-types. Insulation materials are mechanically fixed to a galvanised steel horizontal support rail system that spans between structural columns, and are then faced with a choice of M.R. Polymer modified renders for a traditional appearance, or thin-coat Silicone or Mineral renders for a more contemporary look. Suitable for unrestricted use on buildings up to four storeys.



Thermal image courtesy of <http://www.thermalcities.com>

Full details on the Swisslab and Swisspan external wall insulation systems can be found on pages 14 to 29 of this brochure.

For alternative applications, please refer to the Swisstherm and Swisrail systems, as outlined on our website or separate New Build Technical Brochure.

# Benefits of External Wall Insulation

## Why Should I Consider External Wall Insulation?

### Protects the structure

An External Wall Insulation system provides a weatherproof jacket to protect the fabric of the building from the elements, keeping it warm and prolonging its life.

### Reduces heat loss

Placing insulation on the outside of the building structure is the most effective way of insulating a building – the ‘tea cosy’ effect. With EWI, the thickness of insulation is not restricted by cavity width, nor does it reduce internal room sizes.

### No thermal bridging

External Wall Insulation ensures that there is a continuous layer of insulation encapsulating the building, avoiding thermal bridges and the risk of interstitial condensation that can affect some other methods of insulation. Internal temperature fluctuations are reduced, especially if the building has high levels of thermal mass.

### Transforming the appearance

Alumasc EWI systems are finished with a choice of modern formulation, thin-coat renders in a range of textures and colours. The use of beads and trims ensures sharp edges and clean lines.

### Low maintenance

The render finishes used within an EWI system are designed to be virtually maintenance-free and self-cleaning. In line with good practice for building maintenance, checks are required on movement joints, etc and general building maintenance advised to ensure the longevity and performance of the system.

### Proven track record

Alumasc has been a key exponent of External Wall Insulation systems in both the newbuild and refurbishment sectors since 1985. With over 5 million square metres installed, Alumasc has earned market leading status and numerous industry awards.

### Alumasc Swisslab System



### Alumasc Swisspan System



## A Choice of Render Finishes

The final render coat forms an integral part of Swisslab and Swisspan External Wall Insulation Systems. The Swisslab and Swisspan systems are faced with M.R. Polymer modified renders for a traditional appearance or thin-coat Silicone or Mineral renders for a more contemporary look.

The formulations of Alumasc Polymer, Silicone and Mineral Renders and the integral closesh mesh glass fibre reinforcement make them much more resistant to shrinkage cracking than traditional sand and cement renders. This enables large areas to be rendered seamlessly with total colour consistency.

## The Alumasc Facades Product Selector

Alumasc External Wall Insulation systems, Render Finishes and Decorative Coatings can be selected via a number of routes - be it by construction type, specification requirements or individual product or system. The information on these pages can be read in conjunction with the use of the Facades product selection tools available on our website.

### External Wall Insulation Systems



#### Swisslab Traditional EWI System

##### Application

For overcladding existing properties. Used where the structure can provide continuous support for the insulation

##### Fixing Method

Direct adhesive/mechanical fixing to a masonry substrate

##### Insulation Options

Phenolic, Polyisocyanurate (PIR), Mineral Wool, EPS, Cork

##### Render and Coatings Options

Polymer-modified Render, Silicone Render, Mineral Render, Silicone Façade Paint, M.R. Rendabrick or Traditional Brick Slips



#### Swissspan Traditional EWI and Rail System

##### Application

For overcladding existing properties where mechanical fixing is problematic and restricted to structural elements

##### Fixing Method

To galvanised steel rails secured to structural anchor points (eg, steel frame or concrete columns)

##### Insulation Options

Phenolic, Polyisocyanurate (PIR), EPS, Cork, Mineral Wool

##### Render and Coatings Options

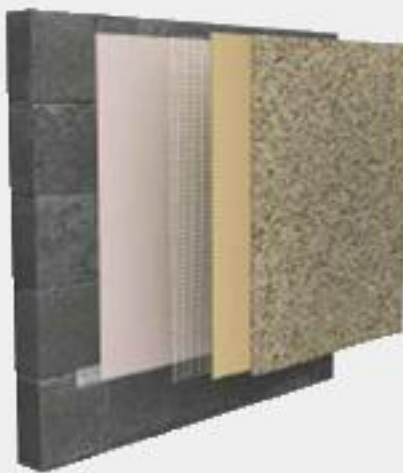
Polymer-modified Render, Silicone Render, Mineral Render, Silicone Façade Paint, M.R. Rendabrick or Traditional Brick Slips



# The Alumasc Facades Product Selector

Swisslab and Swisspan External Wall Insulation systems can be finished with a wide choice of decorative renders and coatings. Traditional polymer-modified cement plain and dashing renders are extensively used in social housing refurbishment, whilst modern thin-coat mineral and silicone renders create sophisticated contemporary finishes.

## Traditional Render Systems & Decorative Coatings



### Polymer-modified Renders

#### Appearance

Traditional plain or dashed finish

#### Application

As a finish for the Swisslab and Swisspan External Wall Insulation systems

#### Render Only

Suitable for direct application to brick and blockwork, and most sound substrates

#### Finish

Polymer Plain renders are available in a choice of 9 standard colours and a choice of 18 paint finishes. Polymer dashing renders are available in a choice of 9 render colour options plus a wide range of aggregate dash finishes

### M.R. Polymer Dashing Renders and Aggregates

#### Wide Choice of Colours and Aggregates



### M.R. Polymer Plain Renders and Masonry Paint

#### Extensive Colour Range Available



**Note:** M.R. S4 Polymer Plain Render must be overpainted with M.R. S6 Masonry Paint.

# The Alumasc Facades Product Selector

## Traditional Specialist Facade Systems



### M.R. Rendabrick

#### Appearance

A specially-formulated polymer-cement render that simulates the appearance of brickwork

#### Application

As a finish for the Swisslab and Swisspan External Wall Insulation systems

#### Render Only

Suitable for direct application to brick and blockwork, and most sound substrates

#### Finish

Brick effects are available in Terracotta and Buff, with two mortar joint colour options. Colour matching is available on request

Buff Finishing Coat - Grey Mortar



Terracotta Finishing Coat - Black Mortar



### Traditional Brickslips

#### Appearance

Brick effect for applications where the use of real bricks is not viable

#### Application

Compatible with the Swisslab and Swisspan External Wall Insulation systems

#### Brick Slips

Suitable for application to most substrates in low rise applications

#### Finish

A range of traditional brick and mortar colours is available  
Contact Alumasc for full details

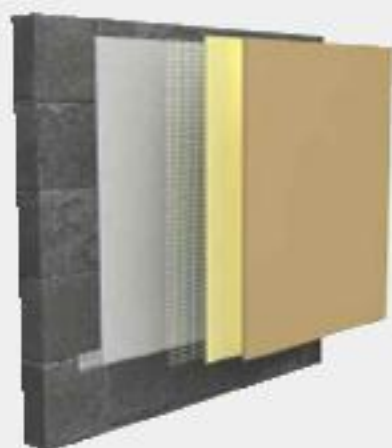
Brick and Mortar Colour Range



## The Alumasc Facades Product Selector

The ST range of thin-coat Silicone and Mineral renders provides a contemporary finish that is suitable for remodelling existing facades and new build projects alike. Eco-friendly Mineral renders are manufactured from natural materials, whilst the Silicone render range offers unparalleled performance.

### Contemporary Render Systems & Decorative Coatings



#### Silicone and Mineral Renders

##### Appearance

Available in a choice of textures and a wide range of through colours

##### Application

ST Silicone and Mineral renders are compatible with the Swisslab and Swisspan External Wall Insulation systems in refurbishment applications. Also suitable for use with the Swisthern and Swisrail systems for new build applications (please refer to our New Build External Wall Insulation systems brochure, available on request or downloadable from our website)

##### Render Only

Suitable for direct application to brick and blockwork, and most sound substrates, subject to survey

##### Finish

Rolled textures with a choice of grain sizes to create relatively smooth or more strongly figured textures. Available in a wide choice of through colours

#### ST Silicone through-colour and ST Mineral Renders

##### Rolled Texture Finishes



ST Silicone Renders in rolled textures and an extensive range of non-fading through colours.

ST Mineral Renders in rolled textures that can be painted if desired with ST Silicone Façade Paint.

For full details of the Alumasc range of Renders, Finishes and Decorative Coatings, please refer to pages 32 -49.

#### Silicone Façade Paint for ST Mineral Renders

##### Extensive Colour Range Available



## Design Considerations



Alumasc Facade solutions are based on extensive experience, over many years, of UK construction projects. This experience is fed back into the design process at all project stages by our sales and technical support teams. Below are a number of key areas to consider when specifying a render only or external wall insulation system.

Inclusion of Alumasc at the outset of the design and specification process will allow all elements from location to budget to be taken into consideration at the earliest stages.

### Substructure choice

- Has a bearing on the need for movement joints and ultimately the continuity of render treatment.

### Insulation choice

- Determines detailing decisions with regard to apertures and high traffic areas
- Thermal performance requirements, budget and environmental considerations influence insulation choice

### Render choice

- Determined from both an aesthetic, performance and maintenance perspective
- Silicone renders have the highest performance levels for resistant to dirt

### Colour choice

Alumasc provide a full palette of colours and are able to advise on the suitability with regard to long term colour retention, weathering and the use of dark colours on large scale details.

### Complementary Component choice

The choice of system components such as beads and fixings is very much dependent on specific project details, determining and adhering to the complete specification is paramount in achieving the desired result.

### Choice of Insulation - Comparative Performance

Insulation Properties:	Phenolic	PIR	EPS	Mineral Wool	Cork
Thermal conductivity W/mK	0.020*	0.026*	0.037	0.036	0.038
Fire Performance	///	///	✓	///	///
Emissions Production	✓	✓	✓	///	///
Recyclability	X	X	X	///	///
Impact resistance	///	///	///	///	///
Cost	///	///	///	///	✓

Key: /// = Excellent, // = Good, / = Adequate, X = Poor

\*Note: Thermal conductivity varies, depending on board thickness

### Choice of Render Finish - Comparative Performance

Binder:	Polymer Cement	Silicone Resin	Mineral Render	Sand and Cement	Lime
Properties:					
Adhesion	///	///	///	✓	✓
Water Repellency	///	///	///	X	X
Vapour Permeability	///	///	///	///	///
Crack Resistance	✓	///	///	X	X
Weather Protection	///	///	///	✓	✓
Durability	///	///	///	✓	✓
Algae Resistance	///	///	///	X	✓

Key: /// = Excellent, // = Good, / = Adequate, X = Poor

## Alumasc Technical Support Services



Alumasc provides a fully comprehensive and seamless package of advice and hands on management back up, extending through site installation to warranties and maintenance schedules. Implementation is led by the Alumasc Facades Manager appointed to the project.

Alumasc Technical Services can advise on all aspects of product selection, specification and integration of Alumasc systems into any building design. Specific technical advice is always available through our Area Sales Managers, Site Support Technicians or Technical Services team.

### Technical Support

- Thermal and wind load calculations
- Detailed NBS specifications
- Project specific CAD working drawings
- Coloured elevational rendering for project visualisations
- Material safety (COSHH) and product data sheets
- Performance and risk assessments on installation requirements for high rise buildings
- For remodelling projects, pull out tests and condensation analysis
- Budget costs via approved contractors

### Project Monitoring

- Regular site visits to provide quality assurance and technical support
- Final inspection of the work to ensure warranty compliance
- Appropriate recommendations made for maintenance regimes to fulfil warranty requirements

### National Network of Approved Contractors

A network of carefully selected contractors, all of whom have received instruction in the installation techniques for Alumasc Facades systems and whose project performance is rigorously monitored in terms of:

- Compliance with project specifications and project programmes
- Good working practice on site and health and safety procedures

### Facade Systems Warranties

- Alumasc offers a comprehensive choice of warranties covering both product and installation to suit the specified design life of the installed product
- Alumasc backed warranties are available for 10 or 15 years supported by public and product liability insurances of up to £50 million
- Alumasc can also arrange third party insurance backing giving up to 20 years cover subject to independent final inspection, documented compliance with an agreed maintenance schedule and pre-payment of the relevant premium



NB: Warranties are only offered on Facades projects that have been installed by an Alumasc Approved Contractor, in accordance with the relevant project specification and Alumasc Quality Assurance scheme ruling at the time of application.

## Swisslab External Wall Insulation

Swisslab is the market leading insulated render system for overcladding existing properties. It is extensively used to upgrade social housing in order to meet the “decent homes standard” and strongly contributes to urban regeneration. Insulation materials are mechanically fixed direct to a continuous substrate and are faced with M.R. Polymer modified renders for a traditional appearance, or thin-coat Silicone or Mineral renders for a more contemporary look.



## Swisslab External Wall Insulation



### Applications

- Refurbishment - where structure provides continuous support for insulation slabs
- Construction types - primarily suited to refurbishment applications
- Buildings up to 6 storeys - suited for unrestricted use
- High rise applications - suitable subject to Alumasc's high rise policy

### Performance

- BBA approved, fully warranted system with life expectancy in excess of 30 years
- Manufactured under ISO 9001: 2008 and ISO 14001: 2004 Quality and Environmental Management Systems
- Fully weather resistant whilst remaining vapour permeable
- Allows the fabric of the building to act as a heat store, increasing thermal efficiency
- Eliminates cold bridging, condensation and mould growth
- Improves external appearance of building
- Reduces heating costs and carbon dioxide emissions
- Protects structural fabric, limiting movement and thermal shock and freeze-thaw cycles associated with traditional brickwork facades
- Highly resistant to impact damage
- Rated Class 0 for surface spread of flame
- Contributes to sound reduction within external wall construction

### Insulation & Finishes

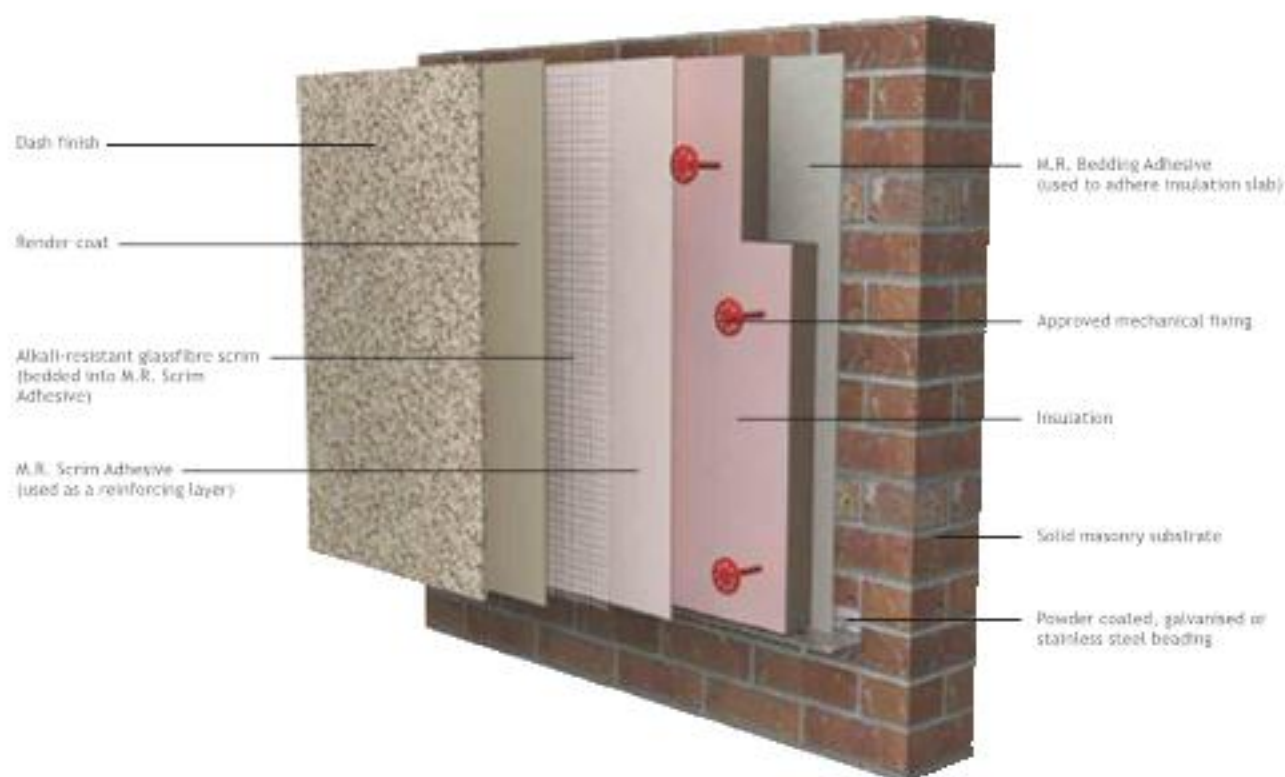
- Choice of insulation thicknesses and materials, achieving very low U-values
- Insulation is mechanically fixed direct to continuous substrate
- Polymer modified render finishes including Plain, Spar Dashed and Brick Effect
- Thin-coat, through-coloured render finishes including ST Silicone and Mineral
- Natural option consisting Mineral Wool or Cork insulation with Mineral render

### Installation & Maintenance

- Installed by approved specialist contractors
- Requires minimal routine maintenance



## Swisslab - The System



### Swisslab - The System

Swisslab is the market leading insulated render system for overcladding existing properties. It is extensively used to upgrade social housing in order to meet the decent homes standard and strongly contributes to urban regeneration. Insulation materials are mechanically fixed direct to a continuous substrate and are faced with M.R. Polymer modified renders for a traditional appearance, or thin-coat Silicone or Mineral renders for a more contemporary look.

#### Insulation Choice

Insulation Choice	Swisslab
Phenolic	✓
Polyisocyanurate (PIR)	✓
EPS	✓
Mineral Wool	✓
Cork	✓

#### Render & Coating Choice

Render, Coating, Finishes	Swisslab
Polymer Plain Render	✓
Polymer Dash Render	✓
Rendabrick	✓
Traditional Brick Slips	✓
Silicone Render	✓
Mineral Render	✓
Silicone Façade Paint	✓
Masonry Paint	✓

#### Construction Type

Construction Type	Swisslab
Traditional Construction	
Solid Masonry	✓
Concrete Panels (LB)*	✓
No Fines Concrete	✓
Masonry and Cavity	✓
Typical Non-Traditional Construction	
BISF**	✓
Orlit**	✓
Wates**	✓
Cruden**	✓
Athol**	✓
Unity**	✓
Cornish**	✓

\* (LB) = Load Bearing

\*\* = Subject to site specific specification



The Swisslab system has been approved by the BBA since 1988 and is currently covered by Certificate No 93/2914, with specific data sheets for individual insulants and render finishes.



NBS Clauses can be downloaded from the Alumasc website.



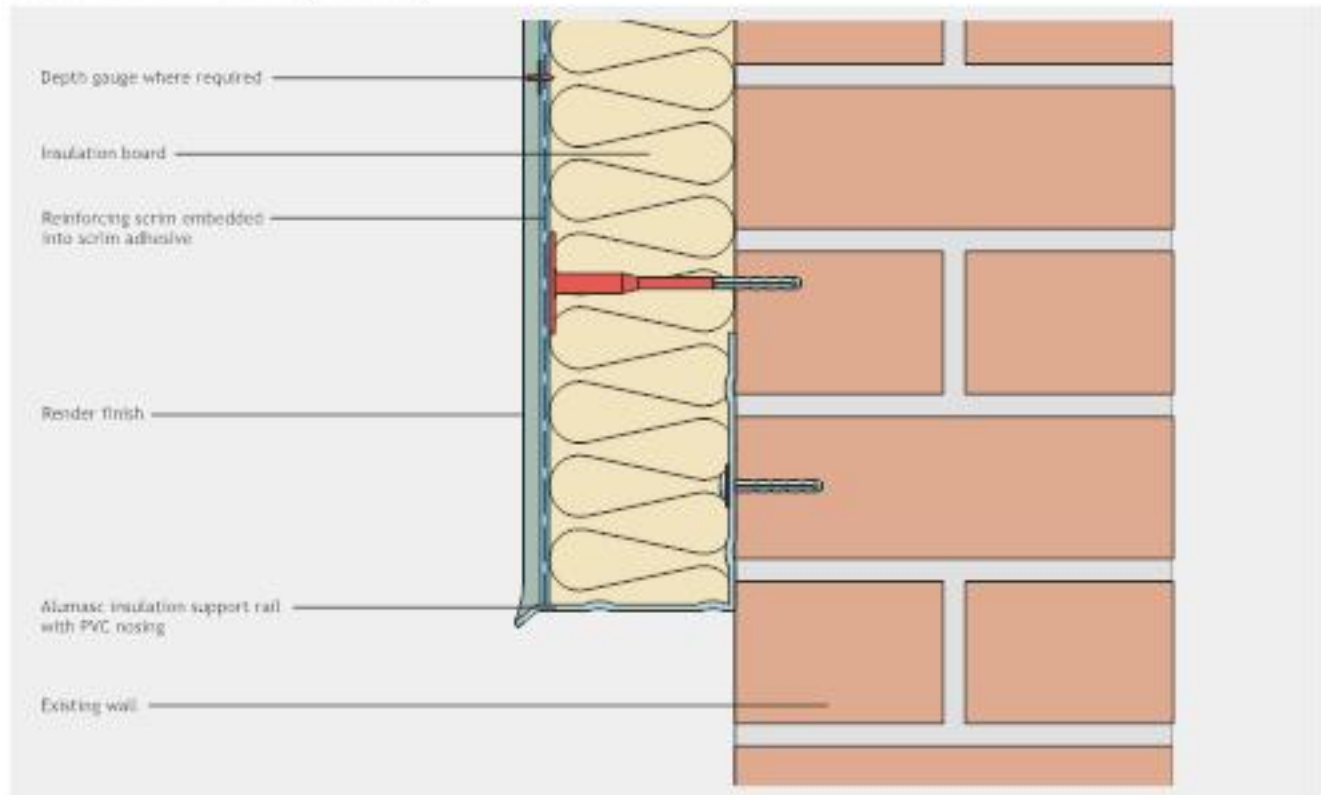


## Swisslab - The System

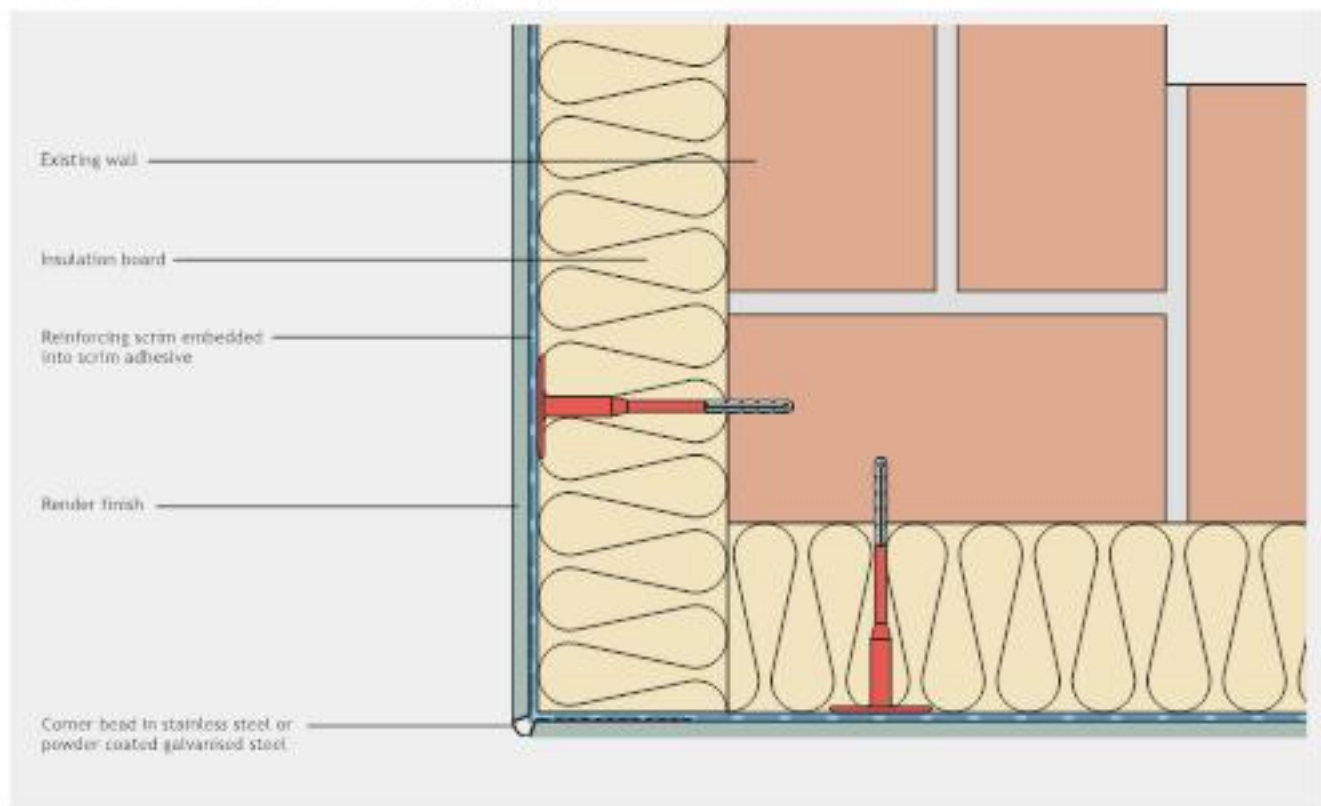


## Swisslab - Application Details

### Swisslab base detail (section)

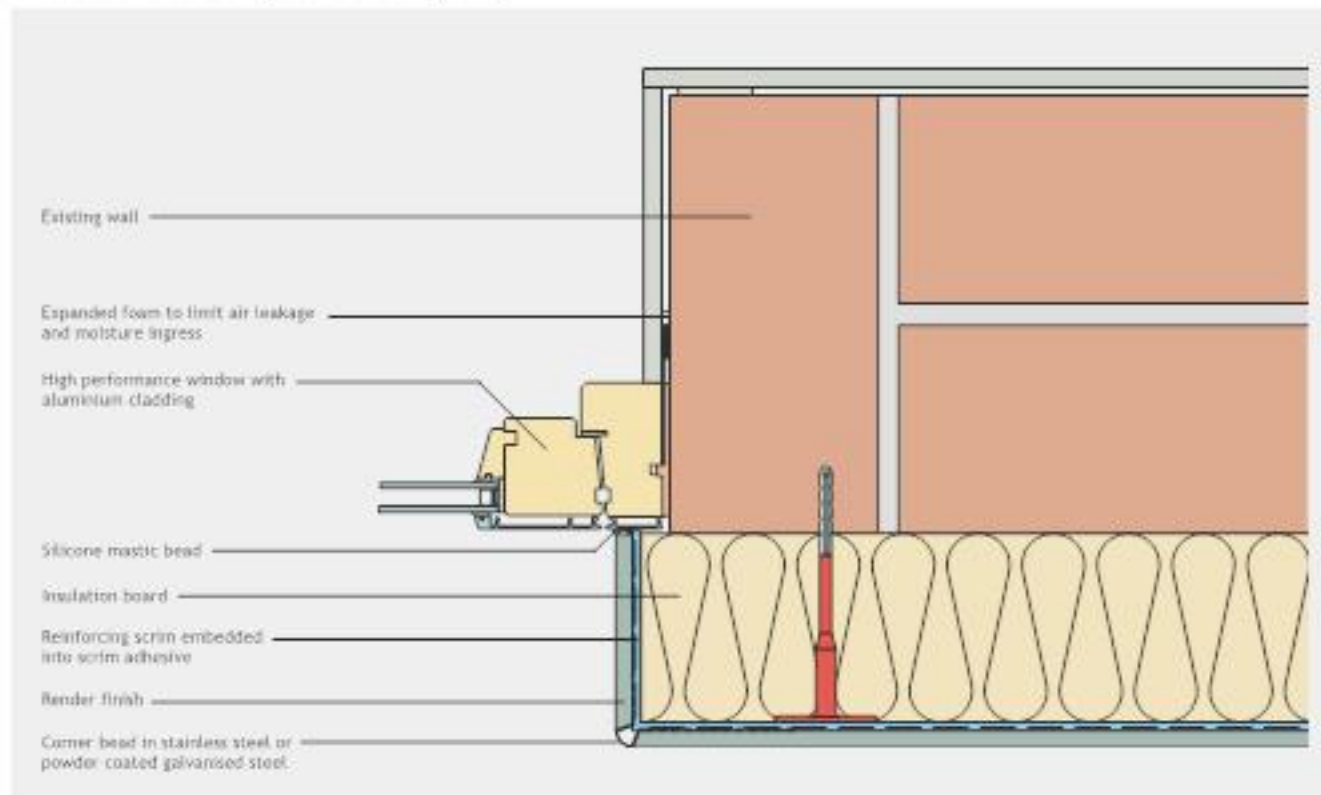


### Swisslab external corner detail (plan)

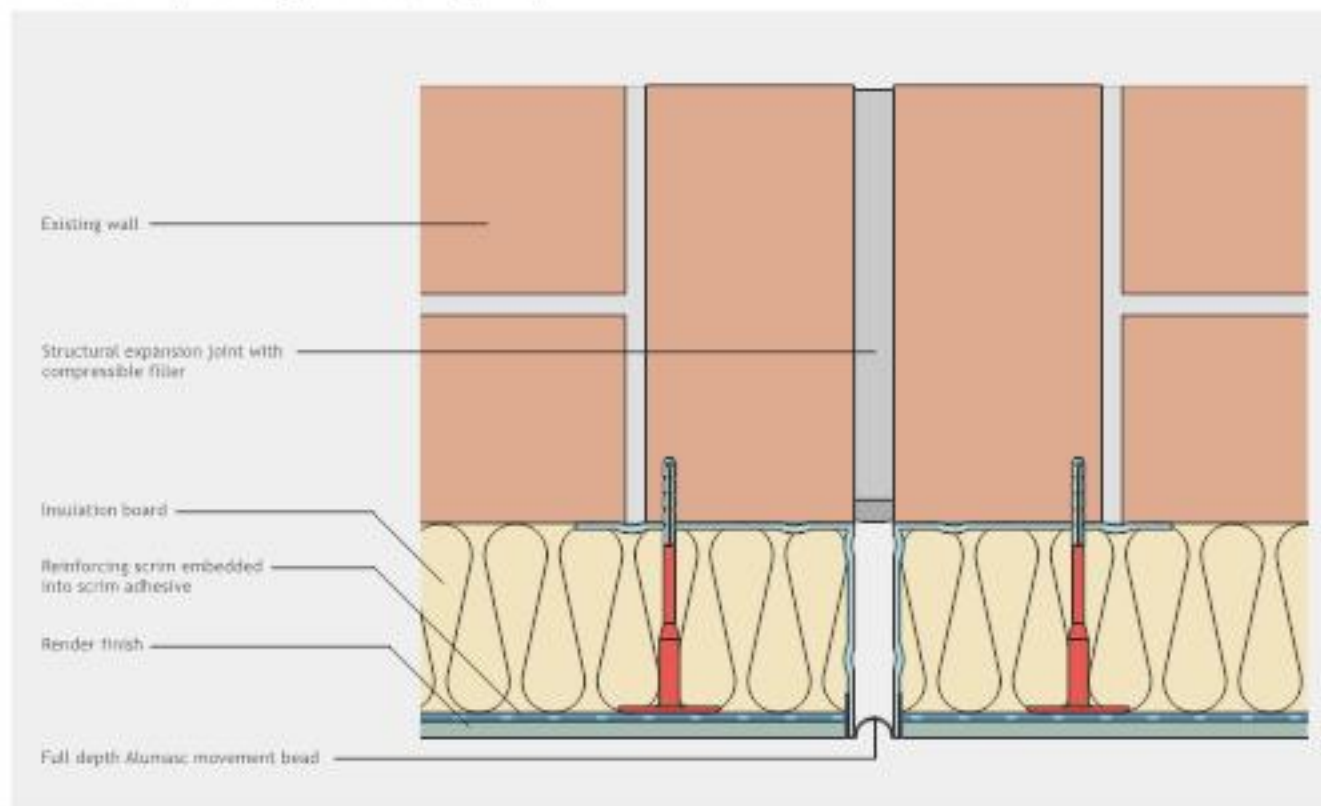


## Swisslab - Application Details

Swisslab window jamb detail (plan)



Swisslab expansion joint detail (plan)

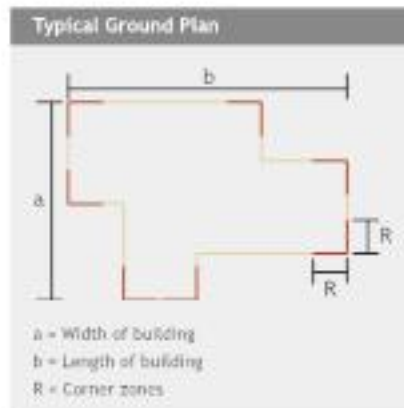


## Swisslab - Layout and Fixing

### Required Number and Arrangement of Fixings

All Swisslab fixing recommendations are subject to a site pull out test carried out by an Alumasc approved agent.

Because of varying wind pressure loads, more fixings will be needed in corner zones than in central surfaces, depending on the ground plan and the building height. The width of the corner zone 'R' depends on the building width 'a' (narrow side of the building).



### Swisslab Insulation Board and Fixings Layout

#### Pattern A Alumasc Technical Services will advise on specific projects

Insulation boards – typical layout of fixings and insulation slabs each 1200mm x 600mm

Additional scrim patches min 500mm x 250mm applied over main reinforcing scrim (not shown) across the angle of all wall openings

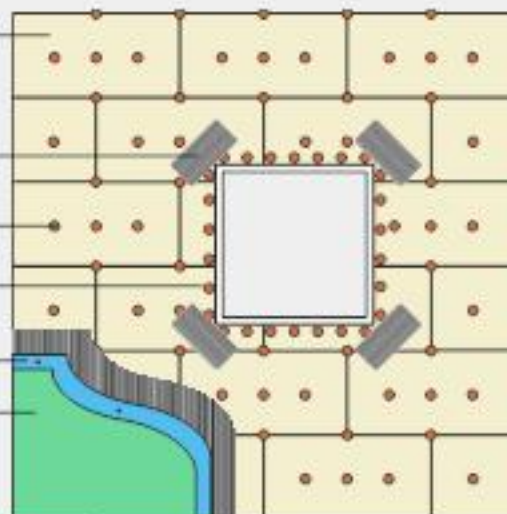
Approved M.R. mechanical fixing

Additional fixings around openings at 300mm centres maximum

M.R. reinforcing scrim in scrim adhesive

M.R. 5 polymer cement render finish min 8mm thick

Note: The 3 longitudinal centre fixings are spaced along the board at 300mm, 600mm and 900mm.



## Swisslab - Layout and Fixing

### High Rise Policy

High rise projects are subject to Alumasc Board approval and compliance with Alumasc's current High Rise Policy.

- Schemes are to be a maximum height of 20 storeys
- In all cases an independent Structural Engineer must be appointed to advise on the suitability of the proposed external wall insulation system specification and detailing on the particular building
- Projects are subject to the following specification clause:

'In preparing this specification we have assumed that the structure of the building to which it relates is absolutely sound and free from defects in all respects. We have not carried out or commissioned a structural survey of the building and recommend that you consider this course of action if you have not already done so.'

The width of the corner zone is at least 1m, with a maximum of 2m. However, the following values apply owing to the practicalities of the fixing arrangement:

Building width	Corner zone R
up to 9m	1.0m
9 to 13m	1.5m
over 13m	2.0m

Fix using approved Impact fixings or expansion fixings. Project specific fixing patterns will be supplied by Alumasc Technical Services.



### Swisslab Insulation Board and Fixings Layout

Pattern B Alumasc Technical Services will advise on specific projects.

Insulation boards – typical layout of fixings and insulation slabs each 1200mm x 600mm

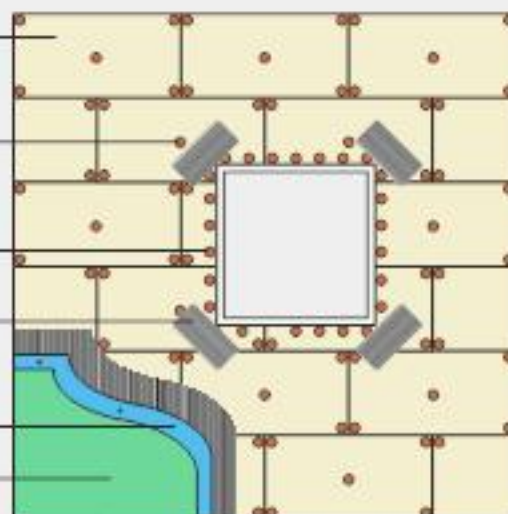
Approved M.R. mechanical fixing

Additional fixings around openings at 300mm centres maximum

Additional scrim patches min 500mm x 250mm applied over main reinforcing scrim (not shown) across the angle of all wall openings

M.R. reinforcing scrim in scrim adhesive

M.R. 5 polymer cement render finish min 8mm thick



## Swisspan - External Wall Insulation

Swisspan is an insulated render system for building refurbishment. It is used for the overcladding of buildings where mechanical fixing is problematic and for uneven substrates. Insulation is mechanically fixed to galvanised steel support rails that span between the structural elements, and then faced with M.R. Polymer-modified traditional renders, or thin-coat Silicone or Mineral renders.



## Swisspan - External Wall Insulation



### Applications

- For building refurbishment where the structure does not provide continuous support for the insulation
- Ideal for problematic substrates or uneven modelling applications
- For unrestricted use on buildings up to 4 storeys

### Performance

- BBA approved, fully warranted system with life expectancy in excess of 30 years
- Manufactured under ISO 9001: 2008 and ISO 14001: 2004 Quality and Environmental Management Systems
- Fully weather resistant while remaining vapour permeable
- Integrated rail system provided secure fixing and load transfer to loadbearing elements of the structure
- Allows building fabric to act as a heat store, increasing thermal efficiency
- Improves external appearance of building
- Eliminates cold bridging, condensation and mould growth
- Reduces heating cost and carbon dioxide emissions
- Protects the building fabric, limiting movement and thermal shock and freeze-thaw cycles associated with traditional brickwork facades
- Highly resistant to impact damage
- Rated Class 0 for surface spread of flame

### Insulation and Finishes

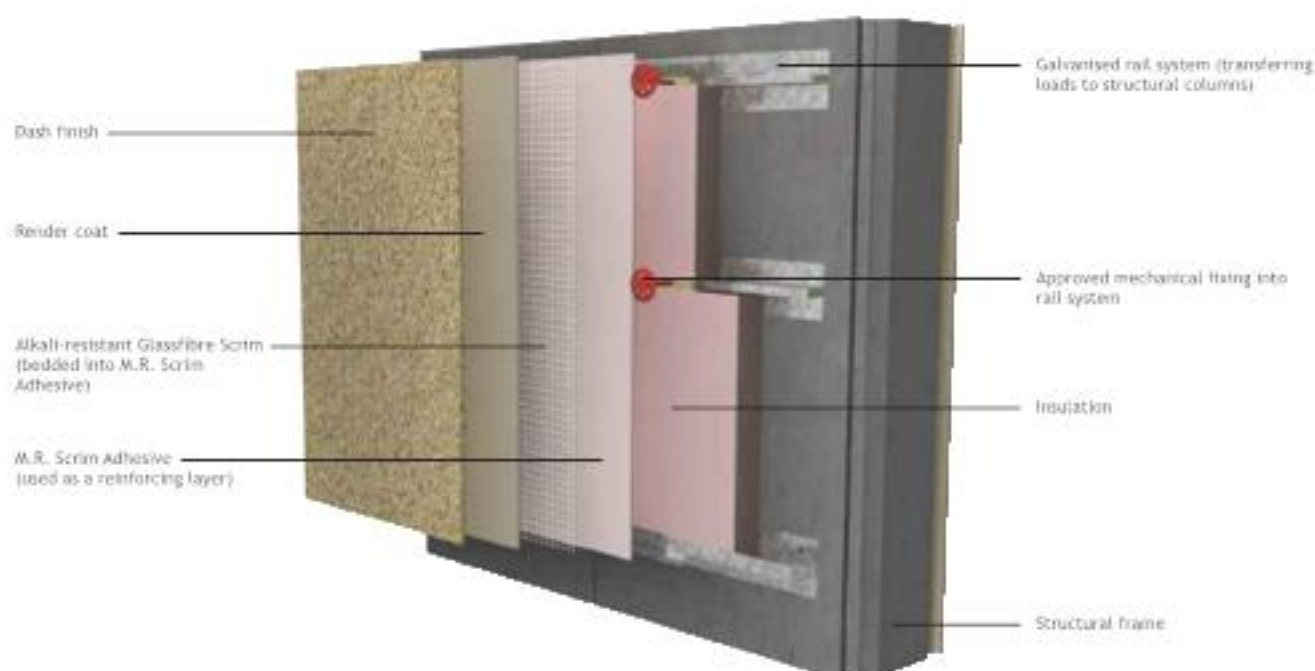
- Choice of insulation thicknesses and materials, achieving very low U-values
- Insulation is mechanically fixed direct to continuous substrate
- Polymer modified render finishes including Plain, Spar Dashed and Brick Effect
- Thin-coat, through-coloured render finishes including ST Silicone and Mineral
- Natural option consisting Mineral Wool or Cork insulation with Mineral render

### Installation and Maintenance

- Installed by approved specialist contractors
- Requires minimal routine maintenance



## Swisspan - The System



### Swisspan - The System

Swisspan is an insulated render system used to overclad existing properties where the possibilities for mechanical fixing are restricted to structural elements - typically structural frames with non load-bearing steel or concrete infill panels and non-traditional house types such as BISF, Orlit, Wates, Cruden, Athol, Airey Duo Slab, Cornish and Unity. Insulation materials are mechanically fixed to a galvanised steel horizontal support rail system that spans between structural columns, and are then faced with a choice of M.R. renders and coatings.

#### Insulation Choice

Insulation Choice	Swisspan
Phenolic	✓
Polyisocyanurate (PIR)	✓
EPS	✓
Mineral Wool	-
Cork	✓

#### Render & Coating Choice

Render, Coating, Finishes	Swisspan
Polymer Plain Render	✓
Polymer Dash Render	✓
Rendabrick	✓
Traditional Brick Slips	✓
Silicone Render	✓
Mineral Render	✓
Silicone Façade Paint	✓
Masonry Paint	✓

#### Typical Construction Types

Construction Type	Swisspan
<b>Traditional Construction</b>	
Solid Masonry	-
Concrete Panels (NLB)*	✓
No Fines Concrete	-
Masonry and Cavity	✓
<b>Typical Non-Traditional Construction</b>	
BISF	✓
Orlit	✓
Wates	✓
Cruden	✓
Athol	✓
Airey Duo Slab	✓
Cornish	✓
Unity	✓

\* (NLB) - Non Load Bearing



The Swisspan system is approved by the BBA and is currently covered by Certificate No 97/3410, with specific data sheets for individual insulants and render finishes.



NBS Clauses can be downloaded from the Alumasc website.



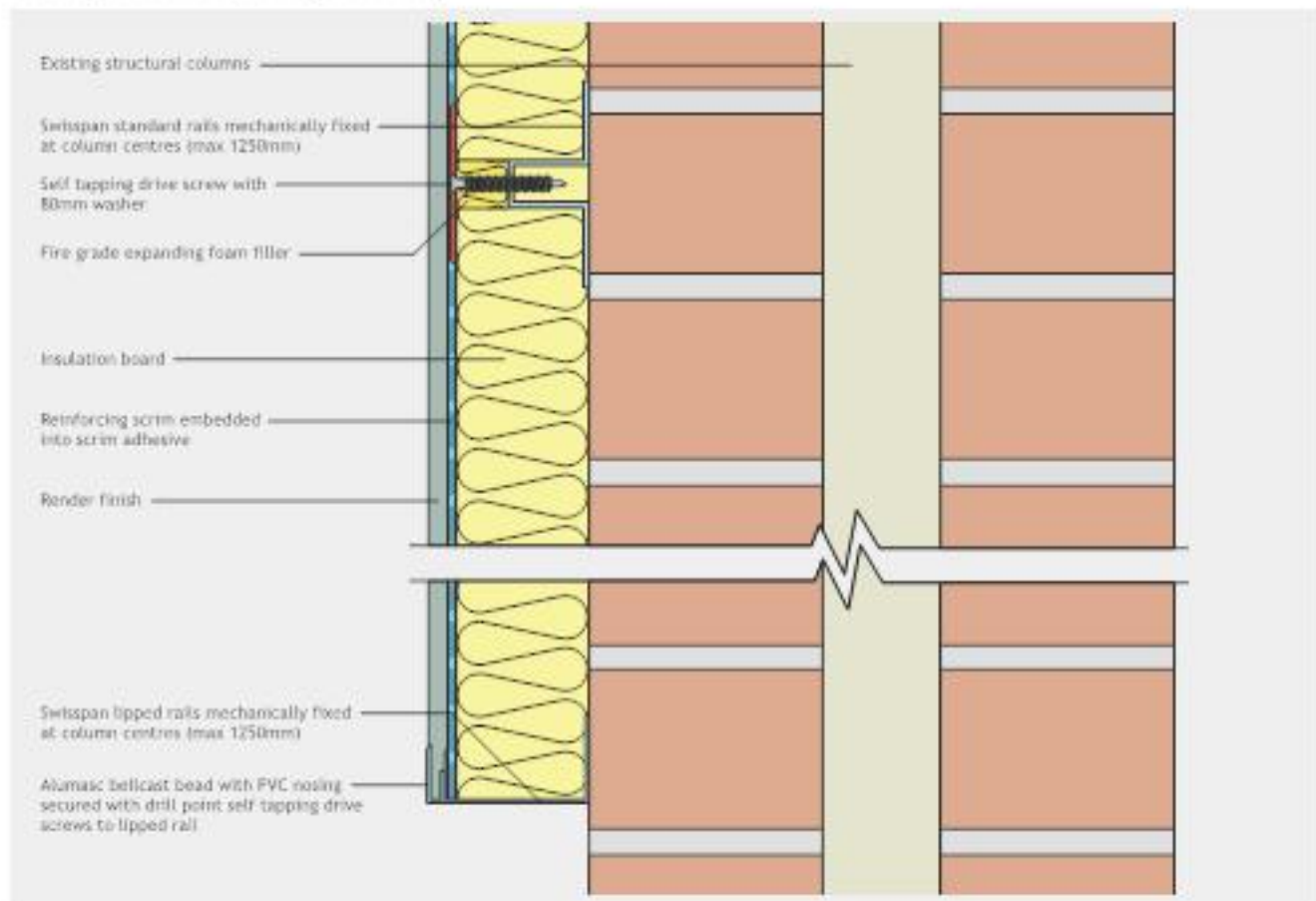


## Swisspan - The System

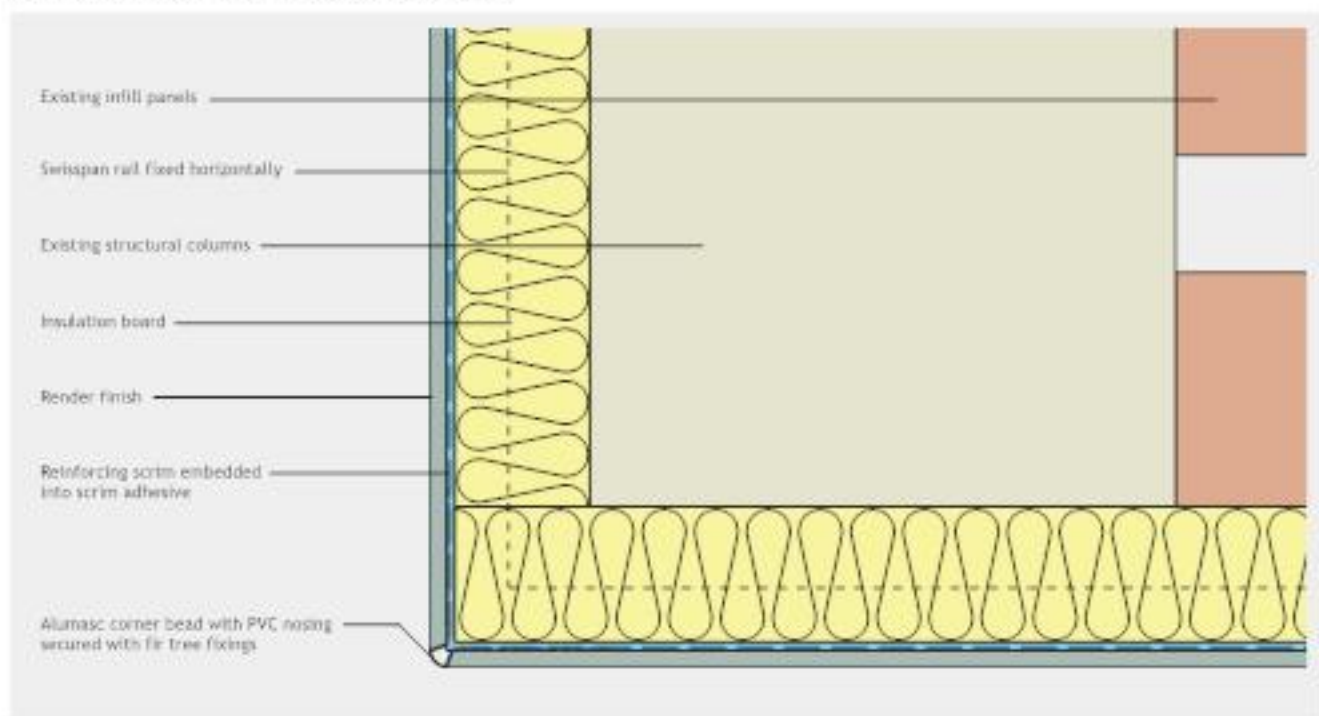


## Swisspan - Application Details

### Swisspan base detail (section)

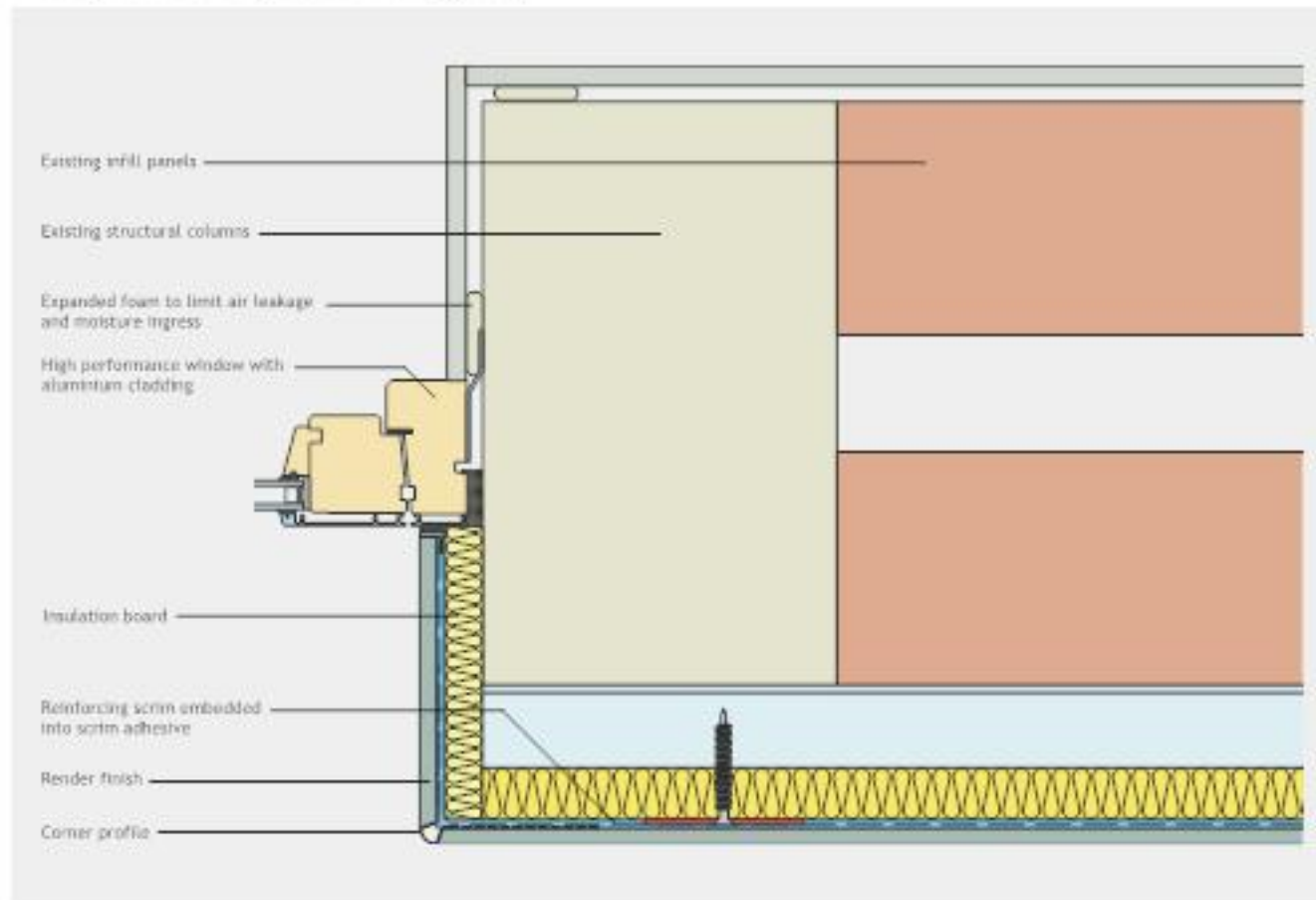


### Swisspan corner angle detail (plan)

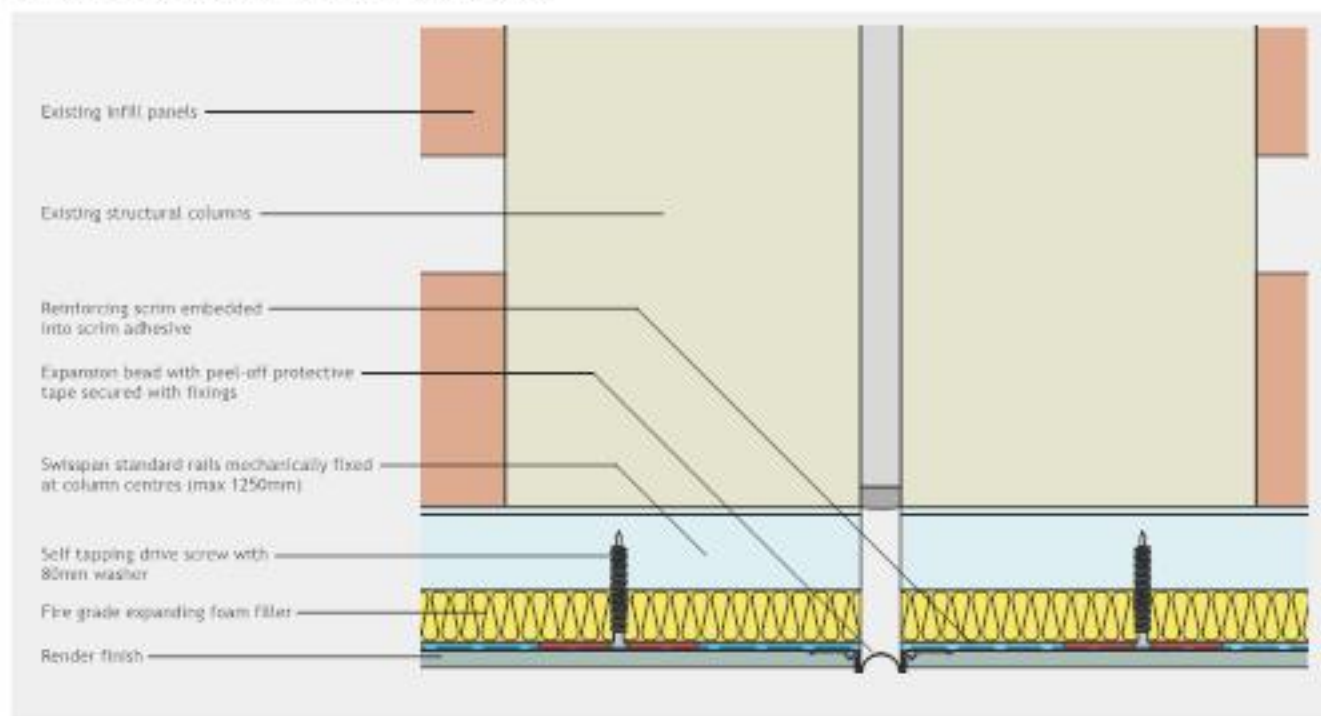


## Swisspan - Application Details

Swisspan window jamb detail (plan)



Swisspan expansion joint detail (plan)

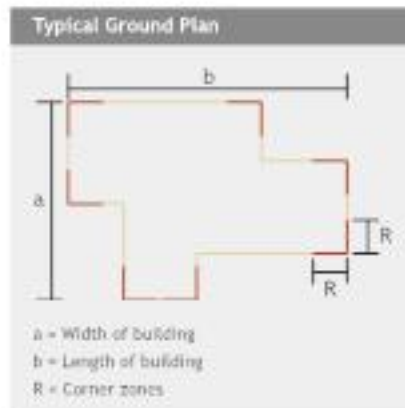


## Swisspan - Layout and Fixing

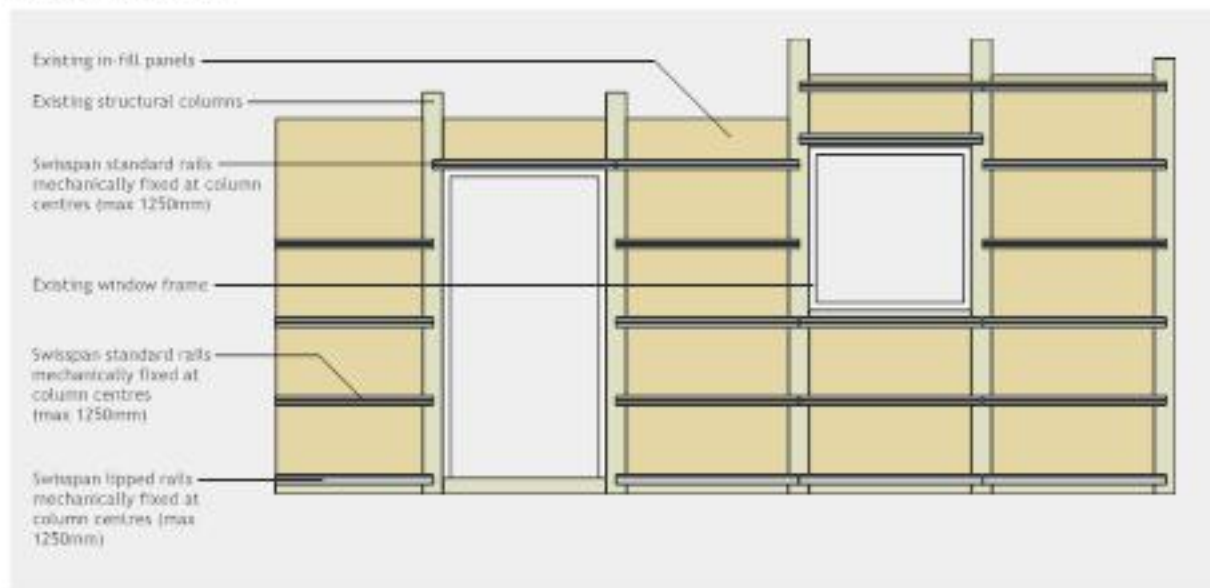
### Required Number and Arrangement of Fixings

All Swisspan fixing recommendations are subject to a site pull out test carried out by an Alumasc approved agent.

Because of varying wind pressure loads, more fixings will be needed in corner zones than in central surfaces, depending on the ground plan and the building height. The width of the corner zone 'R' depends on the building width 'a' (narrow side of the building).



### Swisspan Rail Layout



## Swisspan - Layout and Fixing

Swisspan is suitable for applications up to 4 storeys, proposals for applications above this level are subject to project specific written approval and compliance with Alumasc's current High Rise Policy.

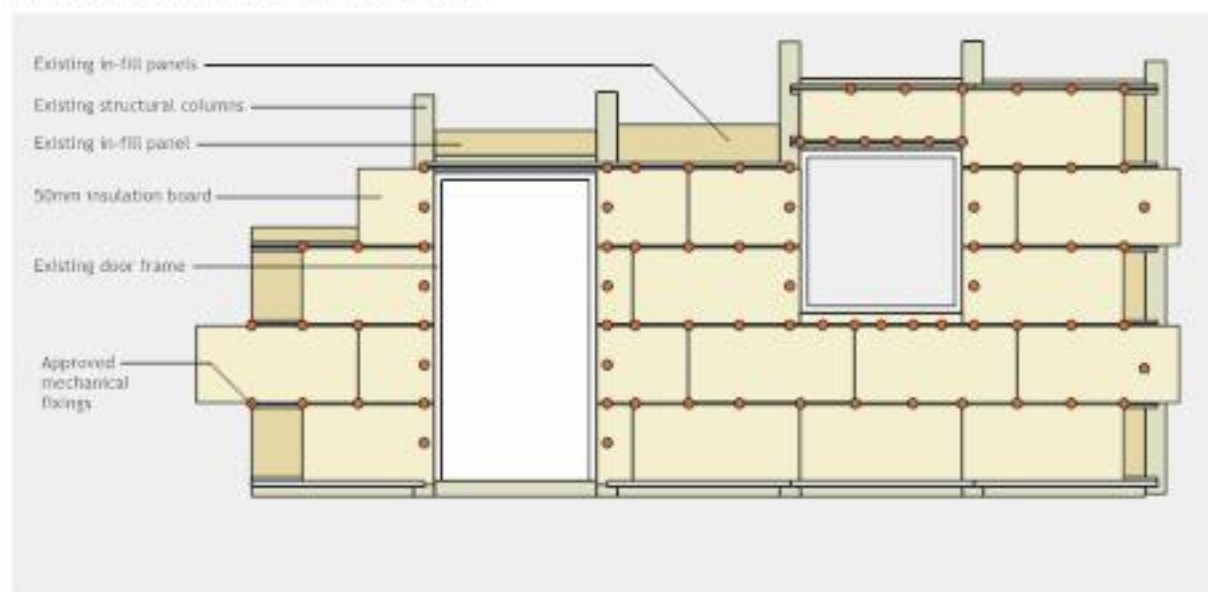


The width of the corner zone is at least 1m, with a maximum of 2m. However, the following values apply owing to the practicalities of the fixing arrangement:

Building width	Corner zone R
up to 9m	1.0m
9 to 13m	1.5m
over 13m	2.0m

Fix using Swisspan Impact fixings or Expansion fixings. Project specific fixing patterns will be supplied by Alumasc Technical Services.

### Swisspan Insulation Board and Fixings Layout



## Alumasc Facades Project Gallery

Alumasc's BBA approved, fully warranted External Wall Insulation and Render systems provide great scope for improving a building's overall performance thermally and aesthetically in refurbishment projects. The Swisslab system is widely used in social housing upgrading, while both Swisspan and Swisslab are also ideal for improving appearance and performance in all forms of building refurbishment to meet the requirements of current regulations.

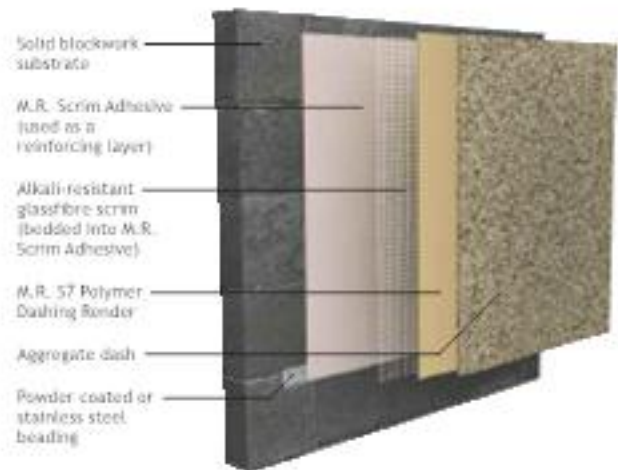


## Alumasc Facades Project Gallery



## M.R. S7 Polymer Dashing Render

M.R. S7 is a premium, one coat polymer cement dashing render, available in seven standard colours, complemented by a wide choice of aggregates dash finishes. It is a high performance, BBA certified alternative to traditional sand and cement, used mainly in refurbishment applications where a traditional, low maintenance finish is required. It can be used in both render only and external wall insulation applications.





# M.R. S7 Polymer Dashing Render

## Dashing Renders and Aggregates



Arcane on Peach



Polar White on White



Buff Quartz on Cream



Peimwhite Calcine Flint on White



Hazel on Brown\*



Derbyshire Spar on Cream



Yellow Spar on Yellow\*



Harvest on Cream



Permgold on Yellow\*



Red &amp; White on Extra White



Black &amp; White on White



Champagne on Cream\*



Durite Canterbury Spar on Pink



Westlens on Grey

## Applications

- Suitable for single coat application to most substrates
- Can be used as a finish coat over M.R. S3 base coat to brick and blockwork
- Insulated Render system - compatible with the Swisthern, Swisrail and Swisslab External Wall Insulation Systems

## Performance

- BBA approved, fully warranted system with 30 year life expectancy
- Manufactured under ISO 9001: 2008 and ISO 14001: 2004 Quality and Environmental Management Systems
- Durable, lightweight with increased bond strength over sand and cement
- Resistant to cracking and crazing
- Fully weather resistant whilst remaining vapour permeable
- Highly resistant to impact damage

## Colour Options

- 9 standard render colour options
- Wide range of natural aggregate dash finishes

## Installation & Maintenance

- Installed by approved specialist contractors
- Requires minimal routine maintenance



## M.R. S7 Polymer Dashing Render

Render Coverage	
Pack size	25kg bag
Mixing ratio	5 - 5.6 litres of clean cold water per bag
Coverage	Up to 2.5m <sup>2</sup> per bag (based on 8mm thickness)

Coverage rates stated are for guidance only and depend on background substrate and consistency of mix. Contractors should always verify the coverage rate according to the specific characteristics of each individual project and product.



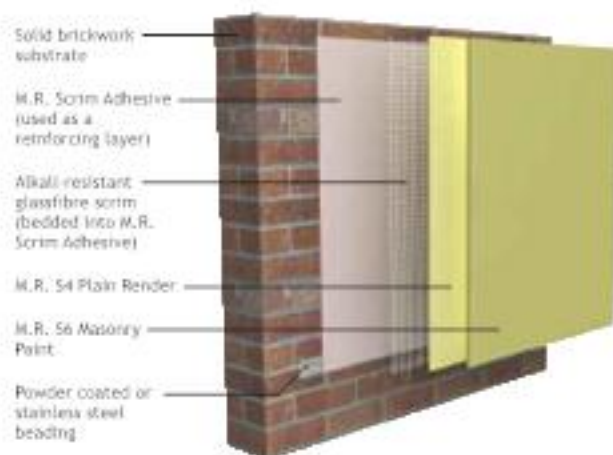
\*Note: Aggregates containing yellow stone can be susceptible to iron ore staining.



The M.R. S7 Polymer Cement Spar Dash Render Finish has earned BBA approval and is covered by Certificate 93/2895.

## M.R. S4 Polymer Plain Render

M.R. S4 is a two-coat plain render system, ideal for coating large elevations and for creating feature bands on building facades. Seven standard render colours are available, which are over-painted with M.R. S6 masonry paint. In addition to direct application to solid walls, M.R. S4 can be used as the facing for Alumasc's insulated render systems. M.R. S4 is also suitable for use as a base for thin-coat Silicone and Mineral top coats.



# M.R. S4 Polymer Plain Render

## Render Colours



## Masonry Paint Colours



## Applications

- Suitable for two-coat, painted application over most building surfaces
- Used to coat large elevations and create feature bands around windows or doors
- M.R. S4 must be painted with M.R. S6 masonry paint
- Suitable as a base coat for thin-coat Silicone and Mineral top coats
- Insulated Render system - compatible with the Swisslab and Swisspan External Wall Insulation Systems

## Performance

- BBA approved, fully warranted system with 30 year life expectancy when used over the Swisslab or Swisspan systems
- Manufactured under ISO 9001: 2008 and ISO 14001: 2004 Quality and Environmental Management Systems
- Durable, lightweight with increased bond strength over sand and cement
- Less susceptible to cracking and crazing than traditional plain renders
- Fully weather resistant whilst remaining vapour permeable
- Highly resistant to impact damage
- Class 0 surface spread of flame

## Colour Options

- 9 standard render colour options
- 18 standard masonry paint colour options

## Installation & Maintenance

- Installed by approved specialist contractors
- Requires minimal routine maintenance



M.R. S4 Polymer Plain Render

Render Coverage	
Pack size	25kg bag
Coverage	1.5 - 1.75m <sup>2</sup> per bag (at normal thickness)

Coverage rates stated are for guidance only and depend on background substrate and consistency of mix. Contractors should always verify the coverage rate according to the specific characteristics of each individual project and product.



Other colours for all products are available upon request but may be subject to minimum order quantity. Special colours may be subject to price increase and extended delivery time.

## M.R. S6 Masonry Paint

M.R. S6 Masonry Paint is a high performance coating that produces a smooth, durable finish when applied to virtually any dry, clean and solid background. It is suitable for use over brick/blockwork, precast concrete, rendered or pebble-dashed surfaces. M.R. S6 provides the final decorative coating to M.R. S4 Polymer Plain render applications, whether applied direct to the substrate or as part of the Swisslab and Swisspan Insulated Render systems.

M.R. S6 Masonry Paint is available in 18 standard colours with other shades available to special order. Go to our interactive colour selector on the website to explore the combinations of colour that can be achieved.



# M.R. S6 Masonry Paint

## M.R. S6 Masonry Paint



Peach



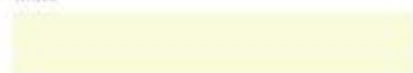
Pink



Rose



White



Yellow



Magnolia



Buff



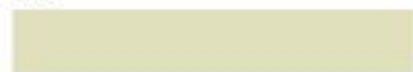
Deep Buff



Chocolate



Cream



Sandstone



Grey



Mushroom



Amber



Coffee



Terracotta



Red



Black

## Applications

- For two coat application by roller or brush
- Can be spray applied where applicable
- For use with M.R. Polymer Plain, Polymer Dashing renders and the Swisslab, Swisspan insulated render systems
- For use on in situ or precast-concrete, concrete blockwork, brickwork, renderings, calcium silicate or fibre-reinforced cement

## Performance

- BBA certified, with a life expectancy in excess of 15 years
- Manufactured under ISO 9001: 2008 and ISO 14001: 2004 Quality and Environmental Management Systems
- When cured, provides a watertight finish that is vapour permeable
- Class 0 surface spread of flame

## Colour Options

- 18 standard colour options
- Additional colours available subject to minimum order quantity

## Colours

Colours are reproduced here for general guidance only. Please contact Alumasc for samples or colour chart. Alternatively, visit our website to use our interactive colour picker.



## M.R. S6 Masonry Paint

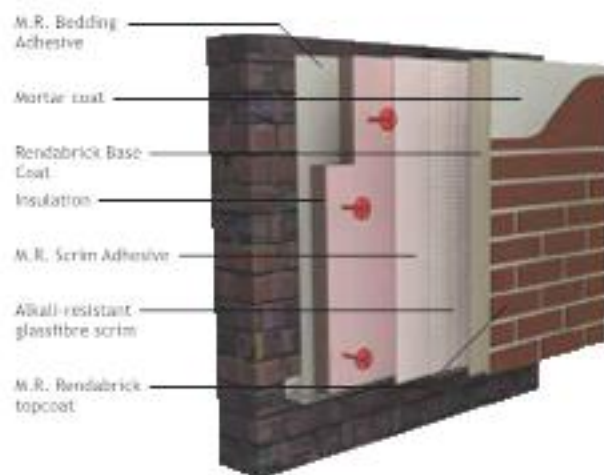
Paint Coverage	
First Coat	5m <sup>2</sup> per litre
Second Coat	4m <sup>2</sup> per litre
Average 22m <sup>2</sup> per tin dependant upon substrate type	

Coverage rates stated are for guidance only and depend on background substrate and consistency of mix. Contractors should always verify the coverage rate according to the specific characteristics of each individual project and product.



## M.R. Rendabrick

M.R. Rendabrick is a specially formulated polymer cement render which can simulate the appearance of brickwork and is applied in three coats to existing masonry. It can also be used to create new effects and details with a choice of two mortar and two brick colours. M.R. Rendabrick base coat and coloured mortar coat is trowel applied. Prior to initial set, a topcoat of coloured render is applied and textured to give the desired finish. The topcoat is then carefully set out, marked and cut back, using a specially designed cutting tool, to give a truly realistic brick pattern.



# M.R. Rendabrick

## M.R. Rendabrick



M.R. Rendabrick Buff, Grey Mortar



M.R. Rendabrick Terracotta, Black Mortar

## Finish Coat



Terracotta



Buff

## Mortar Coat



Grey



Black

## Applications

- Applied in three coats to existing masonry
- A simulated brick finish that can match existing brickwork or create new effects and details
- Insulated Render system - compatible with the Swisslab and Swisspan External Wall Insulation Systems

## Performance

- Durable, lightweight with increased bond strength over sand and cement
- Manufactured under ISO 9001: 2008 and ISO 14001: 2004 Quality and Environmental Management Systems
- Resistant to cracking and crazing
- Fully weather resistant whilst remaining vapour permeable
- Highly resistant to impact damage
- Class 0 surface spread of flame

## Colour Options

- Brick effect available in Terracotta and Buff, with 2 mortar coat colour options
- Additional colours available subject to minimum order quantity

## Installation & Maintenance

- Installed by approved specialist contractors
- Requires minimal routine maintenance



## M.R. Rendabrick

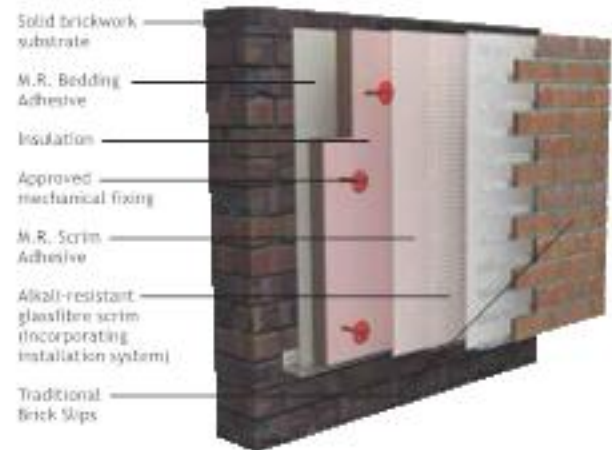
Render Coverage	
Pack size	25kg bag (all coats)
Mixing ratio	3.5 - 4.5 litres of clean cold water per bag depending on coat
Coverage	Base coat: Up to 2.5m <sup>2</sup> per bag (based on 8mm thickness)
Coverage	Mortar coat: Up to 5m <sup>2</sup> per bag (based on 3mm thickness)
Coverage	Base coat: Up to 4.5m <sup>2</sup> per bag (based on 3mm thickness)

Coverage rates stated are for guidance only and depend on background substrate and consistency of mix. Contractors should always verify the coverage rate according to the specific characteristics of each individual project and product.

## Alumasc Traditional Brick Slips

Alumasc's Traditional Brick Slip support system offers an easy to apply, high performance finish where the use of real bricks would not be viable.

The system innovatively uses a preformed template mesh to assist speedy and accurate installation, achieving a true brick finish. Alumasc's Traditional Brick Slips can be used in conjunction with BBA certified EWI systems.





## Alumasc Traditional Brick Slips

The Alumasc Traditional Brick Slip system offers an easy-to-apply, high performance brick finish, where the use of real bricks would not be viable. Developed directly to complement Alumasc's traditional render solutions, the system innovatively uses a preformed template mesh to assist speedy and accurate installation, achieving a premium quality and uniform result to give a truly realistic brick pattern.

Traditional brick slips are extensively used as a hardwearing covering to areas of facade prone to impact damage, such as bin stores, or simply to match existing details retained after remodelling and upgrade work.

### Applications

- Suitable for application to most substrates, in low rise applications
- Insulated Render system - compatible with the Swisslab and Swisspan External Wall Insulation Systems

### Performance

- Durable, quick install system
- Manufactured under ISO 9001: 2008 and ISO 14001: 2004 Quality and Environmental Management Systems
- Easy to apply, with minimal site handling required
- Can be cut on site to accommodate detailing requirements
- Fully weather resistant whilst remaining vapour permeable
- Completely corrosion resistant
- Highly resistant to impact damage
- Class 0 surface spread of flame

### Colour Options

- A range of standard UK brick colour and texture options
- Standard range of mortar colours
- Existing brick types and colours can be matched. Contact Alumasc for further information

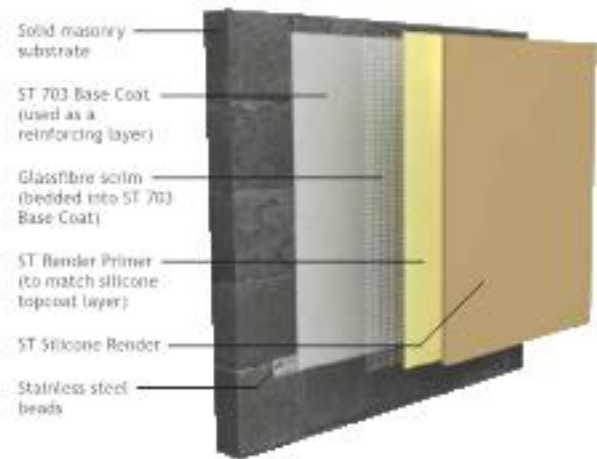
### Installation & Maintenance

- Preformed template mesh used to assist quick and accurate installation
- Installed by approved specialist contractors
- Requires minimal routine maintenance



## ST Silicone Render

The ST range of thin-coat, through colour, Silicone renders are used as a contemporary finish to newbuild applications and the re-modelling of existing facades in both render only and external wall insulation applications. High performing Silicone renders are highly water-repellent, vapour permeable and weather resistant. The Silkolitt (rolled texture) silicone finish is available in a wide range of colours.



# ST Silicone Render

## Textures

ST Silicone renders are available in a variety of finishes.

ST Silkolitt render offers a choice of three rolled finishes, creating an even textured appearance. The degree of texturing is determined by grain size within the render mix - finest using grain size 1.5, up to a heavier texture using grain size 3.5.

### Rolled Texture Finishes



ST Silkolitt rolled texture finish grain size 1.5



ST Silkolitt rolled texture finish grain size 2.5



ST Silkolitt rolled texture finish grain size 3.5

### Topcoat Render Coverage

25 kg tub	Coverage
Silkolitt 1.5mm	Up to 8m <sup>2</sup> per tub
Silkolitt 2.5mm	Up to 7m <sup>2</sup> per tub
Silkolitt 3.5mm	Up to 5m <sup>2</sup> per tub

**Note:** Thickness is predetermined by chosen grain size.

Coverage rates stated are for guidance only and depend on background substrate and consistency of mix. Contractors should always verify the coverage rate according to the specific characteristics of each individual project and product.

## Applications

- Contemporary finish for new build and remodelling applications
- Suitable for direct application to solid walls
- As part of an insulated render system - compatible with the Alumasc Swisslab, Swisspan, Swistherm and Swisrail External Wall Insulation Systems

## Performance

- Fully weather resistant while remaining vapour permeable
- Manufactured under ISO 9001: 2008 and ISO 14001: 2004 Quality and Environmental Management Systems
- Excellent durability and UV stable from a thin system build up
- Protects against damaging solvents, acids and pollutants in the environment
- Low susceptibility to soiling
- Highly resistant to impact damage
- Manufactured from high quality silicone resin and UV resistant colour pigments
- Rated Class 0 for surface spread of flame when used as part of an external wall insulation system, or applied directly to masonry substrate
- Quality control compliance with DIN 18200

## The Alumasc Colour System

The Alumasc Colour System offers a wide range of colours, which are divided into seven sections - ie, yellows, blues, greens, etc. Within each section there are many variations of colour intensity from strong vibrant colours to subtle tones.

The Alumasc Colour System is an exceptional colour modelling aid that assists designers in creating harmonized colour and texture schemes for buildings. Colours are reproduced here for general guidance only. Please contact Alumasc for samples or colour chart. Alternatively, visit our website to use our interactive colour selector.

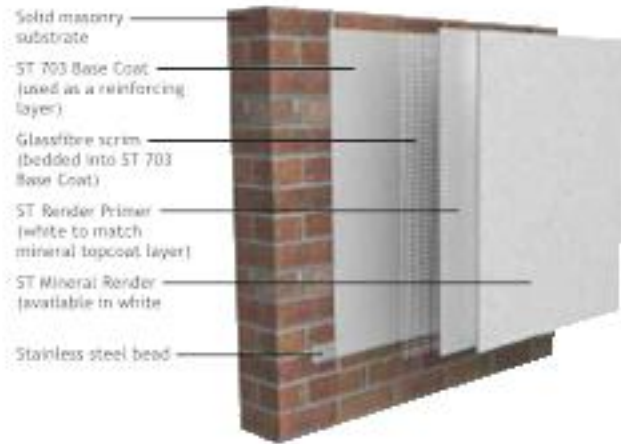


## Installation and Maintenance

- Installed by approved specialist contractors
- Requires minimal routine maintenance

## ST Mineral Render

Alumasc ST thin-coat Mineral renders are used as a contemporary finish to newbuild applications and the re-modelling of existing facades. Eco-friendly Mineral renders are manufactured from natural material. Mineral Render K (rolled texture) is available in white, and can be over painted with Alumasc Silicone Facade Paint.



# ST Mineral Render

## Colours and Textures

### Rolled Texture Finishes



Mineral Render K 2mm grain sizes



Mineral Render K 3mm grain sizes



Mineral Render K 4mm grain sizes

### Topcoat Render Coverage

25 kg bag	Coverage
Mineral K 2mm	Up to 12.5m <sup>2</sup> per bag
Mineral K 3mm	Up to 10m <sup>2</sup> per bag
Mineral K 4mm	Up to 7.5m <sup>2</sup> per bag

**Note:** Thickness is predetermined by chosen grain size.

Coverage rates stated are for guidance only and depend on background substrate and consistency of mix. Contractors should always verify the coverage rate according to the specific characteristics of each individual project and product.

## Applications

- Contemporary finish for new build and remodelling applications
- Render system for direct application to solid walls
- Insulated Render system - compatible with the Alumasc Swisslab, Swisspan, Swistherm and Swisrail External Wall Insulation Systems

## Performance

- Fully weather resistant while remaining vapour permeable
- Manufactured under ISO 9001: 2008 and ISO 14001: 2004 Quality and Environmental Management Systems
- Excellent durability and UV stable from a thin system build up
- Highly resistant to impact damage
- Made entirely from natural materials (mineral aggregates, white marble grain)
- Non-flammable and Class 0 surface spread of flame
- Quality control compliance with DIN 18550

## Texture and Colour Options

- Mineral Render K (rolled texture) in 2, 3 and 4mm grain sizes
- The base colour of ST Mineral Render is white. Should a coloured render be required, either specify ST Silicone Render as an alternative (see page 32), or overpaint ST Mineral Render with Silicone Façade Paint (see page 36)

## Installation and Maintenance

- Installed by approved specialist contractors
- Requires minimal routine maintenance



## Silicone Façade Paint

Alumasc's Silicone Façade Paint has been developed specifically for use as a finishing coat over Alumasc ST Mineral Render, bringing the special benefits of a silicone-based coating to independent application over virtually any clean and sound substrate. Available in a wide range of colours, Alumasc Silicone Façade Paint has high weather resistance against driving rain, UV light and environmental pollution. It has excellent application properties with brush, roller or airless spray.



# Silicone Façade Paint

## Sample Colours



## Applications

- For use with Alumasc's ST Mineral Render and can be used with the Swisslab, Swisspan, Swisitherm and Swisrall insulated render systems
- Can also be used directly on in-situ or precast-concrete, concrete blockwork, brickwork, renderings, calcium silicate or fibre-reinforced cement
- For two coat application by roller or brush
- Can be spray applied where applicable

## Performance

- BBA certified, when used as part of the Swisitherm insulated render system with ST Mineral Render finish
- Manufactured under ISO 9001: 2008 and ISO 14001: 2004 Quality and Environmental Management Systems
- Life expectancy in excess of 15 years
- When cured, provides a watertight finish that is vapour permeable
- Class 0 surface spread of flame

## Colour Options

- Available in off white or in a base white which can be tinted in a wide range of colour options, matt finish

## The Alumasc Colour System

The Alumasc Colour System is a colour modelling aid that assists designers in creating harmonised colour and texture schemes for buildings.

Colours are reproduced for general guidance only. Please contact Alumasc for samples or colour chart.

Alternatively, use our interactive colour selector on the web site.



## Silicone Façade Paint

15 Litre Drum	Coverage
Silicone Façade Paint	Approximately 0.2 - 0.25 litres per m <sup>2</sup> per coat

Coverage rates stated are for guidance only and depend on background substrate and consistency of mix. Contractors should always verify the coverage rate according to the specific characteristics of each individual project and product.



## Alumasc Project Support

Alumasc Technical Services can advise on all aspects of product selection, specification and integration of Alumasc systems into any building design.

Specific technical advice is always available through our Area Sales Managers, Site Support Technicians or Technical Services team.

### The Alumasc Four Part Business Proposition

Based on an integrated delivery of the four key factors that make up a top class Facades system offer:



#### Premium Products

A constantly evolving range of quality proven world class products and systems, fully accredited to UK, European and USA standards.



#### Technical support

Comprehensive data for specification and use of all products and systems is available in published form, and on the company website.

This is backed up with proactive support on a project basis, led by specialist area managers and using the latest CAD technology.



#### Approved Installers

A rigorously trained and monitored installation network for each specialist system to ensure correct application on site.



#### Warranties

A comprehensive choice of Alumasc warranties, giving protection for up to 20 years, with the additional option of a pre-paid insurance underwritten warranty, ensuring long term peace of mind.

### Alumasc Technical Support for Facades

#### Design Support

- Detailed site evaluation and survey reports
- Design advice
- Cost estimates
- Project specific elevational colour schemes
- Thermal efficiency calculations
- Condensation risk analysis
- Wind loading calculation for high rise
- CAD details
- Product samples

#### Specification Support

- Detailed NBS specifications
- Advice on Regulations and Standards
- COSHH and product data sheets

#### Installation, Aftercare and Warranties

- Installation by an approved contractor network, on site technical and installation support, project specific warranties, supplementary maintenance schedules and programmes





## Approved Contractors and Warranties

Alumasc have, as part of their support team, a UK network of fully trained and approved contractors available to price and install Alumasc EWI and Render systems for all types of new build and refurbishment projects.

### Alumasc Approved Contractors

Installation of Alumasc EWI and Render systems is carried out by a national network of fully trained and approved contractors.

#### Alumasc Approved Contractors:

- Provide fully warranted workmanship as part of the Alumasc products and services warranty offer
- Undergo comprehensive training both in-house and on-site, with a register kept of all carded operatives within the company
- Are assessed for competence and suitability on specific project types prior to selection for tendering opportunities
- Are assessed for financial stability prior to any award of approved status or project recommendation
- Are prepared to work beyond their local geographical boundaries where possible, therefore enabling provision of a list of contractors tailored to your individual need
- Are monitored as part of the ISO 9001: 2008 Quality Management and ISO 14001: 2004 Environmental Management systems

Alumasc ensure approved contractors receive valuable, hands-on assistance in the application of all Alumasc products and systems, as well as refresher training, whenever required, to ensure that applicators are all aware of any product or method improvements.

For details of the Alumasc approved contractor network please contact us or your local area sales manager direct.

### Warranties

Alumasc offers a comprehensive choice of warranties covering both product and installation to suit the specified design life of the installed product.

- Alumasc backed warranties are available for 10 or 15 years supported by public and product liability insurances with a total indemnity limit of £50 million on an annually renewable basis
- Alumasc can also arrange third party insurance backing giving up to 20 years cover subject to independent final inspection, documented compliance with an agreed maintenance schedule and pre-payment of the relevant premium

**NB:** Warranties are only offered on Facades projects that have been installed by an Alumasc Approved Contractor, in accordance with the relevant project specification and Alumasc Quality Assurance scheme ruling at the time of application

For all information relating to warranties for your specific project please contact us at the St Helens office or your local Area Sales Manager direct.



## Swisslab - Installation and Fixing

### Preparation

The Swisslab system should be installed on a sound substrate. Prepare thoroughly all existing surfaces before commencement of works. Apply M.R. Fungicidal Wash and M.R. Stabilising Solution where necessary.

### Fixing the Base Bead

**1** Mark the position of the base board with a chalk line. Fix the bead to the wall with hammer-set screws at 300mm centres. Use packing shims where necessary to ensure a straight, even line.



**3** At building corners, neatly cut back all edges of protruding boards to a straight edge. Grind board edges to ensure complete alignment.



**4** Drill through the insulation boards into the substrate, to the fixing patterns shown on pages 20-21.

Use approved Impact Plug/Screw fixings and washer fixings to secure the insulation boards. Make sure that the plugs are flush with the insulating boards.



### Fixing the Insulation Boards

**2** Apply M.R. Bedding Adhesive to the surface of each board as specified by Alumasc.

Press the boards in place, in a breaking bond pattern, tightly butt jointed. Check that the boards are level, with no protruding edges, and remove any excess mortar from joints.



## Swisslab - Installation and Fixing

### Joints and Connections

**5** Use Expansion Joint Profiles at all expansion joints in the building structure to form a joint approximately 15mm wide. Ensure the open joint is kept free of mortar by temporarily filling with a polystyrene strip.



**6** Secure external corners by embedding the mesh wings into a layer of M.R. Scrim Adhesive prior to rendering.

### Reinforcement

**7** A 500 x 250mm piece of reinforcing scrim should be bedded into a layer of M.R. Scrim Adhesive at all corners of window and door openings, and then covered with a further mortar layer.



**8** Apply M.R. Scrim Adhesive over the whole wall surface. Apply Reinforcing Scrim in rows, lapping joints 100mm, and press into the mortar. Lay mesh around corners and into window reveals. Flatten and smooth the mortar extruding through the mesh, completely covering the mesh.



**9** Allow the reinforced base coat to dry for a minimum of 24 hours before applying the render topcoat. Silicone seal around all abutment and reveal details.

### Traditional Render Finish

**10** Apply a thick coat of Alumasc M.R. S4 Polymer Plain or M.R. S7 Dashing Render.



**11** Where a plain finish is required Trowel apply M.R. S4 Polymer Plain Render. Paint with M.R. S6 Masonry Paint where colour choice requires.

**12** Where a dashed finish is required trowel apply M.R. S7 Polymer Dashing Render. Hand apply aggregate dash whilst render is still wet. Swisslab is also compatible with M.R. Rendabrick, Traditional Brick Slips, or thin-coat ST render finishes. See pages 38-39, 40-41 and 42-45.



## Swisspan - Installation and Fixing

### Preparation

The Swisspan system should be installed on a sound substrate. Prepare thoroughly all existing surfaces before commencement of works. Apply M.R. Fungicidal Wash and M.R. Stabilising Solution where necessary.

### Fixing the Base Bead

**1** Mark the position of the base board with a chalk line. Fix the bead to the wall with hammer-set screws at 300mm centres. Use packing shims where necessary to ensure a straight, even line.



### Fixing the Rails and Insulation Boards

**2** Fix the steel rail system back to substrate/framework at specified centres to form insulation supports.



**3** Position boards in between rails in a staggered pattern, tightly butt jointed. Check that the boards are level, with no protruding edges.



**4** Fix between the boards to the rails to the fixing patterns shown on page 29.



**5** Make sure that the plugs are flush with the insulating boards.



**6** At building corners, neatly cut back all edges of protruding boards to a straight edge. Grind board edges to ensure complete alignment.



Swisspan installation procedures continue as Swisslab steps 5 - 12.

## Maintenance Advice

The Alumasc External Wall Insulation systems are highly resistant to impact damage and are low maintenance. If damage is sustained, through vandalism or accident, Alumasc renders and coatings are easily repairable. Alumasc offers a comprehensive technical support and aftercare service for advice and assistance.

### Suggested Maintenance Schedule

#### Render Repairs & Remedial Work

Mechanical or other damage to the render surface must be repaired with Alumasc products and be applied by an Alumasc approved contractor in accordance with Alumasc specification and written guidelines.

If it is found that remedial or maintenance work is thought necessary please contact the original approved contractor and/or the Alumasc Area Sales Manager for your area. Where work has been warranted always check with Alumasc Exterior Building Products Ltd that the proposed remedial work would not invalidate any warranties.

Care must be taken to avoid discoloration of existing render system and coatings. All health & safety regulations must be adhered to at all times.

#### Cleaning

Regular cleaning of Alumasc's M.R. Polymer Render system is to be undertaken in conjunction with the main building maintenance document, and is recommended as good practice to improve life span of Polymer Render finishes and Masonry Coatings, but this is not a requirement of the Alumasc warranty.

To keep M.R. Polymer Render systems and M.R. S6 masonry coatings in optimum condition it is recommended that inspections takes place on an annual basis and cleaning is actioned approximately every 5 years.

#### Leaks of Stains

Suitable remedial action must be taken at the first opportunity when evidence of leaks or stains on the render system face which may originate from external sources and/or building details is visible.

In the event of specific staining, the intensity of cleaning solution, beginning with hot soapy water, is to be increased until the required effect is achieved. A proprietary brick cleaning product may be used in specific circumstances.

Where appropriate, good architectural detailing should be promoted to ensure that water sheds evenly and effectively to prevent moisture streaking or stains.

#### Overpainting

M.R. Polymer Render systems may be over-painted using M.R. S6 masonry paint, dependent upon dirt, environment, aesthetics and/or finances - after 8, 10, 12, 15, 20, 25 years etc. (Requirement is subject to the exposure of the building and location). Please consult Alumasc Exterior Building Products Ltd for technical advice.

M.R. S6 will remain effective for 15 years but it would be advisable from the 10 year period onwards for (typically annual) visual checks to take place of significant components, main wall elevation, movement joints, etc as part of the maintenance regime in conjunction with other external building materials.

#### Gutters, Downpipes etc.

Ensure all gutters, downpipes, overflows etc are maintained in sound, clean condition. When damage and/or a blockage is reported, it is recommended that immediate action is taken to effect a repair or replacement, as a continuous leak onto an M.R. Polymer Render system or Decorative Coating could cause staining or damage to the finish causing a secondary maintenance problem.

#### Movement Joints

All Alumasc movement joints within the system should be inspected on a periodic basis in conjunction with the main maintenance schedule for any cleaning necessary, checking of seals and the removal of any obstructions.

#### Silicone Sealants

All silicone sealants should be inspected and maintained on a periodic basis and appropriate remedial action taken to replace once expected life of sealant has been reached.

#### Fire Damage

In the event of fire damage a dilute solution of 10% hydrochloric acid to 90% clean water can be used for surface cleaning.

#### Plants & Landscaping

Project site conditions can affect the long term condition and subsequent maintenance of the M.R. S6 masonry coatings. All external shrubbery, plants and landscaping must be kept in good order, and overgrown plants, etc should be cut back regularly to prevent algaeicides and or mildew from growing on the surface of the coating. M.R. S6 has inbuilt fungicides and algaeicide agents but care must be taken to prevent excessive mould growth.

#### External Fixtures

Any subsequent attachments and/or external fixtures fixed to the surface to the system must be installed in accordance with Alumasc specification requirements using approved mechanical fixings.

Note: For maintenance advice on ST thin-coat Silicone and Mineral Renders, refer to [www.alumascfacades.co.uk](http://www.alumascfacades.co.uk)



## System Components

The following is a summary of useful information. Full details are available on the Alumasc Facades website.

### Basecoats and Adhesives



#### M.R. Fungicidal Wash

M.R. Fungicidal Wash is a concentrated surface biocide for professional use on concrete, brick, masonry, stone, asbestos type sheeting and wood. Ideal for cleaning down unsightly walls. Use with all Alumasc External Wall Insulation and Render Systems on existing substrates prior to application.

#### M.R. Stabilising Solution

M.R. Stabilising Solution/Bonding Agent is specially formulated for sealing powdery or unstable surfaces, normally following the application of M.R. Fungicidal Wash. Use for stabilising surfaces prior to the application of the M.R. 5 Masonry range of polymer cement renders.

#### M.R. S3 Dubbing Render

M.R. S3 Dubbing Render is a dry, premixed polymer and fibre reinforced powder. Use as a base coat or dubbing render.

#### M.R. S2 (Plain Render For Below DPC)

M.R. S2 is a dry, premixed cement-based powder. Use for the rendering of difficult surfaces below the DPC, where water repellent admixture included in the formulation makes for the effective prevention of moisture penetration.

#### M.R. Bedding Adhesive

A high polymer adhesive combining sand, cement, crushed rock and moisture-retaining aggregates. Use to adhere insulation slabs to continuous masonry substrates.

### Insulation



#### Phenolic (K5 EWB)

HCFC and CFC-free. High thermal performance, providing best U value of the listed insulants for a given board thickness. Use with the Swislab and Swisspan EWI systems.



#### Polyisocyanurate (PIR)

HCFC and CFC-free. A highly durable alternative to Phenolic, with which it shares key features, but with slightly increased thickness for a given U value. Use with the Swislab and Swisspan EWI systems.



#### Polystyrene/FRA Grade EPS

HCFC and CFC-free. Lightest in weight of the listed insulants for a given thermal performance. Economic and easy to handle product for all types of building. Use for Swistherm, Swisrail, Swislab and Swisspan EWI systems.



#### Mineral Wool

HCFC and CFC-free. The only listed insulant classified as non-combustible. Also performs well as an acoustic barrier. Use with the Swistherm, Swisrail and Swislab EWI systems.



#### Cork

HCFC and CFC-free. Composed entirely of natural materials in both source and manufacture. 100% recyclable. Use with Swistherm, Swisrail, Swislab and Swisspan EWI systems.

### Insulation materials

Insulation		Phenolic (K5 EWB)	Polyisocyanurate (PIR)	Polystyrene FRA	Mineral Wool	Cork
Thermal conductivity	W/mK	0.020 to 0.022	0.026 to 0.028	0.037	0.036	0.038
Compressive strength	kN/m <sup>2</sup>	150	150	70	65	140
Water vapour resistance	MN s/g	15	15	300	5.2	37.5
Fire performance	-	UK Class 0	UK Class 0	Euroclass E	Non-combustible	Euroclass E
Board density	Kg/m <sup>3</sup>	50	32	16	140	105 and 120
Size	mm	1200 x 480	1200 x 600	1200 x 600	1200 x 600	1000 x 500
Thickness	mm	20 to 120 in 10mm increments	20 to 120 in 10mm increments	20 to 200 in 10mm increments	40 to 200 in 10mm increments	40 x 100 10mm increments plus 75 and 150

## System Components

### Reinforcement



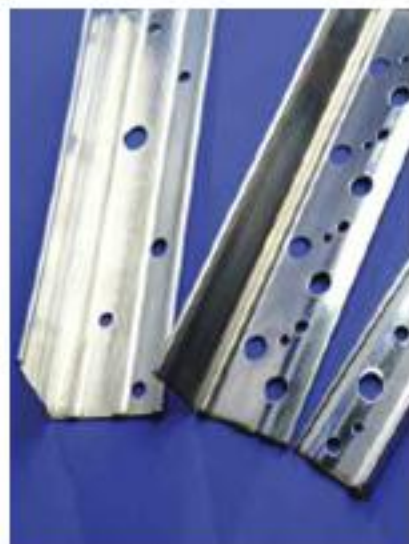
#### Scrim Reinforcement

Alkali-resistant glassfibre woven fabric mesh used as reinforcement in all Alumasco EWI and render-only systems. Acts to prevent cracking of the render topcoat. Use for render-only applications, and with the Swisitherm, Swisrail, Swisslab and Swisspan EWI systems.

#### M.R. Scrim Adhesive

A flexible basecoat to receive glassfibre scrim reinforcement. For Polymer Render, and for use with the Swisslab and Swisspan EWI systems.

### Beads and Fixings



#### Powder Coated Galvanised Steel Beads

Use only with cement-based renders, and must not be cut or trimmed to suit on site. For use with Polymer Render systems, and Swisslab and Swisspan EWI systems.

#### Powder Coated Galvanised Steel Beads with PVC Nosing

Use only with cement-based renders. For use with Polymer Render systems, and Swisslab and Swisspan EWI systems.

#### Stainless Steel Beads

Use only with cement-based renders. Can be trimmed on site using metal shears or fine-tooth saw. For use with Polymer Render systems, and Swisslab and Swisspan EWI systems.

### Renderers and Coatings

#### M.R. 57 Dashing Render

M.R. 57 is a dry, premixed powder formulation developed to produce a durable, lightweight render for single coat application to most masonry substrates. It may be applied directly to existing sound render or pebble dash as a single coat, or as a finish coat over M.R. 53 basecoat to brick and blockwork. Whilst soft, M.R. 57 may be dashed with a range of natural aggregates. It is particularly suitable as a one coat render finish over Swisslab and Swisspan External Wall Insulation systems.

#### M.R. 54 Plain Render

M.R. 54 is a dry, premixed powder designed to provide a durable and lightweight plain render to most building surfaces when applied in two 5mm coats. M.R. 54 is polymer and fibre-reinforced giving greater adhesion. Use as a plain finish render, or as a basecoat prior to application of M.R. specialist coatings.

M.R. 54 can be used to coat large elevations and to create feature bands around windows or doors.

M.R. 54 can also be used as a plain render finish over Swisslab or Swisspan.

#### M.R. Rendabrick

M.R. Rendabrick is a specially formulated polymer cement render which simulates the appearance of brickwork.

Use applied in three coats to existing masonry or to the Swisslab or Swisspan External Wall Insulation systems.

#### Traditional Brick Slips

An easy to apply, high performance brick finish, where the use of real bricks would not be viable. Developed directly to complement Alumasco's traditional render solutions, the system innovatively uses a preformed template mesh to assist speedy and accurate installation, achieving a premium quality and uniform result.

Used as a hardwearing covering to areas of facade prone to impact damage or simply to match existing details. Compatible with Swisslab and Swisspan.



#### M.R. 56 Masonry Paint

M.R. 56 Masonry Paint based upon synthetic resin emulsion and contains UV stable pigments, algicide and fungicide additives to assist in the prevention of algae build up.

Specifically designed for use with the M.R.S Render systems but is also suitable for application by roller, brush or spray to walls, ceilings and soffits of the following materials: in situ or precast concrete, concrete blockwork, brickwork, renderings, calcium silicate or fibre-reinforced cement.

### Renderers and Coatings



#### Silicone Render - ST Silkolitt:

Contemporary, high-performance render finish, suitable for use as part of an insulated render system and as a render-only system for direct application to solid walls. Use with Swisitherm, Swisrail, Swisslab and Swisspan EWI systems.

#### ST Mineral Render - Mineral K:

Contemporary, eco-friendly render finish, suitable for use as part of an insulated render system and as a render-only system for direct application to solid walls. Use with Swisitherm, Swisrail, Swisslab and Swisspan EWI systems.



#### ST Primer Coat

A primer coat for most common plasters and substrates, used for render-only application or as part of an insulated render system. Use with Swisitherm, Swisrail, Swisslab and Swisspan EWI systems.

#### ST 703 Base Coat

Lightweight mineral base coat for use with ST Silicone decorative topcoats.

#### ST Additive L

Setting accelerator for use with ST Silkolitt and ST Silkorill silicone renders to assist with winter curing times.

#### ST Silicone Façade Paint

A powerfully water-repellent facade paint for use as a finishing coat over Alumasco ST Mineral Render. Also suitable for application on in situ or precast concrete, concrete blockwork, brickwork, renderings, calcium silicate and fibre-reinforced cement.

## Alumasc Premium Products - All Brands

Alumasc provides an unrivalled range of premium products for building exteriors and drainage, along with high levels of technical expertise and project support. Our wealth of experience combined with networks of approved installers, merchant stockists and a choice of warranty options ensures we provide appropriate product and system solutions for all types of buildings.



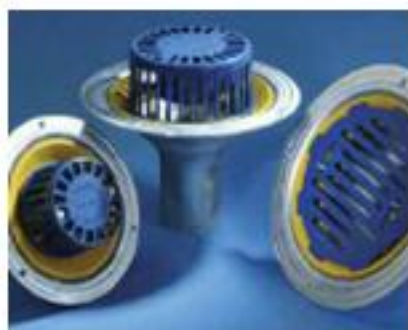
Alumasc is the UK's leading manufacturer of aluminium rainwater systems and offers a complete range of gutters, downpipes and fascia/soffits for both contemporary and traditional architecture.

Alumasc's cast iron rainwater system is for historic and restoration sites, with bespoke designs available to match or replace existing installations.

### Rainwater

- Aluminium Rainwater Systems
- Aluminium Fascias, Soffits and Copings
- Cast Iron Rainwater Systems

[www.alumascrainwater.co.uk](http://www.alumascrainwater.co.uk)



Alumasc's Harmer brand provides market leading solutions for rainwater handling, and building drainage.

Aluminium roof, floor and shower drains are complemented by specialist drainage ranges in plastic. A choice of cast iron pipework systems is available for internal and rainwater drainage. Specialist rainwater management systems and paving and deck supports are also available.

### Drainage

- Roof, Floor and Shower Drains
- Cast Iron Soil & Waste Systems
- Rainwater Management Systems
- Paving and Decking Supports

[www.alumascdrainage.co.uk](http://www.alumascdrainage.co.uk)



Alumasc is a specialist provider of world class waterproofing and green roof systems.

The range includes Derbigum high performance flat roof membranes, Firestone TPO and EPDM single ply membranes, Hydrotech structural waterproofing and ZinCo Extensive, Biodiverse, Semi-intensive and Intensive green roofs.

### Waterproofing

- Flat Roof Membranes
- Single Ply Membranes
- Structural Waterproofing
- Green Roof Systems

[www.alumascwaterproofing.co.uk](http://www.alumascwaterproofing.co.uk)



Alumasc is a specialist in the design and development of thermally efficient insulated render systems. Alumasc's external wall insulation systems are available with a choice of insulating material and silicone, mineral or polymer-modified decorative render finishes.

### Facades

- External Wall Insulation
- Render Only Systems
- Brick Slips & Specialist Systems
- Decorative Coatings

[www.alumascfacades.co.uk](http://www.alumascfacades.co.uk)



## Proven Project Track Record



Wimbledon Centre Court, Skyline



Burbo Point Apartments, Swisrail EWI



Centrium Apartments, Swisithorn EWI



Derby Hospital, Harmer SML



Harris Academy, Derbygm



Tate Modern, Hydrotech



Millennium Stadium, Harmer SML



Waterstone Park, Skyline & GX



River Quarter, ZinCo Green Roof; Hydrotech



St Pancras Station, Apex Heritage Cast Iron

## Alumasc Facades for New Build

Alumasc also specialises in External Wall Insulation and Render systems for new build applications. Ever-higher thermal performance standards, fast track construction and urban regeneration have influenced the way we design buildings today. As a consequence, the specification of external wall insulation for new construction is becoming increasingly prevalent in creating high performance, commercially beneficial facade systems.



### Swistherm External Wall Insulation

Swistherm is a lightweight, thin coat insulated render system suited to contemporary and new build applications. Insulation slabs are mechanically fixed direct to a continuous substrate. Swistherm is faced with Alumasc's range of Silicone or Mineral renders which are available in a choice of textures and colours.

#### Applications

- New Build - where structure provides continuous support for insulation slabs
- Construction Types - primarily suited to new-build construction
- Buildings up to 6 Storeys - suited for unrestricted use
- High Rise applications - suitable subject to Alumasc's high rise policy

#### Performance

- BBA approved, fully warranted system with life expectancy in excess of 30 years
- Manufactured to ISO 9001: 2000 and ISO 14001: 2004 Quality and Environmental Management Systems
- Fully weather resistant whilst remaining vapour permeable
- Allows the fabric of the building to act as a heat store, increasing thermal mass
- Eliminates cold bridging, condensation and mould growth
- Highly resistant to impact damage
- Protects structural fabric, limiting movement and thermal shock and freeze-thaw cycles associated with traditional brickwork facades



## Alumasc Facades for New Build

### Swisrail External Wall Insulation

Swisrail is an external wall insulation system specifically designed for use on framed buildings subject to NHBC approval. The system incorporates a 25mm drained cavity between the insulation and the steel frame to comply with NHBC guidelines. It is faced with a range of thin-coat, through coloured renders with a rolled or dragged surface texture.



#### Applications

- New Build - for use on framed buildings subject to NHBC approval
- Construction Types - primarily suited to new-build construction
- Buildings up to 6 Storeys - suited for unrestricted use
- High Rise applications - limited suitability subject to Alumasc's high rise policy





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To get a copy of the Alumasc Facades for New Build Brochure Ring +44 (0) 1744 648400, or go to [www.alumascfacades.co.uk](http://www.alumascfacades.co.uk)

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-  Waterproofing
-  Façades

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