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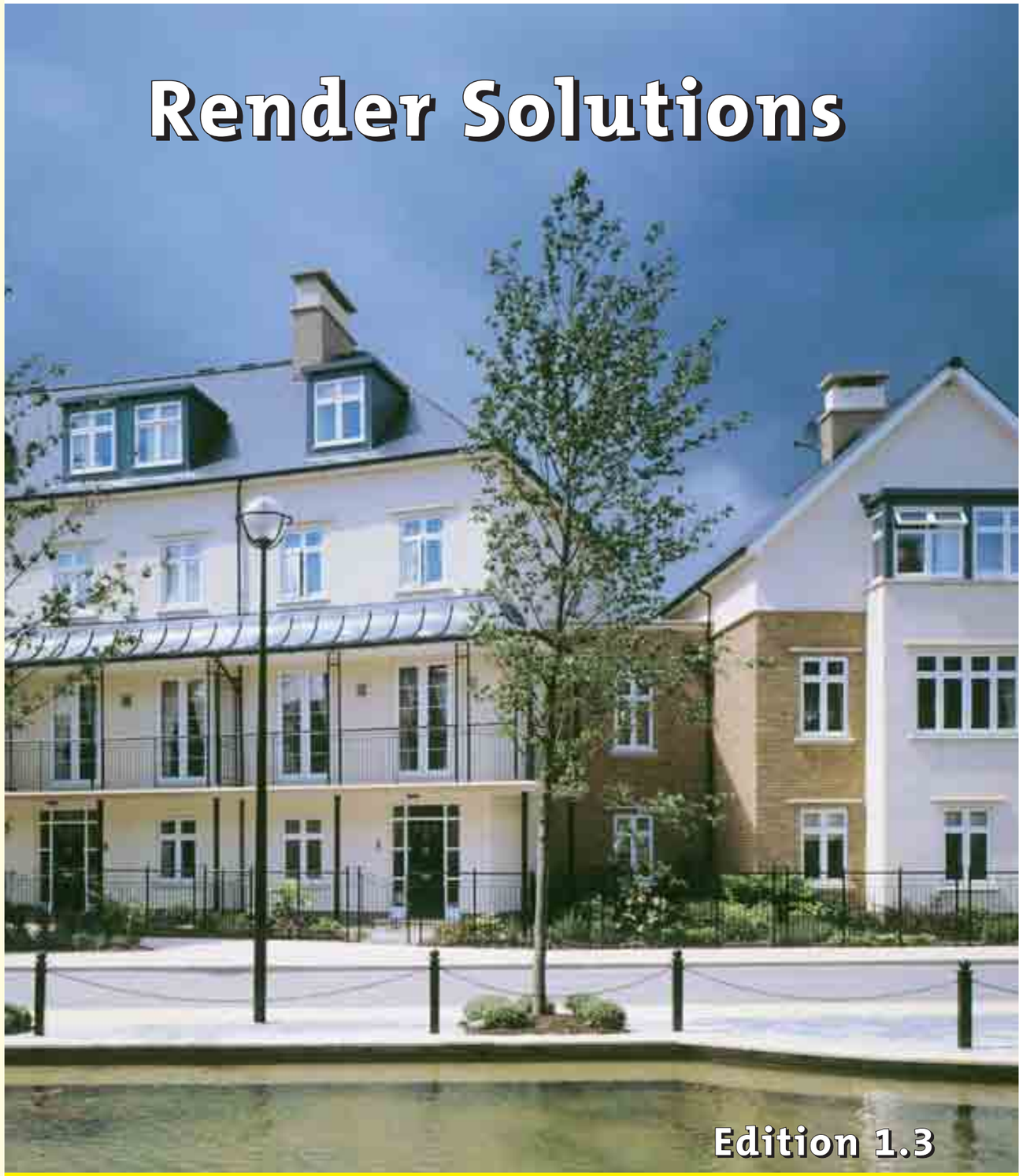
www:netweber.co.uk
e-mail: mail@netweber.co.uk

Your local Stockist is

IDA Ref 3846

Render Solutions



Edition 1.3

Saint-Gobain Weber

Saint-Gobain Weber – who are we?

Weber is part of an international group employing more than 4,300 people in over 27 countries worldwide. **Weber** currently employs 180 people throughout Great Britain and Ireland.

Weber is incorporated as Saint-Gobain Weber Ltd and is a subsidiary of Saint-Gobain. Established in France in 1665, Saint-Gobain is one of the world's largest industrial groups, with an annual turnover of £35 billion and 206,000 employees.

The Group has been operating in the UK and Ireland since 1985. Saint Gobain operates across five sectors: Building Distribution, Construction Products, Flat Glass, High-performance Materials and Packaging.

Locations

Weber is located in 27 countries worldwide

Europe

Austria
Belgium
Bulgaria
Czech Republic
France
Germany
Hungary
Italy
Netherlands
Poland
Portugal
Romania
Russia
Serbia
Slovakia
Slovenia
Spain
Switzerland
Turkey
United Kingdom

Asia

China
India
Malaysia
Thailand

Africa

South Africa

South America

Argentina
Brazil

Locations

Europe

Austria
Gleichentheilgasse 6, A-1230 Wien Neu-Erlaa
Tel: (43) 16 61 50. Fax: (43) 16 61 508

Belgium
Steenkaai 44, B-1800 Vilvoorde
Tel: (32) 2 257 43 00. Fax: (32) 2 257 43 99

Bulgaria
1715, Sofia, Okolovrusten put Str257
Tel: (359) 2 970 60 80. Fax: (359) 2 970 60 85

Czech Republic
Borek 290, 37010 Praha
Tel: (420) 38 722 51 28 32. Fax: (420) 38 722 51 27

France
Rue de Brie - Servon - BP 84, 77253 Brie Comte Robert
Tel: (33) 1 60 62 13 00. Fax: (33) 1 64 05 47 50

Germany
Clevischer Ring, 127, D-51063 Köln - Mülheim
Tel: (49) 221 6689 0. Fax: (49) 221 6689 500

Hungary
Bécsi ut. Pf-46
Tel: (36) 26 56 76 600. Fax: (36) 26 56 76 608

Italy
Via Sacco e Vanzetti 54, Zona Industriale 1
I-41042 Fiorano Modenese (MO)
Tel: (39) 0536 83 71 11
Fax: (39) 0536 83 26 70/(39) 0536 91 03 01

Netherlands
Trapezium 250, Postbus 42, 3360 AA Sliedrecht
Tel: (31) 184 430 700. Fax: (31) 184 410 534

Poland
Atrium Plaza, Al. Jana Pawla II 29, 00-867 Warszawa
Tel: (48) 22 653 79 50. Fax: (48) 22 653 79 89

Portugal
Zona industrial de Taboeira, Apartado 3016 Esgueira,
3801-997 Aveiro
Tel: (351) 234 30 11 30. Fax: (351) 234 30 11 44

Romania
Str. 22 Decembrie 1989 NR 23, 3350 Turda
Tel: (40) 64 312 044. Fax: (40) 64 433 428

Slovakia
Stara Vajnorska 139, SK-83104 Bratislava
Tel: (421) 2 4445 3022/3024/3026. Fax : (421) 2 4445 3030

Slovenia
Ljubljanska cesta 68, Slo-1290 Grosuplje
Tel: (386) 1 781 80 10. Fax: (386) 1 781 80 12

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Ctra. C 17 Km.2, E-08110 Montcada i Reixac-Barna
Tel: (34) 935 64 25 54. Fax: (34) 935 64 50 05

Switzerland
Technoramastrasse 9, CH-8404 Winterthur
Tel: (41) 522 44 40 00. Fax: (41) 522 44 40 01

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Tel:(44) 15 25 71 88 77. Fax: (44) 15 25 71 89 88

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707 Zhangyang Road, Shanghai
200120 People's Republic of China
Tel: (86) 21 6886 8082. Fax: (86) 21 6886 8505

Hong Kong
Room 1203, Tungway Commercial Building
109-111 Gloucester Road, Wanchai, Hong Kong, Hksar, China
Tel: (852) 2 519 0088. Fax: (852) 2 802 8786

India
502, Sentinel, Hiranandani Gardens, Powai, Mumbai 400 076
Tel: (91 22) 55022214/15/16. Fax: (91 22) 55022217

Thailand
65, 42 Tower, Floor M, Room M1-M2, Sukhumvit 42 (Kluaynamthai)
Prakanong, Klongtoey, Bangkok 10110
Tel: (66) 2 713 61 77. Fax: (66) 2 713 6127 to 6129

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Argentina
Trenque Lauquen y Pergamino, Ruta Prov. 36 km 30, 500
1889 - Bosques, Provincia de Buenos Aires
Tel/Fax : (54) 114 221 9666 INT. 130

Brazil
Via de Acesso João de Goes 2127, 066 12-000 Jandira - SP
Tel: (55) 11 47 89 80 00. Fax: (55) 11 47 89 29 11

Product index

Building on success – The Weber Brand Project

Internationally, **Weber** is a major manufacturer of building materials for the facade, tiling and construction markets. It has tripled in size over the past 10 years. The new worldwide re-branding project will reflect the strength and reliability of the **Weber** brand to its customers in whatever part of the world they are active.

In the UK, **Weber** has seen similar changes, developing through both acquisition and rapid organic growth to grow five-fold in the past ten years. The re-branding project will provide a platform for anticipated future growth and build a background of confidence for customers regarding the depth of the company's technical resources and expertise. By linking each product name on every piece of packaging with the umbrella **Weber** brand, the **Weber** name will be strengthened and the link to its customers reinforced, providing instant recognition of **Weber** products and reflecting **Weber's** unique blend of worldwide experience and local knowledge.

Weber Render Solutions is one of a series of three handbooks that will cover the three primary **Weber** business activities.

Edition 1.3 of ***Weber Render Solutions*** carries the new brand names throughout.

Technical assistance: 01525 722110
Customer services: 01525 722100

Contents

Front cover: St James Homes, Kew Riverside
See page 34

Company profile

As a recognised manufacturer and innovator of easy-to-apply products in the facades, construction mortars, flooring systems and tile-fixing markets, **Weber** is a leading player in the construction products industry.

The natural synergy between these three specialist activities enables **Weber** to provide integrated solutions for a wide range of projects from building renovation and refurbishment to new building developments and major civil engineering. Providing 'no worry' products and services is a key feature of what customers expect from us. **Weber** knows the job of its customers and customers trust **Weber**.

Weber does not sell only products but the complete solution which includes the services that go with the products; technical support and training. Based on its strong knowledge and experience of the market, the **Weber** training programmes meet the needs of its customers. **Weber** provides specifiers, developers and contractors across the board with substantial technical support, both before, during and after contract periods.

Weber is commited to the continuous quest for excellence in products and services, the permanent development of its teams and care for its people.

Our customers – the core to our success

Weber works hard to build long term "win-win" open and friendly business relationships with its customers, so they feel part of the **Weber** family.

We believe in being close to our customers and involving them in the innovation process as privileged partners.

Weber employs 180 employees throughout Great Britain and Ireland, with the following substantial facilities:

Manufacturing Plants
Flitwick, Bedfordshire,
Ballyclare, Northern Ireland,
Telford, Shropshire

Customer Service Offices
Flitwick, Bedfordshire,
Ballyclare, Northern Ireland,

Technical offices
Glasgow.

Weber is incorporated as Saint-Gobain Weber Ltd.

www.netweber.co.uk

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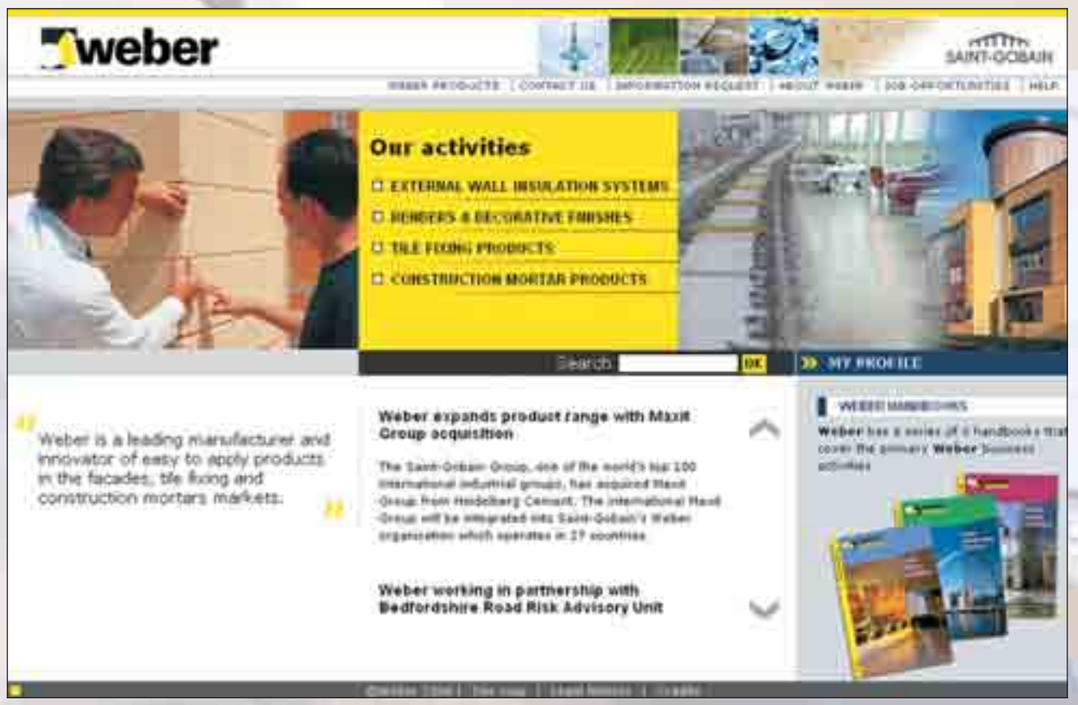
Visit us online at www.netweber.co.uk

Log on to **www.netweber.co.uk** today to access the very latest news from **Weber** and all the essential technical information on our facades product range, including:

- Detailed product/system data sheets
- Product colour cards
- Project case studies
- Solutions to specific problems
- Technical glossary
- The latest press releases



Product colour cards

Detailed data sheets

1

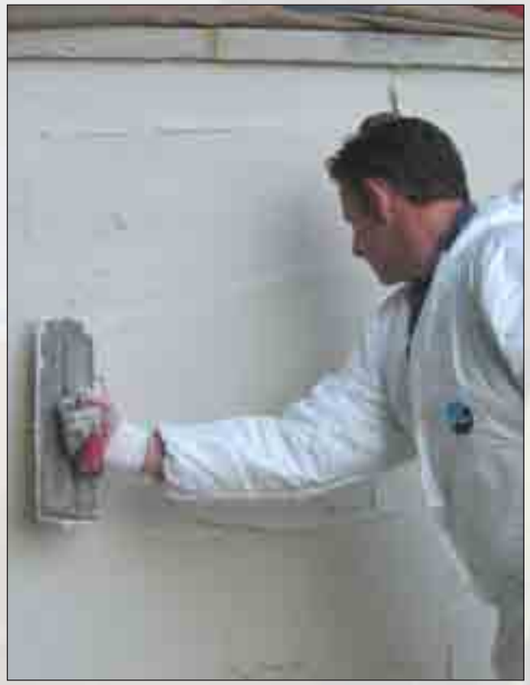
Externall wall insulation: home page

Problem/Solution page

Training

A lack of investment in the future, extreme downward pressures on profitability and a plain lack of foresight have all paid their part in contributing to the rapid decline in available skills in the building industry over the past decades. Recently though, many initiatives are under way to raise the levels of understanding for both applicators and specifiers alike and the facades activity is no exception.

In-house training



Modern materials and techniques change rapidly and specifiers rely on leading manufacturers for up to date advice. **Weber** is a founder member of the RIBA CPD Providers Network and long time member of the CPD Accreditation Service.

Currently four CPD presentations are available to specifiers;

1. Render protected external wall insulation
2. Concrete defects – cause and cure
3. Modern rendering using monocouche through-coloured renders
4. The specification guide to BS EN 1504 – new European standards for product specification within the concrete repair industry.

These presentations are usually carried out over a lunch time period and are available (subject to numbers attending) at a mutually convenient date in your own premises. In the first instance contact our CPD co-ordinator via 01525 718877 or on-line at **www.netweber.co.uk**. Briefing Notes for all seminars are available on request.

Weber's Training Commitment

In an effort to support industry concerns, **Weber** has invested in dedicated training facilities at its factories in Flitwick, Ballyclare and Telford. The facilities offer the opportunity for both theoretical and practical training with conference room and purpose designed practical areas. Arrangements can also be made at the premises of key distributors in Dublin and selected colleges around the country.

One day courses for training on modern render techniques are undertaken at both the Flitwick and Ballyclare factories. Subjects include basic monocouche techniques, pump applications and ashlar detailing. These courses are suitable for the specifier, clerk-of-works, supervisor and applicator alike.

Interest in the availability of training should, in the first instance, be directed to your local Area Sales Manager or facades technical staff on 01525 722110

Recommended applicators

It is important that your project is completed *right first time.*Experienced labour is getting more and more difficult to locate, especially in the application of finishes, where the standard of work left reflects directly upon the 'pavement appeal' and thereby the reputation on the specifier.

Weber is only too happy to put specifiers and clients in touch with applicators that have shown they can produce good quality work.

A selection of Recommended Applicators can be supplied for major projects in most areas. These lists contain contractors with a range of specialities, skills and resources. They all have experience in successfully applying **Weber** materials. For a considered selection, please contact your local **Weber** Area Sales Manager.

Those promoted will continue to be supported by **Weber** as projects progress and will have taken advantage of training courses offered by **Weber**.

Qualiclub

Weber demonstrates its commitment to working with the industry through the *Qualiclub* arrangement.

Within *Qualiclub*, key members in the subcontractor arena work closely with the company in the improvement of existing products and development of new solutions for the industry from concept to launch.

In this way performance and ease of use are 'designed in' as fundamental requirements.

Quality assurance

1

Quality and Environmental Management

Committed to quality of product and service across the board, **Weber** has made considerable investment in achieving and maintaining the highest possible quality standards available. All facilities have regularly monitored quality systems and procedures in place, all dedicated to the aim of providing consistent materials and service of the highest standard.

We all live in a shrinking and interdependent world. The environment is therefore of increasing importance to our customers and suppliers alike. **Weber** is continually investigating innovative concepts for materials and exploring methods of production that are aimed at reducing its impact on the world's natural resources and involve lower risk to applicators in use.

BS EN ISO standards are an important measure and control of the company's determination to follow these precepts. All sites currently operate to BS EN ISO 9001:2000. All sites either have obtained accreditation to the environmental standard BS EN ISO 14001 or are in the process of obtaining the accreditation.

Materials quality control testing at our Flitwick QC laboratory.

Ten Year Guarantee

Worldwide, the **Weber** group has been the leader in the innovation, development and supply of modern renders, rendering techniques and systems.

From traditional trade products in domestic applications to modern innovative render systems in demanding commercial programmes, you can ***specify* Weber** renders and associated products ***with confidence***.

Totally committed to quality, customer service and the ongoing development of high performance materials, **Weber** provides a ten year materials guarantee in support of its products in use.

Drawing on worldwide resources, extensive research and development programmes keep products conforming to international standards and performing ahead of the field. Ease of use and reliability in service are basic precepts.

Quality Assurance in manufacture is maintained through the use of modern plant and stringent quality testing during all stages of manufacture to ensure that the product you buy is the very best there is.

The **Weber** ten year guarantee covers all **Weber** products as long as they have been applied in accordance with the company's specification and instructions. Reliable and trouble-free projects depend upon quality products applied following good working practice. Installations so applied and used within their design parameters have the full backing of the **Weber** guarantee for ten years. Practical experience has proven a much longer life expectancy.

This guarantee does not affect your statutory rights.

1

Third Party Accreditation

In addition to the **Weber** guarantee, independent accreditation provides specifiers with further reassurance that materials perform in use and that they will continue to perform over the life of the project.

Many **Weber** renders and systems have accreditation from independent authorities suitable for the markets where they are used, which include, the British Board of Agrément, the Irish Agrément Board and the BRE.

Copy certificates can be supplied electronically or in printed formats.

BBA BRITISH BOARD OF AGRÉMENT

NSAI Agrément

Technical services

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Weber has built a reputation for its technical support, both at design stage and on site during the application programme. Well-qualified Specification Consultants are available in the field to provide important design and detailing advice to specifier and contractor alike, while experienced trades people support the building team as the project progresses. While these teams can assist when problems occur, their main purpose is to address issues vital to the successful completion of a project before the problems occur, and assist all involved in reaching the 'right first time' goal.

Trade associations

Weber's interest in the raising of standards throughout the industry is supported in the applicator field by its membership of the following Trade Associations.

FPDC

The Federation of Plastering and Drywall Contractors is the specialist trade association representing the UK's commercial plastering, fibrous, drylining and screeding contractors.

The primary objective of the Federation is to promote best practice; assisting members with gaining a competitive advantage by delivering valuable commercial benefits.

But the Federation also has a wider role to play as the 'voice of the plastering and drylining industry' for over 50 years, communicating with manufacturers, suppliers, specifiers and Government.

Contractor members enjoy a broad spectrum of benefits, all designed to promote best practice.

INCA

INCA is the Insulated Render & Cladding Association representing system designers, specialist installers and key component suppliers to the industry. All system designers offer BBA or Wimlas tested systems, proven in UK climatic conditions. Vetted installers have at least two years' experience in applying insulated render and cladding systems (except Provisional and Small Works members).

INCA's remit is to represent its members' interests by providing information and impartial advice on proven insulated render and cladding systems

- promoting its use, concept and advantages for both refurbishment and new build
- promoting vetted qualified installers
- representing the industry when liaising with government, local authorities and other bodies
- the promotion of quality through the development of uniform technical and professional standards and codes of practice.

NIA

The National Insulation Association (NIA), the not-for-profit organisation which currently represents over 95% of the UK's insulation industry is the authoritative voice between industry and government in securing the best advice and guidance for householders in achieving environmental and energy saving goals that will help to bust rising energy costs, increase wellbeing and improve property values.

More heat is lost through walls than through any other route and in an uninsulated home this could be as much as 35% of the generated heat. The UK's housing stock is estimated at around 24.5 million dwellings of which some 36% consist of 'hard to treat homes' – those without cavities and built of solid brick, stone or concrete and pre 1944 timber frame. The NIA recommend that external wall insulation is an ideal method of insulating properties of this type and are eligible for an insulation grant which can typically cut the cost of installation by up to 50%.

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Weber renders

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Monocouche renders

weber.pral M
One-coat, premium through-coloured Monocouche render suitable for hand and machine application.

weber.pral D
One-coat, through-coloured hand applied Monocouche render manufactured in Ireland for the Irish market.

Textured synthetic finishes

weber.plast TF
Acrylic-based, composite decorative finish.

weber.plast DF
Acrylic-based, composite decorative finish.

weber.sil TF
Silicone-based, through-coloured decorative finish.

weber.tene SG
Polymer-based decorative coating, fine aggregate finish.

flexirend highbuild
Multi-textured resin based finish.

weber.plast P
Silicone-enhanced acrylic paint.

weber.sil P
A mineral-based, high performance silicone paint.

Insulated systems

weber.therm XP
The new generation of external wall insulation systems featuring a range of one-coat mineral renders

weber.therm XM
Lightweight external wall insulation system incorporating thin-coat polymer render and meshcloth reinforcement

weber.therm XL
Thick coat external wall insulation system incorporating expanded metal lath

weber.therm XB
External wall insulation system featuring a real brick slip finish

weber.therm FT
Engineered components to provide robust detailing and water defence cavity when using **weber.therm XM** with single-skin and lightweight steel frame construction

Weber products

In addition to our facades products, **Weber** manufactures a comprehensive range of specialist products covering:

- concrete repair and protection
- precision grouting
- bedding mortars
- structural strengthening
- tile fixing adhesives, grouts and silicones
- levellers, primers and tanking/acoustic systems
- flooring compounds
- self-levelling floor screeds

These are fully detailed in our wide range of literature, available on request.

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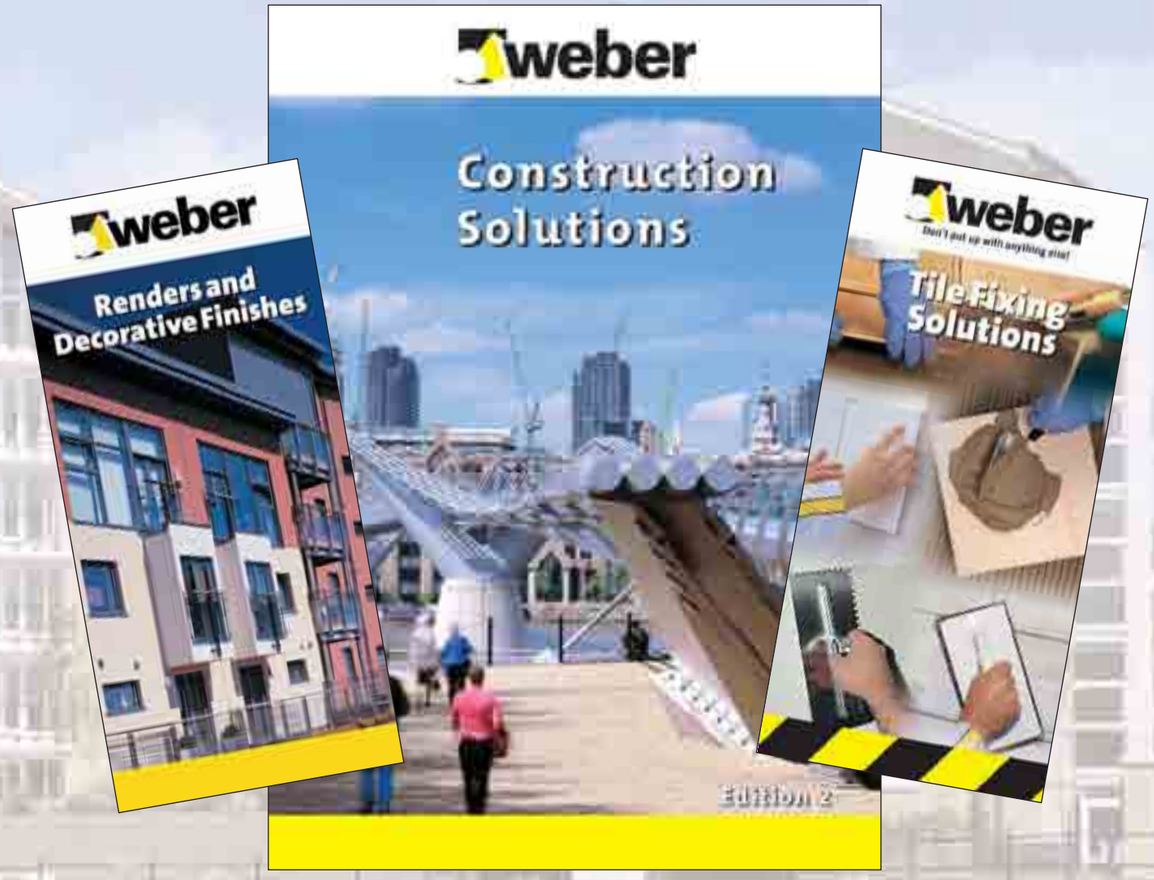


Other handbooks in this series

This handbook is one of a series of specialist guides that are being designed by **Weber** for the professional user and specifier.
To obtain your copy, call one of our Customer Services staff on 01525 722100 or order on line at **www.netweber.co.uk**

Weber renders: selectors

The argument for factory-controlled 'engineered materials'

First impressions count, and the same applies to architecture and the home we may consider purchasing. Render is an extremely useful tool when designing striking aesthetics and is at the forefront of the viewer's first impressions.

There are many examples of buildings which, by standing the test of time without failure, continue to show that external rendering based on a site mix of loose materials can be successful.

However, recent experiences prove that traditional rendering seems to have lost its reliability, with resulting additional cost, delay and possible lost sales for the commercial and home market specifier alike.

Modern factory-controlled materials provide the solution to colour and reliability.

Modern factory-produced renders provide many advantages:

Accurate proportioning

All today's preambles will state that renders are to be gauged by volume using a suitable measure. Human disposition towards finding the quickest method of doing the job means that the gauging box is dispensed with at the earliest convenience, if it ever arrives on site at all. The shovel which replaces it is not an accurate measure of volume as far more damp sand can be heaped on its blade than dry cement or lime brought from the confines of a paper sack. Conversely, adding the extra shovel of cement just to "make sure it's a good job" can result in failure because the resulting renders are too strong for the substrate to which they are being applied.

Quality assured materials

Accurate proportioning of render components is as vital as the choice of the components themselves. Sand, which may initially be thought to be just a filler, is not 'just sand'. For long trouble free life, soft bricklaying sands, which suffer relatively high drying shrinkage, should be avoided at all costs and clean, washed, sharp sands must be used for rendering.

Manufacturers of proprietary renders have the unique opportunity to accurately blend together several sands from differing sources to produce a raw material that will be both easy to apply and provide long life. Guaranteed, consistently proportioned formulations with good technical performance and controlled, low drying shrinkage result.

Colour and texture

Colour, form and texture are the basic tools specifiers have at their disposal to create an attractive facade. A wide range of colour is now available in modern cementitious renders. Where the specifier requires colours that are outside the technical possibilities with cementitious materials, modern basecoat renders in conjunction with high performance synthetic coatings are available to fit the bill with the same render reliability.

Insulation

With insulation requirements for construction steadily rising, Insulated Render Systems provide the technically superior wall insulation option for both refurbishment and new-build. Making reliable, single skin construction possible in new-build and applied with minimal tenant disruption in refurbishment, Insulated Render Systems completely envelop and protect the construction, eliminating cold bridging and interstitial condensation. Insulation thickness that provides thermal equilibrium and more, if that could ever be necessary, can be accommodated without encroaching on living space or increasing the building foundation footprint.

Fast-track application

Modern renders are often designed with properties that allow machine application. This modern machinery mixes, hoists and places newly mixed render directly onto the wall, freeing up skilled applicators to concentrate on using their skills to level and finish larger areas of rendering rather than in labouring activities. These fast-track specifications enable hidden savings in the form of early scaffold release and all round shorter programme times.

See specific product information to see whether this method of application is suitable for the material under consideration and page 142 for a review of some of the machine types available.

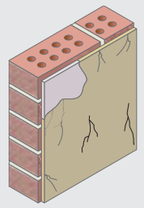
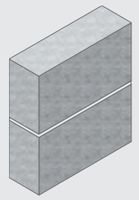
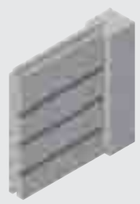
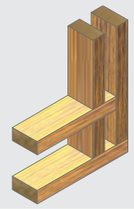
First impressions will always count. Despite the inevitable extra material costs involved, factory controlled modern renders offer a wealth of cost-effective advantages for the developer who wishes to protect his reputation and offer his clients attractive, modern buildings built with reliable materials.

How to use the Selectors

To find the most suitable render option for your needs, refer to the Primary Selector Chart below and on the next page *Guide to choice of finish* for criteria that most closely fit your requirements.

General selection guidelines will be found on page 20. From here go to the secondary selectors in Sections 3, 4 and 5 as indicated to be directed to a specific product. NBS style specification notes follow the selectors (a selection of case study notes precedes).
We strongly recommend consideration of the detailed specification advice for direct or insulated render systems in Sections 7 and 8 respectively and also reference to the Best Practice in Application issues in Section 9. Material Data Sheets for all products can be found in Section 10.

Guide to choice of system

	Mixed substrates	Masonry/concrete	Metal frame	Non-traditional	Timber frame
					
Mineral through colour 	Insulated render system				
		Monocouche			
Insulating 	Insulated render system				
Strong colour 	Insulated render system *Some limitations*				
	Synthetic				Synthetic

Weber renders: general selection guidelines

Main product selector

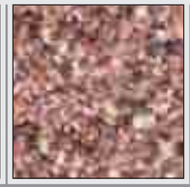
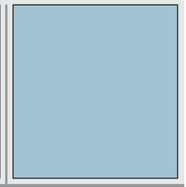
Selectors here are designed to narrow your selection down to a choice of either monocouche, synthetic or insulated systems. Colour and texture can be related to the actual product that will provide the finish chosen in the particular system. Substrate and main system features can be related to the system itself.

- **Colour charts for all products** page 22 – 31
- **Monocouche** Section 3
- **Synthetics and their backing renders** Section 4
- **Insulated Systems** Section 5

- Monocouche renders
- Synthetic NCS colour range
- weber.tene/santane
- Brick slips
- Top coat renders – dry-dash
- Top coat renders – scrape
- flexirend highbuild
- weber.sil P

Guide to choice of finish

2

Finish	Spray texture	Ashlar	Scrape finish	Dry-dash	Brick	Fine texture	Travertine	Natural aggregate	Roller texture	Smooth
										
Monocouche	**weber.pral M** and **weber.pral D** 24 colours, *see page 22*									
Synthetic						**weber.plast TF** **Weber** NCS colours, *see page 25*	**weber.plast DF** **Weber** NCS colours, *see page 25*	**weber.tene SG** 12 colours, *see page 26*	**santane EFL** (fine roller texture) 20 colours, *see page 27*	
						weber.sil TF **Weber** NCS colours, *see page 25*			**flexirend highbuild** 10 colours, *see page 31*	**weber.sil P** **Weber** NCS colours, *see page 25*
						santane TL 20 colours, *see page 27*				**weber.plast P** **Weber** NCS colours, *see page 25*
Insulated render system			**weber.rend TTS** 10 colours, *see page 24*	**weber.rend TTC** 11 colours, *see page 28*		**weber.therm XB** 11 colours, *see page 30*	**weber.plast TF** **Weber** NCS colours, *see page 25*	**weber.plast DF** **Weber** NCS colours, *see page 25*	**weber.tene SG** 12 colours, *see page 26*		**weber.sil P** **Weber** NCS colours, *see page 25*
			weber.rend PTS 10 colours, *see page 24*	**weber.rend PTC** 11 colours, *see page 28*		**weber.rend RB** *see page 29*	**weber.sil TF** **Weber** NCS colours, *see page 25*				**weber.plast P** **Weber** NCS colours, *see page 25*
	weber.therm XP Light marked ashlar						**weber.therm XP**				**weber.therm XP**

2

General selection guidelines

There is a vast array of criteria that need to be assessed and considered before any specification can be made.

The selectors offer a variety of starting points; alternatively you may wish to consider the following.

Colour and texture

Scraped finish

Through coloured cementitious renders are generally finished by removing the surface with a nail float producing a surface similar to weathered stone. Consider any of the Monocouche range in Section 3 or for an insulated system those finished with a cementitious material such as **weber.rend TTS**, **weber.rend PTS** or **weber.therm XP**.

Fine texture

Synthetic materials in section 4 provide a range of fine texture materials, from close textured aggregate, travertine, coloured aggregates through to smooth paint in a wide choice of colours.

Strong dark colours

Consider a synthetic finish from the NCS colour range with a suitable backing render in section 4.

A comprehensive guide to colour and texture across the range follows on the next two pages.

Note: Due to the combination of heat gain and the insulating qualities of the system, some strong synthetic colours are not recommended for Insulated Render Systems (EWI). See notations on the colour cards.

Dry-dash

The traditional appearance of dry-dash finishes can be combined with the modern performance of high tech insulated systems. A variety of dashing aggregates, when combined with the range of coloured topcoats, offers a very wide variety of tone and texture. See page 28 for aggregates and topcoat colours.

Performance

Permeability

All **Weber** renders and finishes throughout the Monocouche, Synthetic and Insulated Render Systems are vapour permeable.

Thermal/meeting Part L Regulations

For high thermal performance you will need to examine the Insulated Render Systems in Section 5.

Impact

Impact resistance has much to do with the system or substrate to which the render is applied. However, consideration could be given to using thicker coat renders, incorporating a heavy duty mesh cloth when using polymer render systems or the genuine brick slip finished **weber.therm XB** External Wall Insulation System.

Durability

While the life of well-maintained synthetic materials that form part of an accredited system is often quoted in excess of 30 years, in general, cementitious or mineral based products have a longer life.

Durability should not be confused with the period of time before which redecoration may be required. The latter is determined by exposure, the amount of pollution in the atmosphere and the efficiency of architectural detailing.

Flexibility/resistance to cracking

Cementitious renders are usually fully bonded to their substrates and will not crack under normal circumstances. They will, however, reflect failure in the substrate. See page 115 for a review of the precautions that can be taken to reduce substrate failure. Many **Weber** renders are designed to be 'stabilised renders' which are suitable for the high render stress conditions of external wall insulation.

Highly polymer-modified cementitious renders such as those used in **weber.therm XM** and **weber.rend MT**, even though cementitious, have a degree of flexibility themselves and provide increased adhesion to their substrates.

Synthetic materials by their nature have a degree of flexibility whereas products such as **santane EFL** are classified as elastomeric and suitable for use in specialist systems that will bridge cracks in existing sound materials. See page 98 for a discussion of these issues and page 170 for the **santane** data sheet.

Combustibility

Synthetic finishes will not burst into flame and do not burn easily but cementitious products are generally considered non-combustible even though they may be polymer modified. Of the insulation materials used with Insulated Render Systems, all are fire retarded, however, mineral wool has been considered inert and non-combustible.

Sound/acoustic

While acoustic qualities are a consideration of the construction as a whole, as a general rule heavy systems with greater mass or finished with heavy textured surfaces are better at contributing to noise reduction.

Exposure

There are methods of dealing with high exposure conditions with most systems and these situations do require special attention. Thicker renders or the use of topcoats should be considered.

For the high exposure that results from systems on high-rise structures such as multi-storey tower blocks, the mechanically fixed **weber.therm XL** or lath option of **weber.therm XP** systems should be considered.

High water shedding

High performance materials with a silicone base shed water very efficiently and as a result stay cleaner longer. **weber.sil TF**, **weber.plast P** or **weber.sil P** with a suitable backing render should be considered. See Section 4 for synthetic finishes.

Substrates

Masonry

All **Weber** renders, finishes and support systems throughout the Monocouche, Synthetic and External Wall Insulation Systems have variants that can be applied to suitably prepared masonry.

Poor background surfaces

Consideration will have to be given to mechanically fixed systems such as **weber.rend IF** (Page 160) or external wall insulation.

Panel

For panel substrates synthetic finishes on the **weber.rend MT** support system (Page 162) should be considered.

Frame construction

Frame construction presents particular challenges. See the solutions discussed in pages 92, 102 and 110.

Non-traditional construction

Weber has built a reputation for dealing successfully with the varying challenges offered by the wide range of non-traditional methods of construction. While the solutions may be type specific, see page 106 for a discussion of the issues.

weber.pral M and weber.pral D colours

Standard range


2500 Chalk


674 Silver Pearl


016 Ivory


041 Cream


2501 Cornish


012 Earth

Standard specials


009 Beige


019 Sand


101 Parchment


086 Ocre Rose


232 Buff


632 Limestone


091 Pearl Grey


207 Light Beige


655 Mushroom


210 Granite Grey


276 Stone Grey


2502 Graphite


208 Light Blue


200 Azure Blue


038 Sage Green


057 Rose

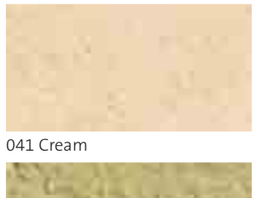

080 Brick Red

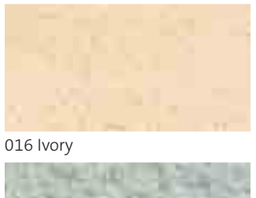

055 Earth Red

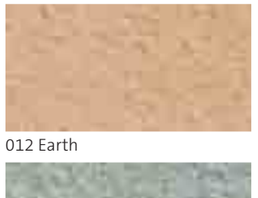
weber.therm L1 and weber.therm M1 colours

Standard range


000 White


041 Cream


016 Ivory


012 Earth


019 Sand


232 Buff

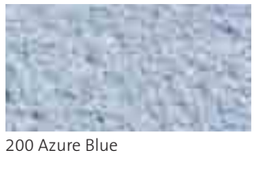

210 Granite Grey


276 Stone Grey


101 Parchment


080 Brick Red


038 Sage Green


200 Azure Blue

Standard specials


207 Beige Clair


006 Rose Fonce


245 Mauve Clair


205 Turquoise Pale


009 Beige


082 Rose Orange


091 Gris Perle


053 Vert Albatre


086 Ocre Rose


102 Rose Ambre


261 Mauve Doux


059 Vert Jade


104 Beige Ambre


057 Rose Flamboyant


099 Gris Mauve


208 Bleu Clair


301 Dore Chaud


083 Orange Clair


322 Rose Rompu


204 Bleu Doux


311 Jaune Safran


055 Terre Rouge


266 Mauve Fonce


277 Bleu Rompu

It is very important to note:

These colour representations are as close as printing techniques permit.

Colour appearance will vary naturally according to product nature, substrate, surface finish and orientation.

For these reasons, final selection against actual samples is strongly recommended. These are readily available from **Weber**.

Some special colours may be feasible according to product type and subject to technical and commercial constraints. Contact **Weber** for further information.

weber.rend TTS and weber.rend PTS colours


675 White


674 Silver


635 Ivory


632 Limestone


637 Bathstone


633 Butter


655 Mushroom


643 Oyster


672 Grey


652 Terracotta

It is very important to note:

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For these reasons, final selection against actual samples is strongly recommended. These are readily available from **Weber**.

Some special colours may be feasible according to product type and subject to technical and commercial constraints. Contact **Weber** for further information.

The NCS-Natural Color System®©

Why use a colour system?
Colour is a vital element in architecture and design. Colour informs and excites us, it defines where we walk or sit; it allows us to express our emotions and our individuality; its contrast helps the visually impaired to find their way; it has cultural contexts as well as practical and commercial ones. Colour sells.

Anyone with normal colour vision can see about 10 million colours, but without a system to define them communication is impossible. Ideally a system is required which can be used from concept, through visualisation, specification and production to realisation. Preferably this system should be based on how we see colour, since we all see colour in the same way – and be independent of language, so that it can be used internationally.

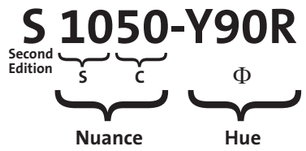
Natural Color System, a precise language of colour
The Natural Color System is a user friendly colour language. It is the only colour system that describes colour exactly as we see it, which is why it is easy to understand, logical and simple to use. Any colour can be defined within the NCS System and given a precise notation.

An international colour standard
NCS improves communication between design and production industries and helps to ensure that the customer receives exactly what they want to see, saving time on complaints and time consuming discussions.

The six elementary colours

The six pure colours: White, Black, Yellow, Red, Blue and Green, correspond with the perception of colour in our brain.

NCS colour notations are based on how much a given colour seems to resemble these six elementary colours.



In the NCS notation 1050-Y90R, for example, 1050 describes the nuance, ie the degree of resemblance to black (S) which is 10% and to the maximum chromaticness (C) which is 50%.

The hue (Φ) Y90R describes the degree of resemblance between Yellow and Red (Y and R). Y90R describes yellow with 90% redness and 10% yellowness.

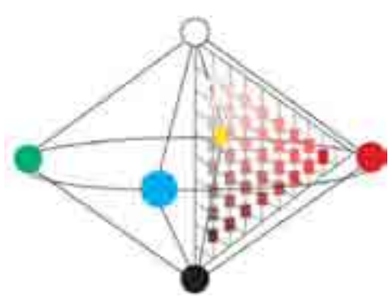
Pure grey colours have no hue and are given nuance notations followed by -N to describe Neutral. There is a scale from 0500-N, which is white, to 9000-N which is black.

The letter S which precedes the NCS notation means that the NCS sample is from NCS Edition 2. The colour standards for this edition were created with non toxic pigments.

When the NCS-System is familiar, it is possible to judge the attributes of a colour by its notation. For example: how much blackness, how much chromacity, and what hue? This helps to communicate and check specifications and to identify colours that are not notated to NCS.

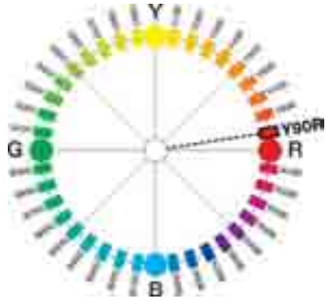
The NCS colour space

Within this three dimensional model all imaginable surface colours can be plotted and given an NCS notation.



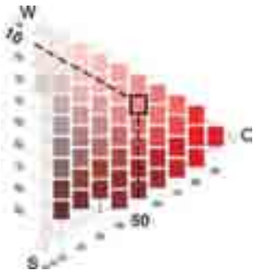
The NCS colour circle

By taking a horizontal section through the centre of the model we see this circle where the four chromatic colours are placed like points of the compass with the space between divided into 100 equal steps. The 10% steps here represent the pages of the NCS atlas and show the colour hues.



The NCS colour triangle

The NCS triangle is a vertical section through the NCS model at one of the 10% steps. Here it is Y90R.
This section shows all the colours on the NCS Atlas page for the hue Y90R between White (W), Black (S) and the full chromatic colour (C). S 1050-Y90R has been highlighted.



Weber colour card

With over 200 coloured synthetic finishes to choose from, the **Weber** NCS colour card is freely available by contacting us on 01525 722100. Alternatively you can go online to order a copy at **www.netweber.co.uk**

The colour representations in the **Weber** colour card are as close as printing techniques permit. For this reason, final selection against actual samples is strongly recommended. These samples are freely and readily available from **Weber**.

weber.tene SG colours


H A101


H A211


H A207


H A402


H A105


H A256


H A354


H A451


H A157


H A302


H A209


H A306

It is very important to note:

These colour representations are as close as printing techniques permit.

Colour appearance will vary naturally according to product nature, substrate, surface finish and orientation.

For these reasons, final selection against actual samples is strongly recommended. These are available from **Weber** on request.

santane EFL and santane TL colours

A 007

A 546


A 033


A 876


A 666

A 716

A 376

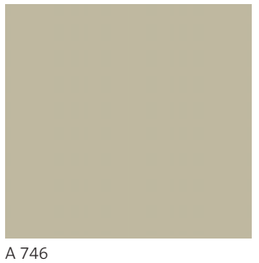

A 013

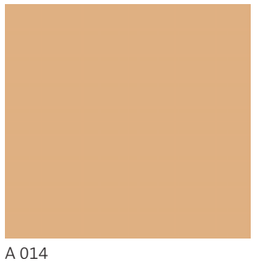
A 266


A 326

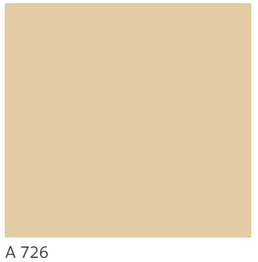

A 086

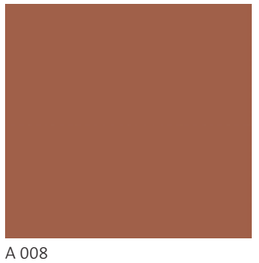

A 696


A 746

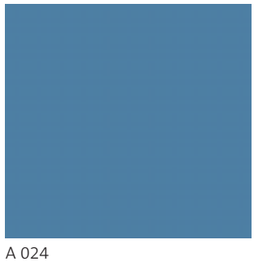

A 014

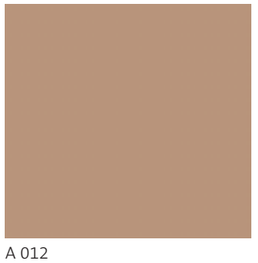

A 022


A 726


A 008


A 821


A 024


A 012

It is very important to note:

These colour representations are as close as printing techniques permit.

Colour appearance will vary naturally according to product nature, substrate, surface finish and orientation.

For these reasons, final selection against actual samples is strongly recommended. These are available from **Weber** on request.

Some special colours may be feasible according to product type and subject to technical and commercial constraints. Contact **Weber** for further information.

weber.rend TTC, weber.rend PTC, weber.rend fibrelite

302 Cotswold

353 Limestone

621 Yellow

624 Fawn

632 Cream

637 Beige

644 Pink

652 Red

654 Brown

672 Grey

675 White

Decorative aggregates *(suggested complementary render colours in italics)*

Arcane
White

Ashton Cream
Cream

Barleycorn
Cream or fawn

Beige Marble
Cream

Black and White Spar
White or grey

Buff Quartz
Pink

Calcined Flint
White or grey

Classic Spar
White, pink or grey

Derbyshire Spa
Cream or fawn

Glenarm White
White

Harvest
White or pink

Honey
White, yellow or cream

Iris
White or cream

Polar White Spar
White

Red and White Spar
White

Red Granite
Brown

Seville
White, yellow or cream

Snowdrop
White or grey

weber.rend RB

weber.rend RBF (Brick face or ‘brick’ colours)

Coral

Mulberry

Sienna

Terracotta

Harvest

Burgundy

Rustic

weber.rend RBB (Brick base or ‘mortar joint’ colours)

Beige

Brown

Dark grey

Oatmeal

Mid grey

Pink

Light grey

Stone

Pearl

It is very important to note:

These colour representations are as close as printing techniques permit.

Colour appearance will vary naturally according to product nature, and surface finish applied during application.

For these reasons, final selection against actual samples is strongly recommended and a site sample installed and agreed before commencement of works.

Initial samples are readily available from **Weber**.

weber.therm XB and weber.rend BPM colours


Antique Red Multi


Red Dragwire


Blue Smooth


Red Multi Dragwire


Brown Multi


Red Multi Smooth


Brown Smooth


Red Multi


Buff Multi Dragwire


Red Smooth


Golden Smooth

weber.rend BPM colours


Tan


Brown


Yellow


Red


Grey


Buff

It is very important to note:
These colour representations are as close as printing techniques permit.
Colour appearance will vary naturally according to product nature and surface finish.
For these reasons, final selection against actual samples is strongly recommended.
These are readily available from **Weber**.

flexirend highbuild, cullamix colours

675 White

674 Silver

635 Ivory (Light Magnolia in **flexirend**)

632 Limestone

637 Bathstone (not available in **cullamix**)

633 Butter

655 Mushroom (not available in **cullamix**)

643 Oyster (not available in **cullamix**)

672 Grey

652 Terracotta (not available in **cullamix**)

It is very important to note:

These colour representations are as close as printing techniques permit.

Colour appearance will vary naturally according to product nature, substrate, surface finish and orientation.

For these reasons, final selection against actual samples is strongly recommended.
These are readily available from **Weber**.

Some special colours may be feasible according to product type and subject to technical and commercial constraints.
Contact **Weber** for further information.

Monocouche renders

The advantages

The factory production process for Monocouche provides render materials with controlled, accurate proportioning using quality assured materials in proven, engineered formulations that result in high performance in practice.

3

Colour and texture

Monocouche renders are now available in a wide range of colours. Factory production enables balanced amounts of light fast organic pigments to be accurately added and controlled throughout the thickness of the render. Variation in texture between flat scraped, machine applied spray roughcast finishes and the incorporation of ashlar features, just add to the armoury that the designer has to hand. See the Colour Charts in Section 2.

Short installation programmes

The factory procedure has the advantage that advanced render technology can be easily included. This enables a one coat application to full BS 5262 standard thickness' with areas often applied and finished within the same day. Hidden savings result from reduced programme times and lower scaffolding costs free up groundworks for early completion. Obvious benefits can therefore be realised for the developer and client alike.

Low maintenance

Render is often seen as a maintenance liability needing constant attention, however, modern through-coloured Monocouche renders have the added attraction of being low maintenance materials. The future proprietor or house owner can clean the render with the commonly available 'hobby' style pressure washer and suitable detergent should the need arise. Some properties, even those close to town centre environments, have not required attention for over 10 years. As with all decorative surfaces, the actual maintenance period is very reliant on the local atmospheric conditions and the quality of architectural detailing.

Machine application

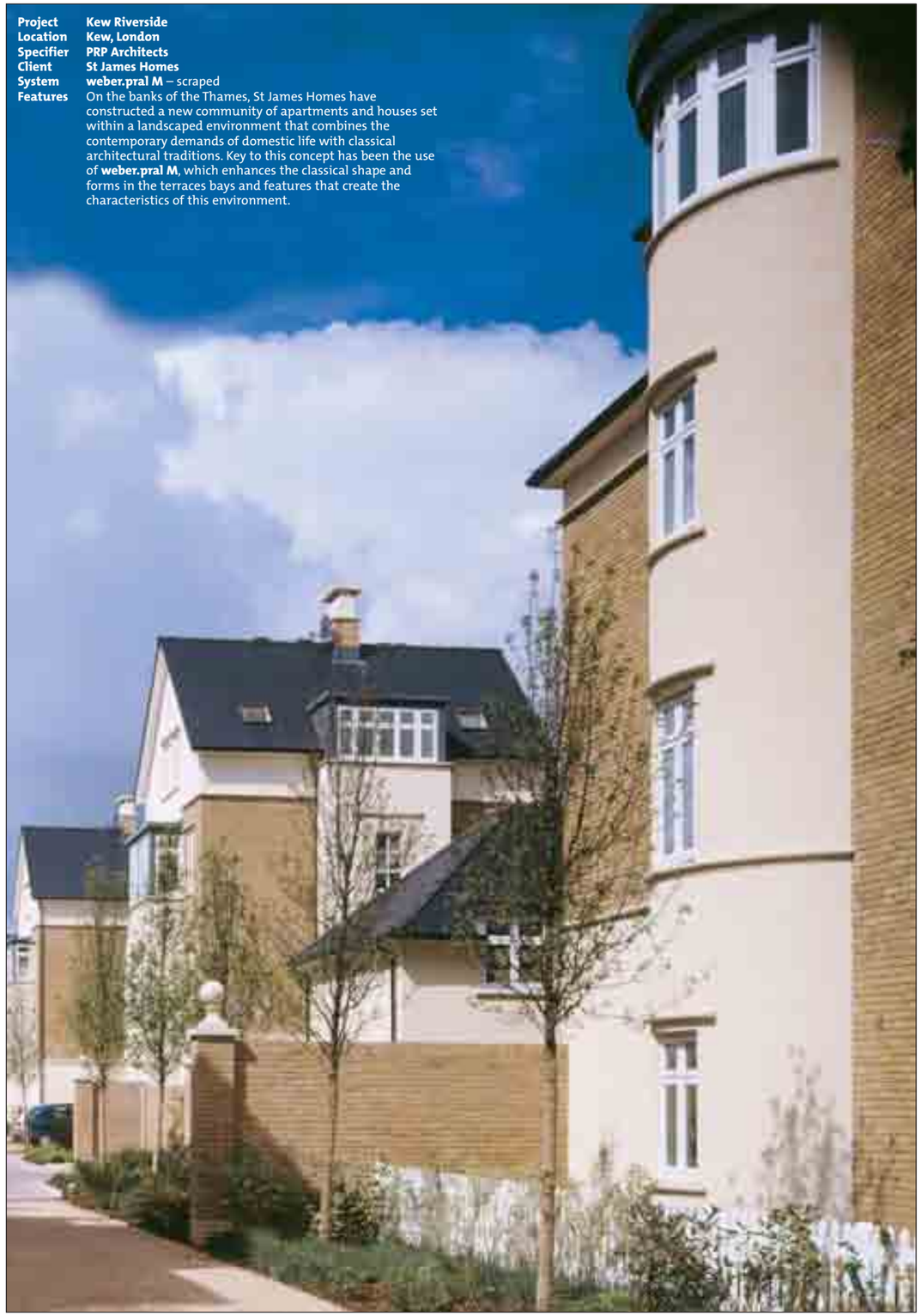
Some factory produced materials have been designed for machine application and with these products, some of the effects of current skill shortages in the industry can be addressed, fast track application achieved and hidden savings, in the form of even shorter programme periods and early release of scaffolding to enable ground works to proceed, realised. See page 142 for a review of some of the machinery available.

Use the selectors on pages 40 – 41 to direct you to your final selection.

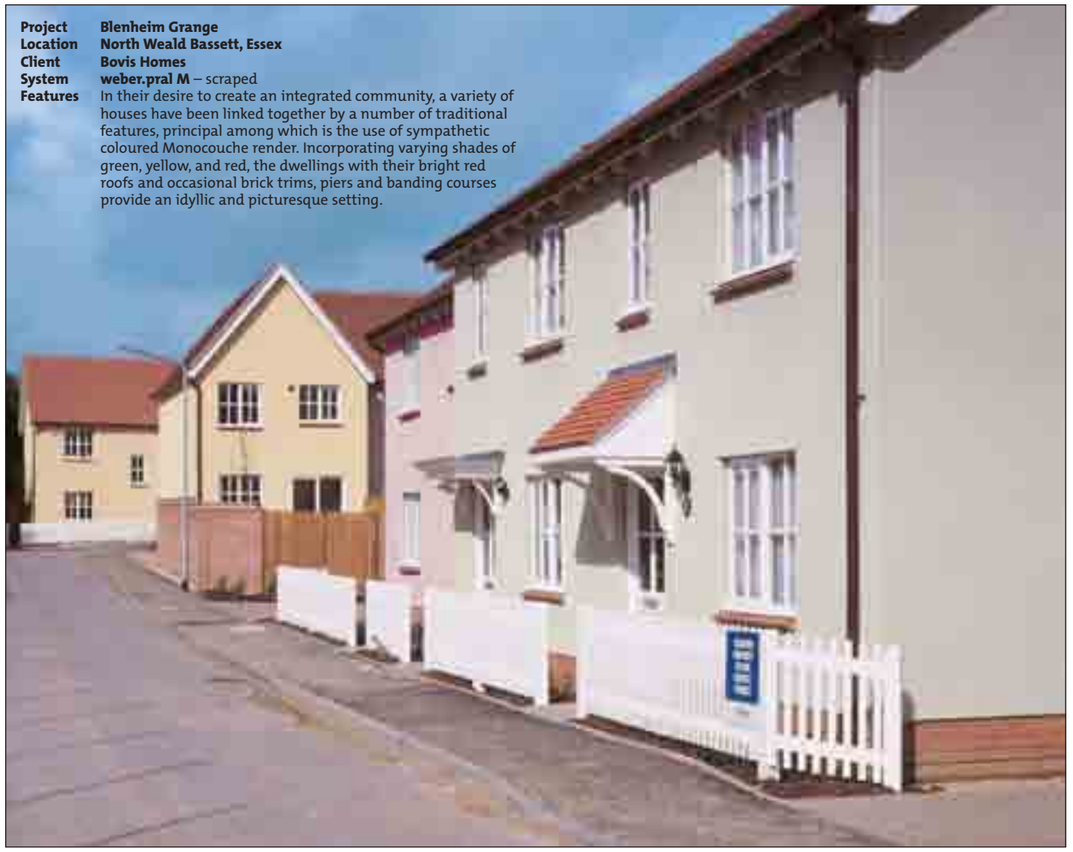
3

Weber monocouche renders: case studies

Project **Kew Riverside**
Location **Kew, London**
Specifier **PRP Architects**
Client **St James Homes**
System **weber.pral M** – scraped
Features On the banks of the Thames, St James Homes have constructed a new community of apartments and houses set within a landscaped environment that combines the contemporary demands of domestic life with classical architectural traditions. Key to this concept has been the use of **weber.pral M**, which enhances the classical shape and forms in the terraces bays and features that create the characteristics of this environment.



Project **Blenheim Grange**
Location **North Weald Bassett, Essex**
Client **Bovis Homes**
System **weber.pral M** – scraped
Features In their desire to create an integrated community, a variety of houses have been linked together by a number of traditional features, principal among which is the use of sympathetic coloured Monocouche render. Incorporating varying shades of green, yellow, and red, the dwellings with their bright red roofs and occasional brick trims, piers and banding courses provide an idyllic and picturesque setting.

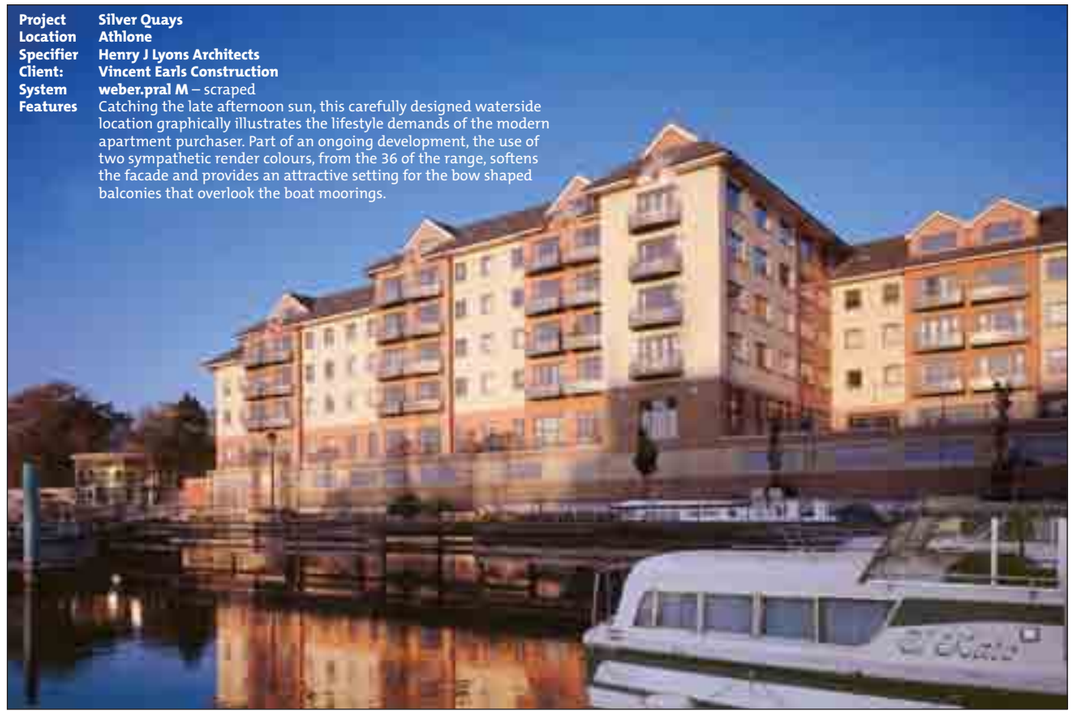


Project **Health Club**
Location **Chafford Hundred**
Client **Bannatye Leisure**
System **weber.pral M** - scraped
Features Working alongside a whole range of other building materials such as glass, exterior cladding and exposed feature steelwork, this modern leisure centre shows that **weber.pral M** can add substance and covering to contemporary designs as well as to traditional architecture.

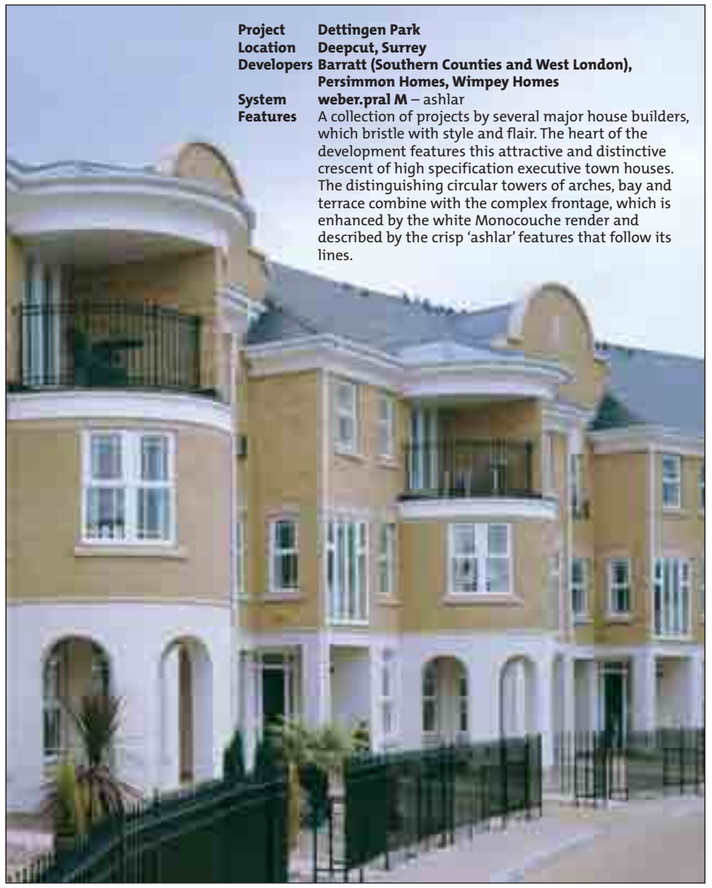
Project **Penarth Marina**
Location **Cardiff**
Specifier **Tony King Architects**
Client **St David Ltd**
System **weber.pral M** – scraped
Features The first of several projects completed around the waterfront of the marina with **weber.pral M**, this terrace of upmarket town houses and apartments graphically illustrates the attractive use of the wide range of colours available in the render range. A well-balanced collection of 36 colours provides the specifier with a palette of material in contemporary tones and hues which are complementary to many other building material finishes.

Project **Private Home**
Location **Cheadle, Staffordshire**
Specifier **C Green**
Client **Home owner**
System **weber.pral M** – sprayed texture
Features **weber.pral M** was chosen to upgrade the exterior of the delightful country cottage in Staffordshire. The spray texture finish blends charmingly with the natural stone quoins, replicating traditional finishes while avoiding a heavy maintenance liability. Once preparation work was completed, the application of material, including finished texture coat, was carried out by two operatives and all external surfaces completed within a one day programme.

Project **Sophia Mansions**
Location **Penarth Marina, Cardiff**
Client **Bellway Homes**
System **weber.pral M** – scraped
Features **weber.pral M** has been applied to the entrance facade where ashlars divide the surface into room sized areas with a raised profile in **weber.pral M** framing the windows.
On the opposite side of the building, overlooking the Marina, **weber.pral M** has been applied to the series of curved bays that form the dominant design to this elevation.



Project **Silver Quays**
Location **Athlone**
Specifier **Henry J Lyons Architects**
Client: **Vincent Earls Construction**
System **weber.pral M** – scraped
Features Catching the late afternoon sun, this carefully designed waterside location graphically illustrates the lifestyle demands of the modern apartment purchaser. Part of an ongoing development, the use of two sympathetic render colours, from the 36 of the range, softens the facade and provides an attractive setting for the bow shaped balconies that overlook the boat moorings.



Project **Dettingen Park**
Location **Deepcut, Surrey**
Developers **Barratt (Southern Counties and West London), Persimmon Homes, Wimpey Homes**
System **weber.pral M** – ashlar
Features A collection of projects by several major house builders, which bristle with style and flair. The heart of the development features this attractive and distinctive crescent of high specification executive town houses. The distinguishing circular towers of arches, bay and terrace combine with the complex frontage, which is enhanced by the white Monocouche render and described by the crisp 'ashlar' features that follow its lines.

Project **Apartments**
Location **Adelaide Road, Dublin**
Specifier **McCrossan O'Rourke Manning Architects**
Client **O'Malley Construction**
System **weber.pral M** – scraped
Features Careful mixing of the traditional materials of render, glass and brick, has produced a development of distinctive apartments in a contemporary design which makes full use of the site available without compromising the prominent canal side situation. Machine application of the through-coloured render reduced programme times to a minimum and freed up scaffolding for the early completion of other works.

Project **The Pavilion**
Location **Dún Laoghaire**
Specifier **Scott Tallon Walker**
System **weber.pral M** – scraped
Features Designed by one of Ireland's premier architectural practices these high quality apartments typify the requirements of modern city development. The white through-coloured render provides the low maintenance backdrop for the distinctive aerial 'patio' structures and feature glass cladding. Finished flat with a scraped surface, the render was applied in a short programme period using modern spray render techniques.

Project **New Housing**
Location **Cloughey, Co Down, Ireland**
Client **Philip McCullough Developments**
System **weber.pral D**
Features Specifically designed for the House Building market in Ireland, **weber.pral D** offers valuable advantages to developer and client alike. Developer Philip McCullough has provided instant 'pavement appeal' on this new high quality development of domestic properties. The scrape finish gives a distinctive 'weathered stone' texture that resists the ingress of water while allowing the structure to breathe.

Project **New Village**
Location **Kilcullen, Co Kildare, Ireland**
Specifier **Crean Sally Architects**
Developer **McCabe Builders**
System **weber.pral M** – scraped
Features Nestling in an almost idyllic rural setting, this development of new housing comprises a variety of distinctive detached houses and attractive apartments. The complex and varied shapes of the construction combine with the different terraces and balconies and are set off against the pristine white of the mineral render to produce an extremely attractive village environment.

Product selectors

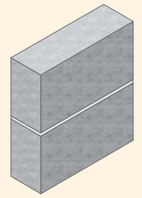
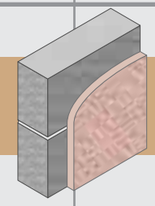
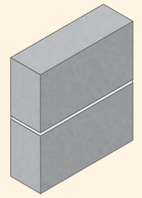
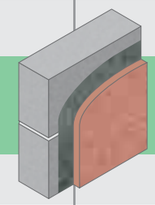
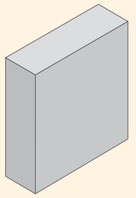
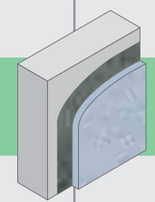
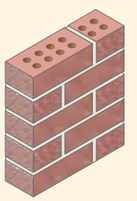
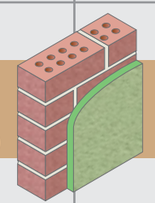
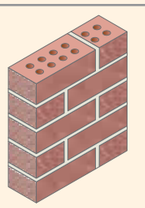
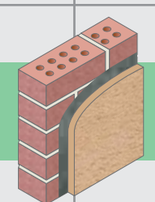
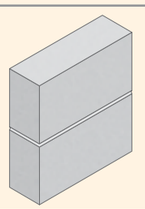
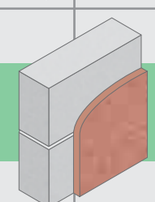
Selectors here provide the means to narrow the selection down to a final product. Choose on the basis of colour, texture and method of application but bear in mind that **weber.pral D** is manufactured in Northern Ireland for the Irish market only.

Monocouche renders can be applied direct to substrates suitable to receive a Mix Designation III as described in BS 5262, however for some other substrates a **weber.rend aid** keycoat or suction control may be required.

Choice of finish and application method

Finish	Scrape	Hand application	Ashlar	Spray texture	Machine application
					
England, Scotland, Wales	**weber.pral M** Colours *page 22*, Data sheet *page 148*				
Ireland	**weber.pral D** Colours *page 22*, Data sheet *page 146*				

Substrate treatment

Substrate	weber.pral D *page 146*	weber.pral M *page 148*
		
Medium-dense block with good key 	**Direct application** Specification *pages 46 – 47*	
Medium-dense block with poor key 	**With weber.rend aid keycoat** Specification *pages 48 – 49*	
Smooth concrete 	**With weber.rend aid keycoat** Specification *pages 48 – 49*	
Brick with raked joints 	**Direct application** (May need **weber.rend aid** containing sulphate-resisting cement if high salt-content bricks)	
Brick with flush joints 	**With weber.rend aid keycoat** Specification *pages 48 – 49*	
Aerated autoclaved blocks (suitable for 1:1:6) 	**Control suction before application**	

Ashlar and embellishments

Scrape finished, Monocouche render **weber.pral M** has been designed to provide a similar surface to the texture of weathered stone. This, combined with progressive hardening characteristics, allow, when applied to recommended thicknesses, replica 'ashlar' features to be marked into its surface shortly after application.

Changes in colour or thickness can be employed to produce raised features such as keystones, raised bands, stringcourses, quoin stones and plinths in fully rendered facades.

Facades rendered with **weber.pral M**, therefore, provide the designer with a blank canvas onto which period architecture or modern geometric design can be imposed without recourse to expensive special stonework.

Ashlar

Replicating stonework within **weber.pral M** can be achieved by cutting recessed joints into the finished render with specialist tools. Vertical, horizontal and radial recesses can be formed using square, V and chamfered cutting profiles.

Designs may be executed with both vertical and horizontal cuts to fully describe stone blockwork or as deep horizontal profiles that provide effective shadow lines to replicate traditional 'ashlar'.
A number of examples are shown below.

Ashlar profiles

Before ashlar work is specified consideration should be given to the minimum thickness of render with regard to exposure conditions. In most exposure conditions the depth of profile of the ashlar will be varied between 5 and 10 mm. Whichever cut is chosen it is important to maintain at least 15 mm of render at the lowest point. In areas of severe exposure the recommended minimum coverage at any point should be increased to 20 mm. The total finished thickness of render should not exceed 25 mm in any application.

Render profile beads should not be specified with ashlar work as they will interfere with the cutting process. We would therefore recommend that feature stops and arrises be formed with temporary timber battens.

Directly after the scraping process the chosen profile can be used to cut through the green render and achieve the desired effect. Refer to Figure 1 below for profiles available.
If the depth of cut exceeds 5 mm horizontally, a chamfered profile should be used to prevent water, dirt and debris collecting on the lower edge of the ashlar.

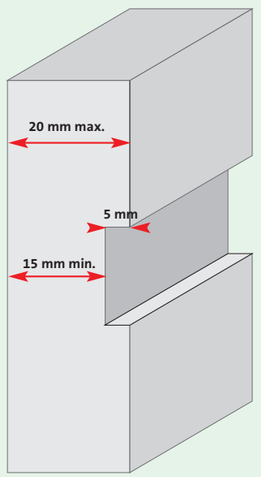
Note: The minimum 15 mm thickness should be increased to 20 mm in cases of severe exposure. For further guidance, refer to the Section relating to thickness on page 113.

Some basic 'ashlar' designs can also be incorporated into polystyrene based **weber.therm XM** systems. Refer to **Weber's** technical department for advice.

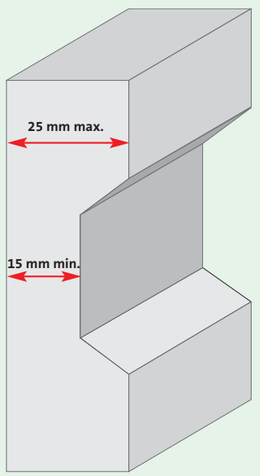
Specific advice regarding good practice in application and setting-out of both ashlar features and embellishments can be found on page 136.

Figure 1

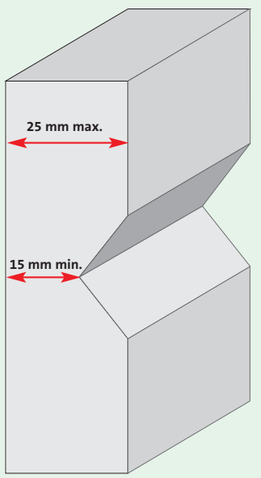
10 – 20 mm profile widths available



25 – 40 mm profile widths available



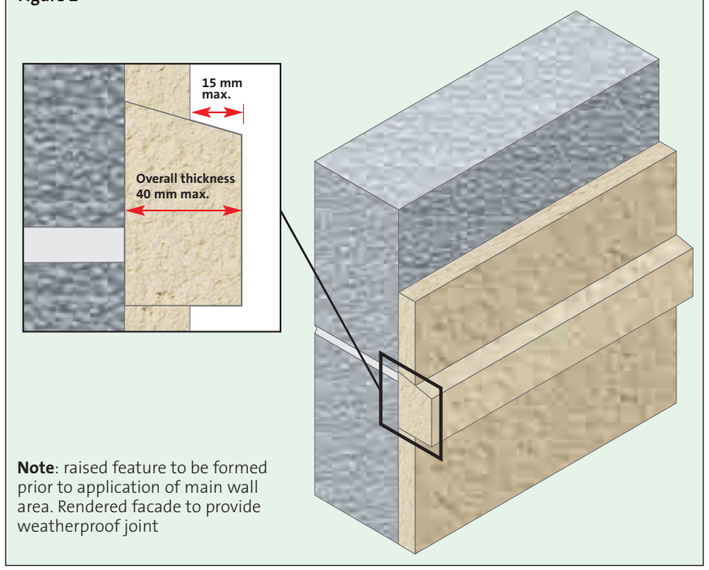
25 mm profile width available



Raised bands, string courses, key stones, quoins and plinths

Raised features within **weber.pral M** should project no more than 15 mm from the subsequent rendered elevation to prevent the collection of debris, dirt and water on the projecting edge. In addition, the top edge should be chamfered to assist water shedding. The total thickness of these features should not exceed 40 mm. A detail drawing of a feature raised band is shown in Figure 2 for guidance.

Figure 2



Note: raised feature to be formed prior to application of main wall area. Rendered facade to provide weatherproof joint

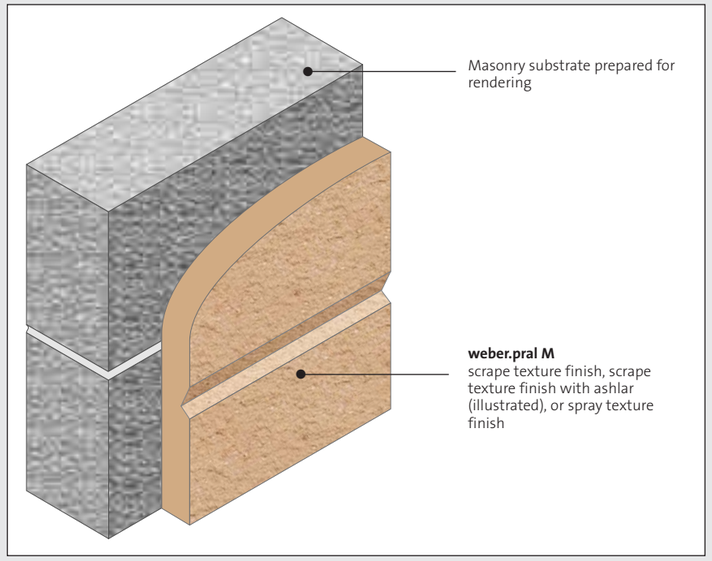
Plinths and quoins follow the same rules regarding thickness. Features must not bridge the dpc.

Note: All these raised features are applied before the main wall areas are executed to ensure that any vulnerable bond interface is protected from exposure to water ingress.

Key stones can be described in 'ashlar' cuts or raised in relief.

Thicknesses of 'ashlar' features must be carefully specified to ensure that full cover of the substrate is maintained. Specific advice regarding good practice in application and setting out of both Ashlar features and Embellishments can be found on page 136.

weber.pral M
direct-applied to substrates with a good key



Abbreviated Guidance Notes

Location: Insert, e.g. *All external walls.*

Render coat: Insert:
weber.pral M *by* ***Weber***.

Colour: See colour chart on page 22.

Thickness: For scraped finishes, insert:
Finished thickness 15 – 25 mm. The applied thickness is actually 3 mm greater to allow for finishing. A minimum thickness of 15mm must be maintained.

For scraped finishes to receive ashlar cuts, insert: *Finished thickness 20 mm* for 5 mm ashlar cuts or *25 mm* for 10 mm ashlar cuts. A minimum thickness of 15 mm must be maintained at the base of the cuts.

For spray texture finishes, insert:
15 – 25 mm in two passes, applied as a monolithic coat.

Finish: Insert one of the following:
Scraped as clause 841B
Scraped as clause 841B with 10 mm deep ashlar effect as clause 843A
Spray texture finish as clause 811B

In ashlar work, specify cuts of between 1 – 10 mm in depth. The latter is commonly used and will provide a good shadow line.

Accessories: See clause 628A for guidance on the use of stops and beads. Delete this item where no accessories are required. Angle beads should not be used where ashlar is continuous around the arris.

628A, 630, 632, 635, 535, 640
It is recommended that angles are formed using chamfered timber battens in preference to proprietary angle beads. The latter may be used, but will be evident in the finished scraped work and must be accepted as a feature.
Scraping may cause spalling away from some angle beads.
Metal bell cast beads and stop beads may be used – specify in clause 635 or 636.
Use clause 628A to specify angles and stops formed using timber battens.

Specification clauses
M20 Plastered/Rendered/Roughcast Coatings

164 Proprietary render
- Location: .....
- Background: new blockwork suitable for direct application of a mix designation III render*
- Render coat: .....
- Colour: .....
- Thickness: .....
- Finish: .....
- Accessories: .....

* **Note:** guidance from block manufacturer regarding movement joints and bed joint reinforcement should be followed.

628A
Except where specified otherwise, form all angles using clean straight timber battens.

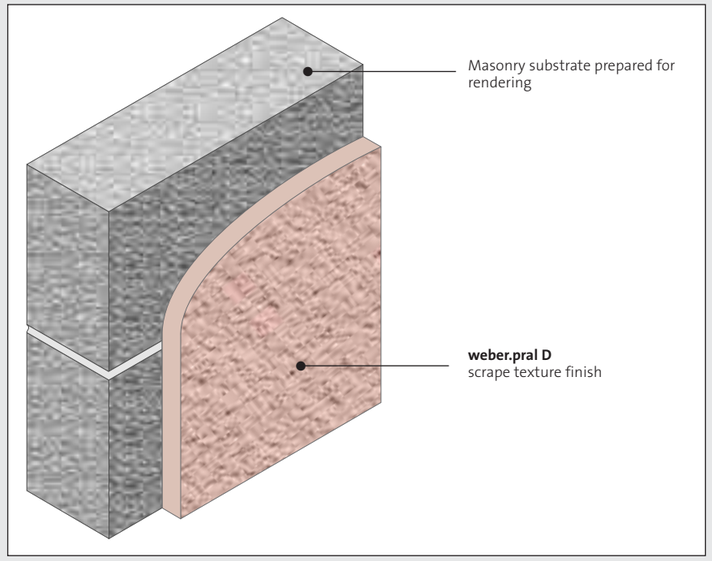
811B Application – spray texture finish
- Machine apply to a thickness of between 10 – 20 mm and rule level.
- When the ruled coat is sufficiently hard but still 'green', normally after 1 – 16 hours depending on the substrate and drying conditions, apply a texturing pass by manoeuvring the nozzle in a circular action until the specified texture and overall thickness is achieved.

841B Scraped finish
- Apply to a thickness 2 – 3 mm greater than the specified finished thickness in two passes and rule level.
- When the render is sufficiently hard, normally between 5 – 16 hours after application, scrape the surface in small circular actions using a Monocouche scraping tool to remove the laitance and bring the application to the specified thickness. Remove no more than 3 mm from the surface.
- Immediately after scraping, brush using a clean soft bristle brush to remove dust.
- Ensure scraped finish is even over the entire surface with no area missed.

843A Ashlar effect
Immediately after finishing:
- Mark out ashlar cuts using a chalk line
- Place timber battens so that the point of the **Weber** ashlar cutting tool will remove each chalk line.
- Run the cutting tool along the battens until the specified depth of cut is achieved.
- Immediately after cutting, brush using a clean soft bristle brush to remove dust.

These notes are very abbreviated, must be read in conjunction with NBS M20 Preliminaries/General Conditions and assume an understanding on the part of the specifier of the Standard NBS M20 section clauses. A full specification service is available from **Weber** – in the first instance contact our technical services staff on 01525 722110

weber.pral D
direct-applied to substrates with a good key



Abbreviated Guidance Notes

Location: Insert, e.g. *All external walls.*

Render coat: Insert:
weber.pral D *by* ***Weber***.

Note: **weber.pral D** is manufactured in Ballyclare for use in Ireland and is not available in Great Britain.

Colour: See colour chart on page 22.

Thickness: Insert:
Finished thickness 15 – 20 mm. The applied thickness is actually 3 mm greater to allow for finishing. A minimum thickness of 15 mm must be maintained.

Accessories: See clause 628A for guidance on the use of stops and beads. Delete this item where no accessories are required.

628A, 630, 632, 635, 535, 640
It is recommended that angles are formed using chamfered timber battens in preference to proprietary angle beads. The latter may be used, but will be evident in the finished scraped work and must be accepted as a feature.
Scraping may cause spalling away from some angle beads.
Metal bell cast beads and stop beads may be used – specify in clause 635 or 636.
Use clause 628A to specify angles and stops formed using timber battens.

Specification clauses
M20 Plastered/Rendered/Roughcast Coatings

164 Proprietary render
- Location: .....
- Background: new blockwork suitable for direct application of a mix designation III render*
- Render coat: .....
- Colour: .....
- Thickness: .....
- Finish: scraped as Clause 841B
- Accessories: .....

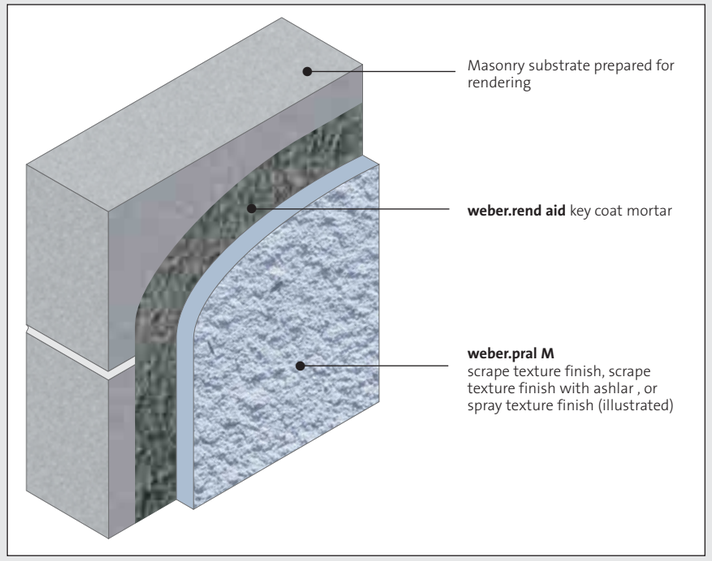
* **Note:** guidance from block manufacturer regarding movement joints and bed joint reinforcement should be followed.

628A
Except where specified otherwise, form all angles using clean straight timber battens.

841B Scraped finish
- Apply to a thickness 2 – 3 mm greater than the specified finished thickness in two passes and rule level.
- When the render is sufficiently hard, normally between 5 – 16 hours after application, scrape the surface in small circular actions using a Monocouche scraping tool to remove the laitance and bring the application to the specified thickness. Remove no more than 3 mm from the surface.
- Immediately after scraping, brush using a clean soft bristle brush to remove dust.
- Ensure scraped finish is even over the entire surface with no area missed.

These notes are very abbreviated, must be read in conjunction with NBS M20 Preliminaries/General Conditions and assume an understanding on the part of the specifier of the Standard NBS M20 section clauses. A full specification service is available from **Weber** – in the first instance contact our technical services staff on 01525 722110

weber.pral M
applied to substrates with a poor key



Abbreviated Guidance Notes

Location: Insert, e.g. *All external walls.*

Render coat: Insert:
***weber.pral M** by **Weber**.*

Colour: See colour chart on page 22.

Thickness: For scraped finishes, insert:
Finished thickness 15 – 25 mm. The applied thickness is actually 3 mm greater to allow for finishing. A minimum thickness of 15 mm must be maintained.

For scraped finishes to receive ashlar cuts, insert: *Finished thickness 20 mm* for 5 mm ashlar cuts or *25 mm* for 10 mm ashlar cuts. A minimum thickness of 15 mm must be maintained at the base of the cuts.

For spray texture finishes, insert:
15 – 25 mm in two passes, applied as a monolithic coat.

Finish: Insert one of the following:
Scraped as clause 841B
Scraped as clause 841B with 10 mm deep ashlar effect as clause 843A
Spray texture finish as clause 811B

In ashlar work, specify cuts of between 1 – 10 mm in depth. The latter is commonly used and will provide a good shadow line.

Accessories: See clause 628A for guidance on the use of stops and beads. Delete this item where no accessories are required. Angle beads should not be used where ashlar is continuous around the arris.

628A, 630, 632, 635, 535, 640
It is recommended that angles are formed using chamfered timber battens in preference to proprietary angle beads. The latter may be used, but will be evident in the finished scraped work and must be accepted as a feature. Scraping may cause spalling away from some angle beads.
Metal bell cast beads and stop beads may be used – specify in clause 635 or 636.
Use clause 628A to specify angles and stops formed using timber battens.

Specification clauses
M20 Plastered/Rendered/Roughcast Coatings

164 Proprietary render
- Location: .....
- Background: smooth faced masonry/concrete*
- Preparation: stipple coat as clause 571A
- Render coat: .....
- Colour: .....
- Thickness: .....
- Finish: .....
- Accessories: .....

* **Note:** guidance from block manufacturer regarding movement joints and bed joint reinforcement should be followed.

571A Stipple coat
- Proprietary reference: **weber.rend aid** by **Weber.**
- On level substrates of good alignment, apply using a hawk and trowel to a thickness of 2 – 3 mm, completing no more than 2 – 3 m² before producing a 5 – 10 mm deep texture with a well loaded brush or roller.
- Cure for 2 – 3 days before overcoating.

628A
Except where specified otherwise, form all angles using clean straight timber battens.

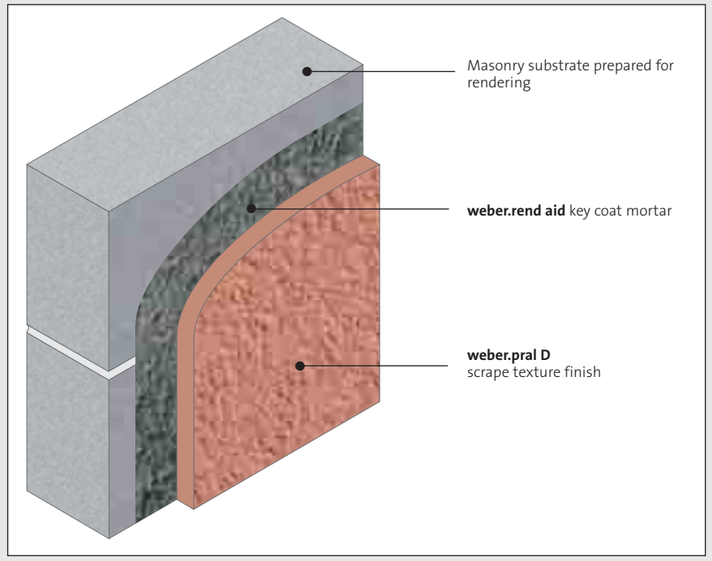
811B Application – spray texture finish
- Machine apply to a thickness of between 10 – 20 mm and rule level.
- When the ruled coat is sufficiently hard but still 'green', normally after 1 – 16 hours depending on the substrate and drying conditions, apply a texturing pass by manoeuvring the nozzle in a circular action until the specified texture and overall thickness is achieved.

841B Scraped finish
- Apply to a thickness 2 – 3 mm greater than the specified finished thickness in two passes and rule level.
- When the render is sufficiently hard, normally between 5 – 16 hours after application, scrape the surface in small circular actions using a Monocouche scraping tool to remove the laitance and bring the application to the specified thickness. Remove no more than 3 mm from the surface.
- Immediately after scraping, brush using a clean soft bristle brush to remove dust.
- Ensure scraped finish is even over the entire surface with no area missed.

843A Ashlar effect
Immediately after finishing
- Mark out ashlar cuts using a chalk line
- Place timber battens so that the point of the **Weber** ashlar cutting tool will remove each chalk line.
- Run the cutting tool along the battens until the specified depth of cut is achieved.
- Immediately after cutting, brush using a clean soft bristle brush to remove dust.

These notes are very abbreviated, must be read in conjunction with NBS M20 Preliminaries/General Conditions and assume an understanding on the part of the specifier of the Standard NBS M20 section clauses. A full specification service is available from **Weber** – in the first instance contact our technical services staff on 01525 722110

weber.pral D
applied to substrates with a poor key



Abbreviated Guidance Notes

Location: Insert, e.g. *All external walls.*

Render coat: Insert:
***weber.pral D** by **Weber**.*

Note: **weber.pral D** is manufactured in Ballyclare for use in Ireland and is not available in Great Britain.

Colour: See colour chart on page 22.

Thickness: Insert:
Finished thickness 15 – 20 mm. The applied thickness is actually 3 mm greater to allow for finishing. A minimum thickness of 15 mm must be maintained.

Accessories: See clause 628A for guidance on the use of stops and beads. Delete this item where no accessories are required. Angle beads should not be used where ashlar is continuous around the arris.

628A, 630, 632, 635, 535, 640
It is recommended that angles are formed using chamfered timber battens in preference to proprietary angle beads. The latter may be used, but will be evident in the finished scraped work and must be accepted as a feature. Scraping may cause spalling away from some angle beads.
Metal bell cast beads and stop beads may be used – specify in clause 635 or 636.
Use clause 628A to specify angles and stops formed using timber battens.

Specification clauses
M20 Plastered/Rendered/Roughcast Coatings

164 Proprietary render
- Location: .....
- Background: smooth-faced masonry/concrete*
- Render coat: .....
- Colour: .....
- Thickness: .....
- Finish: scraped as Clause 841B
- Accessories: .....

* **Note:** guidance from block manufacturer regarding movement joints and bed joint reinforcement should be followed.

571A Stipple coat
- Proprietary reference: **weber.rend aid** by **Weber.**
- On level substrates of good alignment, apply using a hawk and trowel to a thickness of 2 – 3 mm, completing no more than 2 – 3 m² before producing a 5 – 10 mm deep texture with a well loaded brush or roller.
- Cure for 2 – 3 days before overcoating.

628A
Except where specified otherwise, form all angles using clean straight timber battens.

841B Scraped finish
- Apply to a thickness 2 – 3 mm greater than the specified finished thickness in two passes and rule level.
- When the render is sufficiently hard, normally between 5 – 16 hours after application, scrape the surface in small circular actions using a Monocouche scraping tool to remove the laitance and bring the application to the specified thickness. Remove no more than 3 mm from the surface.
- Immediately after scraping, brush using a clean soft bristle brush to remove dust.
- Ensure scraped finish is even over the entire surface with no area missed.

These notes are very abbreviated, must be read in conjunction with NBS M20 Preliminaries/General Conditions and assume an understanding on the part of the specifier of the Standard NBS M20 section clauses. A full specification service is available from **Weber** – in the first instance contact our technical services staff on 01525 722110

Textured synthetic finishes

The advantages

While cementitious mortars are basically rigid materials that have technical constraints on the physical amount of pigment that can be added and therefore have a relatively restricted colour range, materials with a synthetic base can be engineered with a wide range of performance criteria in an extensive range of colours.

While it is not possible for all performance criteria to be available in every single product, a specific synthetic material will include a range of the performance characteristics below.

Flexibility

Many of the standard synthetic finishes such as **weber.plast TF**, **weber.plast DF** and **flexirend highbuild**, are formulated around an acrylic base. These binders result in materials that have a degree of flexibility, ones that are able to accommodate the relatively higher natural movement that is associated with framed, timber or sheathing board substrates. Some very high performance materials such as **santane EFL** are described as elastomeric and provide the next level of flexibility for use on difficult substrates.

Colour

The technical limitations of pigment addition that applies to cementitious materials, and thereby restricts the colour range available, does not apply to synthetic materials. With over 200 coloured synthetic finishes to choose from, the **Weber** NCS colour card is freely available by contacting us on 01525 722100. Alternatively you can go online to order a copy at **www.netweber.co.uk**.

Water shedding

Within the newer developments in synthetic binders are the silicone-based materials. These binders offer the advantage of being hydrophobic and therefore high water shedding. This characteristic means that finishes such as **weber.sil TF** resist the effects of the dirt in rain water and so remain in good condition for much longer.

Clear binders

Synthetic binders can be un-pigmented and this opens the opportunity for naturally coloured aggregates to form a feature of any material. The finishes displayed on page 26 illustrate the effects that can be achieved with **weber.tene SG**, which is such a material.

Support systems

Synthetic materials can be used with a range of backing renders. The specification sheets later in this section include **weber.rend OCR** as a typical support or basecoat render onto dense masonry substrates. However, synthetic materials also form the finishes for **weber.rend MT** and **weber.rend IF**, which may be used to facilitate rendering over difficult substrates and as a finish option for many of the insulated render systems.

Use the selectors on pages 56 – 57 to direct you to your final selection.

Weber textured synthetic finishes: case studies

Project Zandra Rhodes Museum of Fashion and Textiles
Location Bermondsey Street, London
Specifier Legorreta y Legorreta
Client Bermondsey Street Development Ltd
System weber.therm XM
Finish **weber.plast TF150** 1.5 mm
Features Drawing on a combination of three distinct brilliant colours from the range of 268 NCS referenced options in the range of **Weber** synthetic materials, a bold exterior of strong contrasts define the primary elements of this facade design. The building facade makes an impressive statement in this mainly industrial street of central London.

4

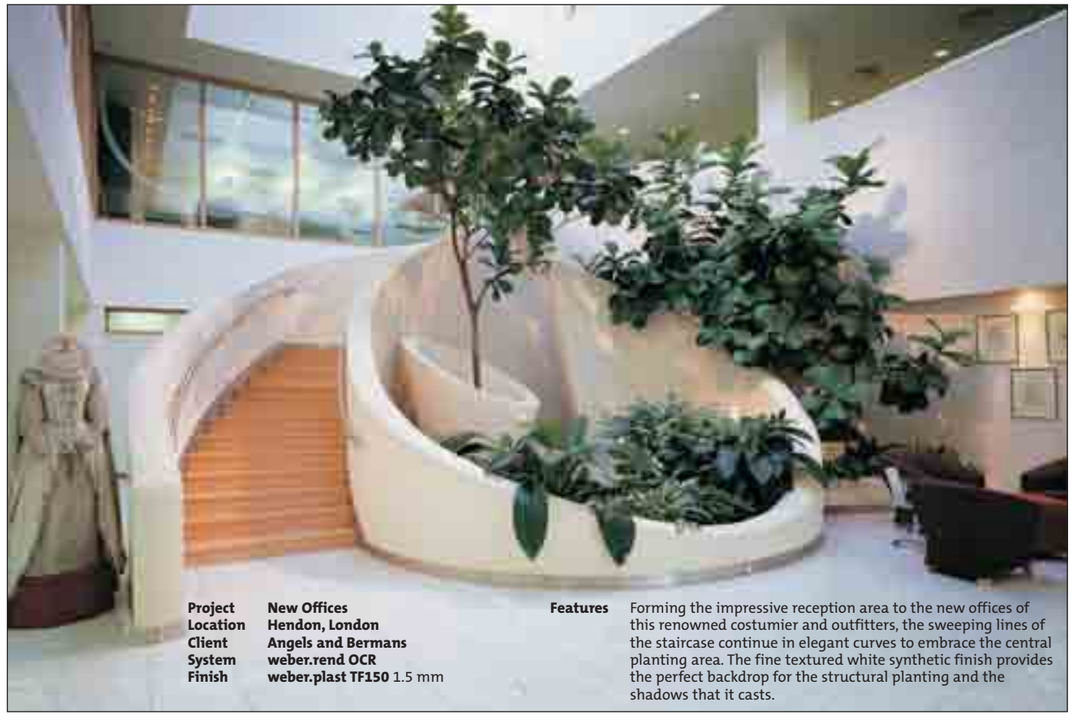
Project University of East London
Location East London
Specifier Edward Cullinan Architects
Client University of East London
System weber.therm XM
Finish weber.plast P
Features This brown-field redevelopment in London docklands, close to the City Airport, was designed with stringent insulation standards and distinctive architectural features that have been enhanced by the clever use of a range of intense colours. This high water shedding synthetic finish can be drawn from a swatch of over 200 NCS referenced colours.

Project Merthyr Terrace
Location Barnes
Specifier Cezary Bednarski
Client Berkeley Homes
System weber.rend MT
Finish **weber.plast TF150** 1.5 mm
Features Judged to be the best one-off new house in the UK by the Royal Institute of British Architects, this three bed detached mews house in SW 13 employed high specification **weber.rend MT** as the backing render for its exterior. The warm natural frames and entrance area both complement and contrast with the clean white **weber.plast TF** finish of the main wall areas to draw you into the property.

Project St Giles Hotel
Location Feltham, London
Specifier Keith Horn Architects
System weber.therm XM
Finish **weber.sil TF** 1.5 mm
Features Located between a busy road and a railway line and situated close to Heathrow Airport, the exterior of this existing 10-storey office block was remodelled into the new St Giles Hotel. The project has been finished in a number of areas with bold strong colours, which contrast with the pristine white low maintenance presentation of the main wall areas.

4

Project **The French Embassy**
Location **Portland Street, London**
Specifier **The Heritage Division of Makers Industrial**
Client **English Heritage**
System **Applied direct to existing coatings, isolated re-profiling with renovex P.**
Finish **santane EFL**
Features The removal of existing finishes proved impossible to carry out without damage to the underlying building fabric. **santane**'s ability to be applied over all existing coatings, fine cracking and new re-profiling work saved the client considerable expenditure and disruption while completely satisfying English Heritage's requirement to avoid any material alteration to the facade.



Project **New Offices**
Location **Hendon, London**
Client **Angels and Bermans**
System **weber.rend OCR**
Finish **weber.plast TF150** 1.5 mm

Features Forming the impressive reception area to the new offices of this renowned costumier and outfitters, the sweeping lines of the staircase continue in elegant curves to embrace the central planting area. The fine textured white synthetic finish provides the perfect backdrop for the structural planting and the shadows that it casts.

Project **Conning Towers**
Location **Poole Dorset**
Specifier **David Quigley Architects**
Client **High Cliff Developments**
System **weber.therm XM**
Finish **weber.sil P**

Features One of the first reinforced concrete buildings in the country and a building originally reviewed by Pevsner, the Civic Trust award-winning Conning Towers was completely redesigned with a new penthouse and a second new block built alongside to prepare it for the next phase of its life. A high water-shedding silicone based paint was chosen to keep the white facade in pristine condition for as long as possible.

Project **Giles Close House**
Location **Birmingham**
Client **Birmingham City Council**
System **Applied direct to mosaics levelling where necessary with renovex P**
Finish **santane**
Features One of three in the same development and just a sample of others treated for the Council, existing mosaics were secured and the properties refurbished incorporating meshcloth in the **santane** system. Selective use of bold colour dramatically improves the visual impact of the typical Local Authority high-density, multi-storey accommodation.

Project **Landmark Place**
Location **Cardiff**
Specifier **Powell Dobson Architects**
Client **St David Homes**
System **weber.therm XM**
Finish **weber.plast TF150** 1.5 mm
Features One of the final developments in the urban regeneration of the city centre area of Cardiff, the selective use of bold colour by the architects has enhanced the architectural features and form of this primarily residential project. Completing the main wall areas of this major project in white provides a distinctive backdrop for the detail areas.

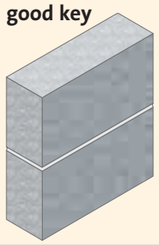
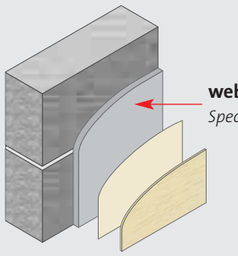
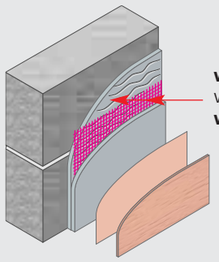
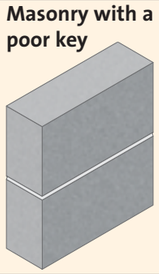
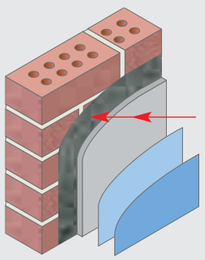
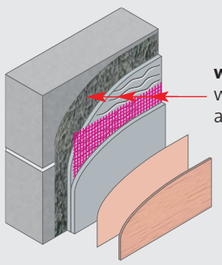
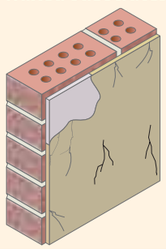
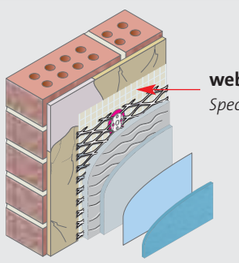
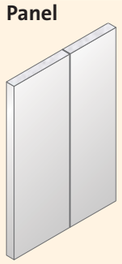
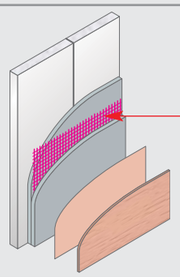
Product selectors

Selectors here provide the means to narrow the selection down to a final product.

Choose on the basis of colour, texture and the type of binder. It is the binder, which provides many of the performance characteristics of the material.

The backing render that will carry the synthetic finish needs to be chosen with the substrate in mind. The options are indicated in the selector.

Choice of backing render

Background	Backing render	
Masonry with a good key 	 **weber.rend OCR** *Specification page 58*	 **weber.rend POC** with **weber.rend MT**
Masonry with a poor key 	 **weber.rend OCR** with **weber.rend aid** *Specification page 59*	 **weber.rend POC** with **weber.rend aid** and **weber.rend MT**
Mixed substrates 	 **weber.rend IF** *Specification page 61*	
Panel 	 **weber.rend MT** *Specification page 60*	

Choice of finish

	Fine texture	Travertine	Natural aggregate	Roller texture	Smooth
Mineral					**weber.sil P** **Weber** NCS colours, *see page 25*
Flexible	**weber.plast TF** **Weber** NCS colours, *see page 25* **santane TL** 20 colours, *see page 27*	**weber.plast DF** **Weber** NCS colours, *see page 25*	**weber.tene SG** 12 colours, *see page 26*	**flexirend highbuild** 10 colours, *see page 31*	
Elastomeric				**santane EFL** (fine roller texture) 20 colours, *see page 27*	
High water shedding	**weber.sil TF** **Weber** NCS colours, *see page 25*				**weber.sil P** **Weber** NCS colours, *see page 25* **weber.plast P** **Weber** NCS colours, *see page 25*

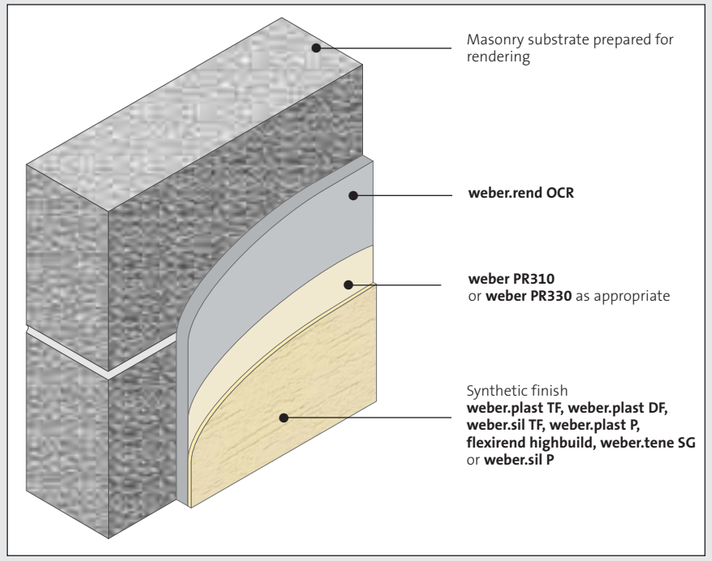
Synthetic NCS colour range

weber.tene/santane

weber.sil P

flexirend highbuild

Synthetic finish on **weber.rend OCR** applied to substrates with a good key



Abbreviated Guidance Notes

Location: Insert, e.g. *All external walls.*

Primer: Insert one of the following suitable for the chosen finish;
For **weber.plast TF**, **weber.plast DF**, and **weber.sil TF** insert ***weber PR310***
For **flexirend highbuild** insert ***weber PR310***
For **weber.tene SG** insert *two coats* ***weber PR330***
For **weber.sil P** insert ***weber.sil P*** *diluted by 10 – 15% with clean water*

Finish: Insert one of the following:
weber.plast TF *as clause W410*
weber.plast DF *as clause W411*
weber.sil TF *as clause W412*
weber.plast P/weber.sil P *as clause W413.*
flexirend highbuild *as clause W414*
weber.tene SG *as clause W415*

Thickness: Insert thickness of specified finish where applicable, (see data sheets in Section 10 for textures)
weber.plast TF insert *1.5 mm* or *3 mm*
weber.plast DF insert *1 mm* or *3 mm*
weber.sil TF insert *1.5 mm* or *3 mm*
weber.plast P/weber.sil P – Delete
flexirend highbuild insert *1.5 mm*
weber.tene SG insert *3 mm*

Colour: See page 25

Accessories: See clause 628A for guidance on the use of stops and beads. Delete this item where no accessories are required.
628A, 630, 632, 635, 535, 640
It is recommended that angles are formed using timber battens in preference to proprietary angle beads.
Metal bell cast beads and stop beads may be used – specify in clause 635 or 636.
Use clause 628A to specify angles and stops formed using timber battens.

Specification clauses

M20 Plastered/Rendered/Roughcast Coatings

160 Proprietary render

- Location .....
- Background: new blockwork suitable for direct application of a mix designation III render*
- Render coat: **weber.rend OCR3** by **Weber** as clause W203
- Thickness: 16 mm
- Primer: prime all areas to receive finish with ..... as clause W401
- Finish: .....
- Thickness: .....
- Colour: .....
- Accessories: .....

*** Note:** guidance from block manufacturer regarding movement joints and bed joint reinforcement should be followed.

628A

Except where specified otherwise, form all angles using clean straight timber battens.

W203 Render

Mix and apply to the specified thickness. Rule off with a straight edge and float up to produce a satisfactory in-plane surface. Remove all trowel marks and allow to dry.

W401 Primer

Apply primer suitable for the chosen finish with brush, spray or roller to all areas to receive specified finish. Leave for 24 hours before applying finish.

W410 Finish – *weber.plast TF*

Apply with a stainless steel trowel to the thickness specified. Finish with a stainless steel/thin plastic float to a standard of finish agreed with the specifier. Maintain a wet edge during application.

W411 Finish – *weber.plast DF*

Apply with a stainless steel trowel to the thickness of the aggregate. Finish with a wood/plastic float to a standard of finish agreed with the specifier. Maintain a wet edge during application.

W412 Finish – *weber.sil TF*

Apply with a stainless steel trowel to the thickness specified. Finish with a stainless steel/thin plastic float to a standard of finish agreed with the specifier. Maintain a wet edge during application.

W413 Finish – *weber.plast P/ weber.sil P*

Apply with a brush, spray or roller to an even finish. Maintain a wet edge during application.

W414 Finish – *flexirend highbuild*

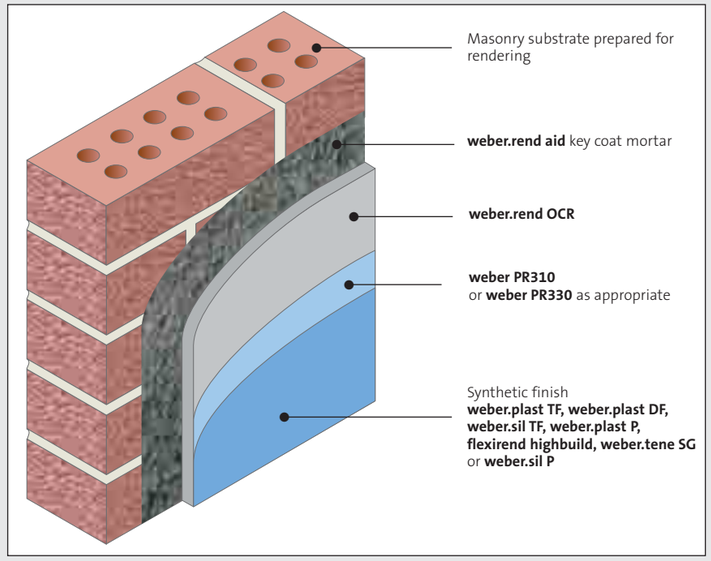
Apply with a stainless steel trowel to the thickness specified. Texture immediately with a suitable roller to a texture and standard of finish agreed with the specifier. Maintain a wet edge during application.

W415 Finish – *weber.tene SG*

Apply with a stainless steel trowel to the thickness specified. Finish with a stainless steel trowel to a standard of finish agreed with the specifier. Maintain a wet edge during application.

These notes are very abbreviated, must be read in conjunction with NBS M20 Preliminaries/General Conditions and assume an understanding on the part of the specifier of the Standard NBS M20 section clauses. A full specification service is available from **Weber** – in the first instance contact our technical services staff on 01525 722110

Synthetic finish on **weber.rend OCR** applied to substrates with a poor key



Abbreviated Guidance Notes

Location: Insert, e.g. *All external walls.*

Primer: Insert one of the following suitable for the chosen finish;
For **weber.plast TF**, **weber.plast DF**, and **weber.sil TF**, insert ***weber PR310***
For **weber.plast P**, insert ***weber PR310***
For **flexirend highbuild**, insert ***weber PR310***
For **weber.tene SG**, insert *two coats* ***weber PR330***
For **weber.sil P** insert ***weber.sil P*** *diluted by 10 – 15% with clean water*

Finish: Insert one of the following:
weber.plast TF *as clause W410*
weber.plast DF *as clause W411*
weber.sil TF *as clause W412*
weber.plast P/weber.sil P *as clause W413.*
flexirend highbuild *as clause W414*
weber.tene SG *as clause W415*

Thickness: Insert thickness of specified finish where applicable, (see data sheets in Section 10 for textures)
weber.plast TF insert *1.5 mm* or *3 mm*
weber.plast DF insert *1 mm* or *3 mm*
weber.sil TF insert *1.5 mm* or *3 mm*
weber.plast P/weber.sil P – Delete
flexirend highbuild insert 1.5 mm
weber.tene SG insert *3 mm*

Colour: See page 25

Accessories: See clause 628A for guidance on the use of stops and beads. Delete this item where no accessories are required.
628A, 630, 632, 635, 535, 640
It is recommended that angles are formed using timber battens in preference to proprietary angle beads.
Metal bell cast beads and stop beads may be used – specify in clause 635 or 636.
Use clause 628A to specify angles and stops formed using timber battens.

Specification clauses

M20 Plastered/Rendered/Roughcast Coatings

160 Proprietary render

- Location .....
- Background: smooth faced masonry/concrete*
- Preparation: stipple coat as clause 571A
- Render coat: **weber.rend OCR3** by **Weber** as clause W203
- Thickness: 16 mm
- Primer: prime all areas to receive finish with ..... as clause W401
- Finish: .....
- Thickness: .....
- Colour: .....
- Accessories: .....

571A Stipple coat

- Proprietary reference: **weber.rend aid** by **Weber**
- On level substrates of good alignment, apply using a hawk and trowel to a thickness of 2 – 3 mm, completing no more than 2 – 3 m^2 before producing a 5 – 10 mm deep texture with a well loaded brush or roller.
- Cure for 2 – 3 days before overcoating

628A

Except where specified otherwise, form all angles using clean straight timber battens.

W203 Render

Mix and apply to the specified thickness. Rule off with a straight edge and float up to produce a satisfactory in-plane surface. Remove all trowel marks and allow to dry.

W401 Primer

Apply primer suitable for the chosen finish with brush, spray or roller to all areas to receive specified finish. Leave for 24 hours before applying finish.

W410 Finish – *weber.plast TF*

Apply with a stainless steel trowel to the thickness specified. Finish with a stainless steel/thin plastic float to a standard of finish agreed with the specifier. Maintain a wet edge during application.

W411 Finish – *weber.plast DF*

Apply with a stainless steel trowel to the thickness of the aggregate. Finish with a wood/plastic float to a standard of finish agreed with the specifier. Maintain a wet edge during application.

W412 Finish – *weber.sil TF*

Apply with a stainless steel trowel to the thickness specified. Finish with a stainless steel/thin plastic float to a standard of finish agreed with the specifier. Maintain a wet edge during application.

W413 Finish – *weber.plast P/ weber.sil P*

Apply with a brush, spray or roller to an even finish. Maintain a wet edge during application.

W414 Finish – *flexirend highbuild*

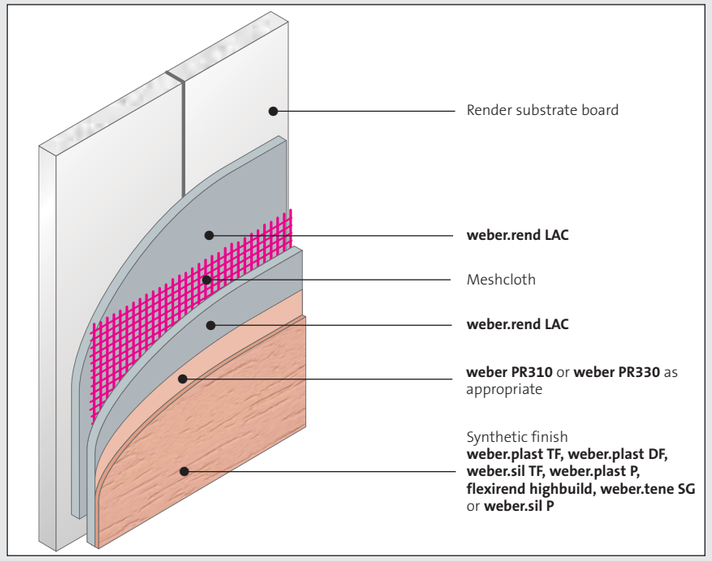
Apply with a stainless steel trowel to the thickness specified. Texture immediately with a suitable roller to a texture and standard of finish agreed with the specifier. Maintain a wet edge during application.

W415 Finish – *weber.tene SG*

Apply with a stainless steel trowel to the thickness specified. Finish with a stainless steel trowel to a standard of finish agreed with the specifier. Maintain a wet edge during application.

These notes are very abbreviated, must be read in conjunction with NBS M20 Preliminaries/General Conditions and assume an understanding on the part of the specifier of the Standard NBS M20 section clauses. A full specification service is available from **Weber** – in the first instance contact our technical services staff on 01525 722110

weber.rend MT with a synthetic finish direct applied to panel substrates



Abbreviated Guidance Notes

Location: Insert, e.g. *All external walls.*

Primer: Insert one of the following suitable for the chosen finish;
For **weber.plast TF** and **weber.plast DF** insert ***weber PR310***
For **weber.plast P** insert ***weber PR310***
For **flexirend highbuild** insert ***weber PR310***
For **weber.tene SG** insert *two coats* ***weber PR330***
For **weber.sil P** insert ***weber.sil P*** *diluted by 10 – 15% with clean water*

Finish: Insert one of the following:
weber.plast TF *as clause W410*
weber.plast DF *as clause W411*
weber.plast P/weber.sil P *as clause W413.*
flexirend highbuild *as clause W414*
weber.tene SG *as clause W415*

Thickness: Insert thickness of specified finish where applicable, (see data sheets in Section 10 for textures)
weber.plast TF insert *1.5 mm* or *3 mm*
weber.plast DF insert *1 mm* or *3 mm*
weber.plast P/weber.sil P – Delete
flexirend highbuild insert *1.5 mm*
weber.tene SG insert *3 mm*

Colour: See page 25

Specification clauses

M20 Plastered/Rendered/Roughcast Coatings

160 Proprietary render

- Location .....
- Background: fully balanced, autoclaved calcium silicate board suitable for seamless render systems fixed on timber or metal framing of sufficient strength to support the sheathing without deflection
- Render: **weber.rend LAC** (applied in two coats incorporating meshcloth as clause W201)
- Thickness: 6 mm
- Reinforcement: standard meshcloth by **Weber**
- Primer: prime all areas to receive finish with .....as clause W401
- Finish: .....
- Thickness: .....
- Colour: .....
- Accessories: full system and render only beads as clause W901

W201 Render

Mix and apply to a thickness of 3 mm and incorporate **Weber** standard meshcloth as specified. Lay-in and allow for partial take-up, apply a further 3 mm. Flatten to achieve a satisfactory in-plane surface. Remove all trowel marks and dress off the surface smooth with a sponge. Allow to dry.

W401 Primer

Apply primer suitable for the chosen finish with brush, spray or roller to all areas to receive specified finish. Leave for 24 hours before applying finish.

W410 Finish – *weber.plast TF*

Apply with a stainless steel trowel to the thickness specified. Finish with a stainless steel/thin plastic float to a standard of finish agreed with the specifier. Maintain a wet edge during application.

W411 Finish – *weber.plast DF*

Apply with a stainless steel trowel to the thickness of the aggregate. Finish with a wood/plastic float to a standard of finish agreed with the specifier. Maintain a wet edge during application.

W413 Finish – *weber.plast P/ weber.sil P*

Apply with a brush, spray or roller to an even finish. Maintain a wet edge during application.

W414 Finish – *flexirend highbuild*

Apply with a stainless steel trowel to the thickness specified. Texture immediately with a suitable roller to a texture and standard of finish agreed with the specifier. Maintain a wet edge during application.

W415 Finish – *weber.tene SG*

Apply with a stainless steel trowel to the thickness specified. Finish with a stainless steel trowel to a standard of finish agreed with the specifier. Maintain a wet edge during application.

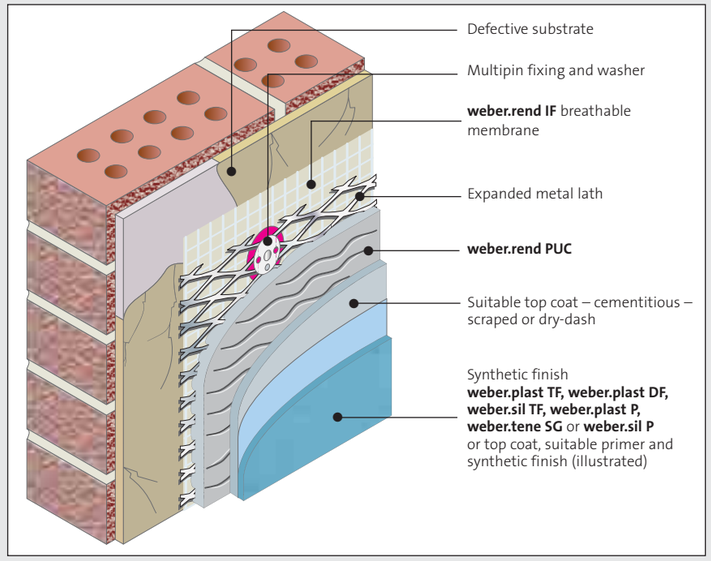
W901 Accessories

- Full system and render only beads as required by system and render, supplied by **Weber.**
- Beads to be located and fixed as detailed on architect's drawings or system manufacturer's details.
- Structural, temporary or bead fixings shall be of suitable strength and durability approved and supplied by **Weber**.

These notes are very abbreviated, must be read in conjunction with NBS M20 Preliminaries/ General Conditions and assume an understanding on the part of the specifier of the Standard NBS M20 section clauses. A full specification service is available from **Weber** – in the first instance contact our technical services staff on 01525 722110.

Weber renders: textured synthetic finishes: NBS clauses

weber.rend IF applied to masonry substrates not suitable for direct application of render



Abbreviated Guidance Notes

Location: Insert, e.g. *All external walls.*

Background: Consult **Weber's** technical staff for specific advice

Preparation: Insert *Masonry wash as clause W001* and include *Hammer test as clause W002* for areas of existing render.

Topcoat: Insert as relevant,
Synthetic finish, insert ***weber.rend TTC*** *as clause W304*
Scraped finish, insert ***weber.rend TTS*** *as clause W301*
Dry-dash finish, insert ***weber.rend TTC*** *as clause W302*

Thickness: Insert as relevant,
Scraped finish insert *6 – 8 mm finished*
Synthetic finish insert *6 mm*
Dry-dash finish insert *6 – 8 mm*

Colour: Insert as relevant,
Synthetic finish, insert *Grey.*
Dry-dash or scraped finish – see colour chart in Section 2

Aggregate colour: Scraped and synthetic finishes – Delete
Dry-dash finish – see colour chart on page 28

Primer: Dry-dash or scraped finish – Delete
Synthetic finish - Insert one of the following suitable for the chosen finish;
For **weber.plast TF, weber.plast DF**, and **weber.sil TF** insert ***weber PR310***
For **weber.plast P** insert ***weber PR310***
For **weber.tene SG** insert *two coats* ***weber PR330***
For **weber.sil P** insert ***weber.sil P*** *diluted by 10 – 15% with clean water*

Finish: Dry-dash or scraped finish – Delete
Synthetic finish, insert one of the following suitable for the chosen finish;
weber.plast TF *as clause W410*
weber.plast DF *as clause W411*
weber.sil TF *as clause W412*
weber.plast P/weber.sil P *as clause W413*
weber.tene SG *as clause W415*

Thickness: Dry-dash, scraped finish or **weber.plast P/weber.sil P** – Delete
Synthetic finish, insert thickness of specified finish where applicable, (see data sheets in Section 10 for textures)
weber.plast TF insert *1.5 mm* or *3 mm*
weber.plast DF insert *1 mm* or *3 mm*
weber.sil TF insert *1.5 mm* or *3 mm*
weber.tene SG insert *3 mm*

Colour: Dry-dash or scraped finish – Delete
Synthetic finish – see page 25

Accessories: See clause 628A for guidance on the use of stops and beads. Delete this item where no accessories are required.
628A, 630, 632, 635, 535, 640
Metal bell cast beads and stop beads may be used – specify in clause 635 or 636. Use clause 628A to specify angles and stops formed using timber battens.

These notes are very abbreviated, must be read in conjunction with NBS M20 Preliminaries/ General Conditions and assume an understanding on the part of the specifier of the Standard NBS M20 section clauses. A full specification service is available from **Weber** – in the first instance contact our technical services staff on 01525 722110.

Specification clauses

M20 Plastered/Rendered/Roughcast Coatings

160 Proprietary render

- Location .....
- Background: cracked, painted, rendered, low key or mixed masonry substrates not suitable to receive render direct
- Preparation: .....
- Isolating membrane: **weber.rend IF** breathable membrane as clause W080
- Render carrier: Ferritic stainless steel by **Weber**. Sheet size 2440 x 1220mm, mesh opening size 50mm x 20mm as clause W152.
- Undercoat: **weber.rend PUC** as clause W252
- Thickness: 10 mm (nominal)
- Topcoat: .....
- Thickness: .....
- Colour: .....
- Aggregate Colour: .....
- Primer: prime all areas to receive finish with ..... as clause W401
- Finish: .....
- Thickness: .....
- Colour: .....
- Accessories: .....

628A

Except where specified otherwise, form all angles using clean straight timber battens.

W001 Masonry wash

Drench surface with **weber CL150**, leave for 48 hours, brush down to remove all signs of moss/growth.

W002 Hammer test

Hammer test rendered surfaces and remove all existing bossed material. Make good areas removed using **weber.rend stipple** and **weber.rend TUC** to achieve an in-plane surface.

W080 Isolating membrane

Fix **weber.rend IF** breathable membrane to existing substrate with multipin sleeve to specified fixing pattern, approx. 9/m².

W152 Render carrier

Secure to wall by fixing into **Weber** multipin sleeves with selected centre pins and lath restraining washers. Minimum pull out value 0.75 kN/fixing.

W252 Undercoat

Mix and apply to 10 mm (nominal) thickness. Rule off with a straight edge to achieve a satisfactory in-plane surface. Remove all trowel marks, and after partial take-up, thoroughly comb scratch, horizontally, for key. Allow to dry.

W301 Topcoat – *Scraped finish*

Mix and apply 8 – 10 mm thick. Rule off with a straight edge to achieve satisfactory in-plane surface. Remove all trowel marks, and after partial take-up, scrape back 2 – 3 mm to develop the final colour and texture required. Minimum finished thickness 6 mm.

W302 Topcoat – *Dry-dash*

Mix and apply topcoat to a thickness suitable for the size of aggregate and float up to produce a satisfactory in-plane surface. Remove all trowel marks and high spots in the coat and cast in pre-dampened natural aggregate as selected, to give even texture and distribution. Maintain a wet edge during application.

W304 Topcoat – *Synthetic finish*

Mix and apply 6 mm, rule off with a straight edge and float up to produce a satisfactory in-plane surface. Remove all trowel marks and allow to dry.

W412 Finish – *weber.sil TF*

Apply with a stainless steel trowel to the thickness specified. Finish with a stainless steel/thin plastic float to a standard of finish agreed with the specifier. Maintain a wet edge during application.

For clauses 401, 410, 411, 413 and 415 see facing page, *weber.rend MT*.

Insulated render systems

The advantages

Modern living and travel has, even more than ever, made us aware that we live in an interdependent global village. As such, the reduction of waste, especially in the developed world, has become an increasingly important design factor in modern construction. Insulation requirements for the complete fabric of the building are therefore steadily rising.

As far as the external wall element is concerned, drastically increasing the wall thickness would theoretically suffice, but this is not often desirable due the increased footprint and mass.

The introduction of lightweight insulation into the structure may be considered in three situations in the construction sandwich, internally, in the cavity and externally.

Problems of internal insulation

By insulating internally, the floor area and usable space is reduced, especially as standards increase.

If the operation is a refurbishment solution, the occupier faces serious disruption during the works. It is impractical to install thick layers of insulation internally, therefore the improvement in thermal performance will always be limited.

The introduction of insulation on the internal face will consequently isolate the structural wall from the heat source of the building and thereby will reduce the temperature of the outside of the wall.

The serious risk with this form of construction is that the structural temperature may fall below the dew point temperature and interstitial condensation may occur. To avoid this risk it is essential that an unbroken vapour barrier be installed on the warm side of the construction.

Problems of cavity insulation

Insulating in the cavity has similar constraints to the previous option in terms of the limited size of the cavity gap. It does have the advantage that it can be installed with minimal disturbance to occupiers. The positioning of the insulation will again result in a colder outer leaf of the construction, which may give rise to interstitial condensation problems. If the insulation in the cavity becomes wet it will reduce the thermal performance and may be worse than the uninsulated option. As a result some building materials that have previously been considered durable have started to fail when subjected to the freeze thaw cycle at these lower temperatures.

Advantages of external insulation

The option of insulating walls externally has many advantages and easily outperforms the other options in thermal performance.

By locating the insulation on the outside, the supporting wall construction falls in to the warm zone and is thus kept warm and dry. This means that the supporting wall structure contributes more to the insulation 'tally' and in the case of masonry structures, will act as a heat store.

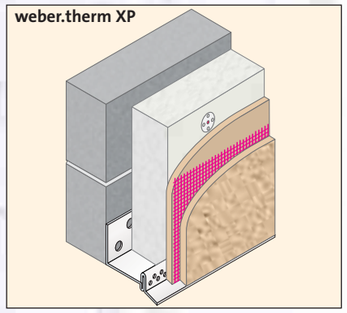
The insulation thickness is not constrained by the limits of the room space or by the cavity and therefore can accommodate all current and future demands for thermal performance.

Cold bridging and interstitial condensation are eliminated and refurbishment can be carried out with little disruption to the tenant. In new-build, insulating in this position can be combined with simple and reliable single skin construction, providing cost effective, fast track programmes and attractive facades.

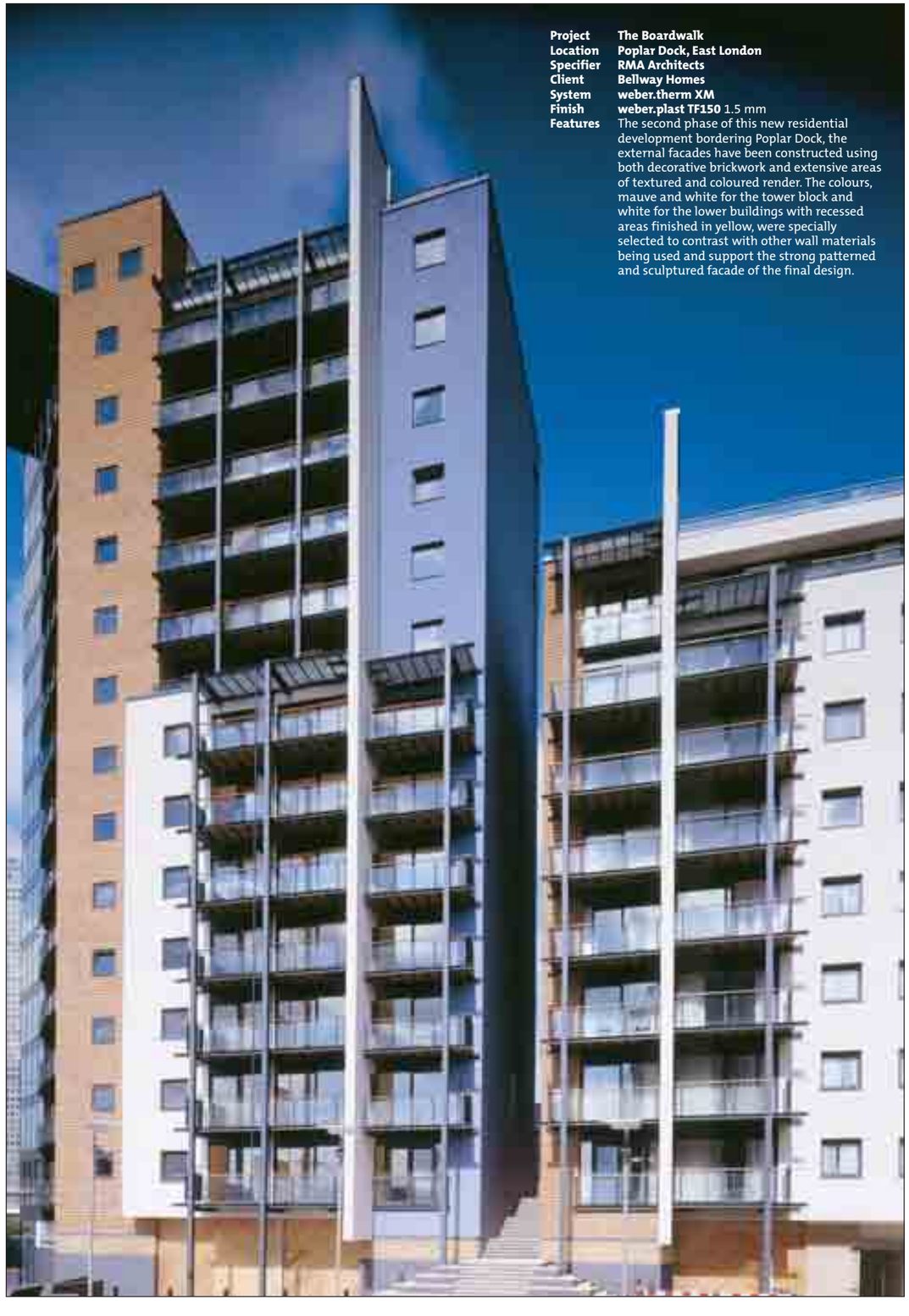
New development

A brand new development in the external wall insulation market is the availability of one-coat renders for the BBA accredited **weber.therm XP** system. These revolutionary materials bring the benefits of fast-track application and early release of scaffolding to thick coat mineral render external wall insulation systems.

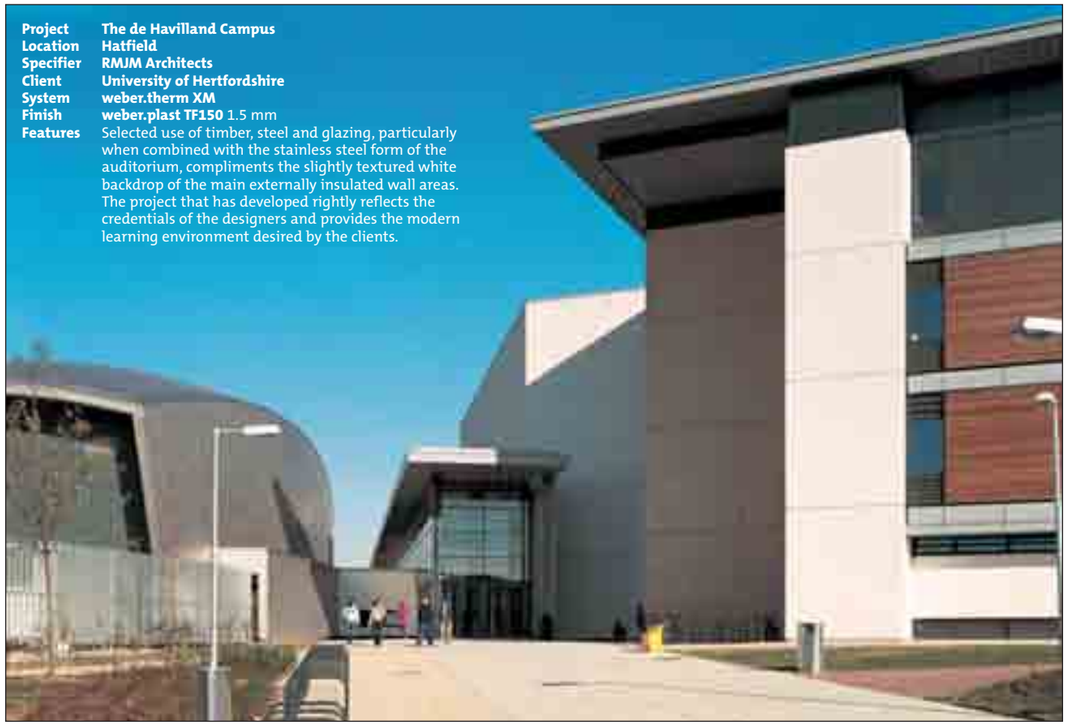
Use the selectors on pages 70 – 71 to direct you to your final selection and specification. Specific selectors are included to assist in your selection of insulant.



Weber insulated render systems: case studies



Project The Boardwalk
Location Poplar Dock, East London
Specifier RMA Architects
Client Bellway Homes
System weber.therm XM
Finish **weber.plast TF150** 1.5 mm
Features The second phase of this new residential development bordering Poplar Dock, the external facades have been constructed using both decorative brickwork and extensive areas of textured and coloured render. The colours, mauve and white for the tower block and white for the lower buildings with recessed areas finished in yellow, were specially selected to contrast with other wall materials being used and support the strong patterned and sculptured facade of the final design.

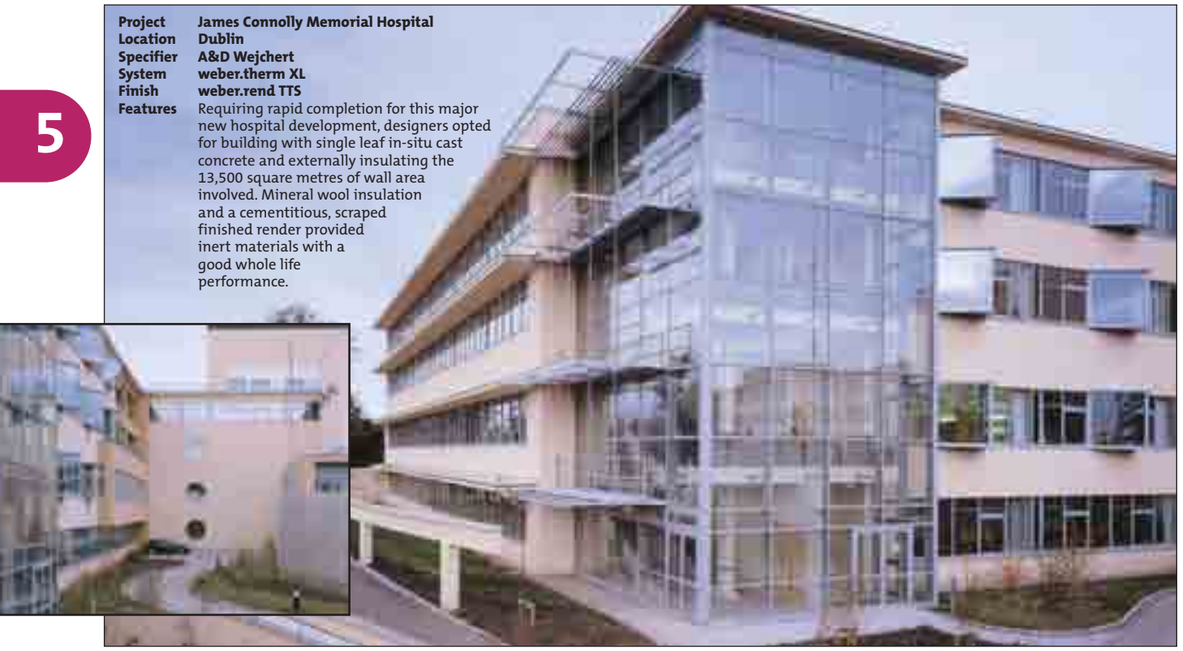


Project The de Havilland Campus
Location Hatfield
Specifier RMJM Architects
Client University of Hertfordshire
System weber.therm XM
Finish **weber.plast TF150** 1.5 mm
Features Selected use of timber, steel and glazing, particularly when combined with the stainless steel form of the auditorium, compliments the slightly textured white backdrop of the main externally insulated wall areas. The project that has developed rightly reflects the credentials of the designers and provides the modern learning environment desired by the clients.

Project Limehouse Basin
Location London
Specifier RMA Architects
Client Bellway Homes (Essex)
System weber.therm XM
Finish **weber.plast TF150** 1.5 mm
Features A twelve-storey tower forms a landmark entrance to the site, with 31 residential apartments and a commercial unit at ground floor level, each with a dockside aspect and at upper levels with panoramic views across the Basin, the Thames, and the City of London beyond. Specifying the **weber.therm XM** system enabled the 2,000 square metre project of dramatic elevations to be completed essentially joint free.

Project **Colville Mews**
Location **Notting Hill**
Client **Thirlstone Homes**
System **weber.therm XM**
Finish **weber.plast DF100** 1.0 mm
Features Metal frame construction carried out within a strict programme, enabled the whole of the exterior of the building to be brought to an advanced stage of completion quickly and efficiently allowing the interior fit-out to proceed as scheduled. Architecturally the **Weber** insulation system, incorporating mineral fibre insulation, provides the opportunity to explore shape and form allowing curved and contoured surfaces and roofline to be introduced economically.

Project **James Connolly Memorial Hospital**
Location **Dublin**
Specifier **A&D Wejchert**
System **weber.therm XL**
Finish **weber.rend TTS**
Features Requiring rapid completion for this major new hospital development, designers opted for building with single leaf in-situ cast concrete and externally insulating the 13,500 square metres of wall area involved. Mineral wool insulation and a cementitious, scraped finished render provided inert materials with a good whole life performance.



Project **Ballincollig School**
Location **Ireland**
Specifier **Jarvis**
System **weber.therm XL**
Finish **weber.rend TTS**
Features A PPP project, this new-build school was one of a group of five undertaken by Jarvis in the Republic of Ireland. Drawing on a range of external materials **Weber's** insulated render systems were used as the main wall areas to provide good levels of insulation, reduce running costs and complement the clean modern lines of the overall design.

Project **Colehill Development**
Location **Leith**
Specifier **Alan Murray Architects**
Client **The Burrell Company and Edinburgh Development and Investment**
System **weber.therm XM**
Finish **weber.plast TF150** 1.5 mm
Features The mixed retail, commercial and residential development is constructed with a concrete frame and solid infill panels, inset windows and areas of glazed curtain walling. The windows and curtain walling incorporate black frames and the solid areas are in a white **weber.plast TF**. The scheme provides a new eight storey oval tower block and an adjacent six storey rectangular block with commercial and retail units on the lower two floors and residential above.

Project: **The Big C Cancer Unit**
Location: **Norfolk and Norwich University Hospital, Norwich**
Specifier: **Purcell Miller Tritton**
Client: **The Big C**
System: **weber.therm XP**
Finish: **weber.therm M1 with a scraped finish**
Features: This new information and support centre for The Big C cancer charity provides local cancer patients and their families with a place to meet, relax and receive one-to-one support in a calming environment. The building has a unique individuality through its contemporary and unorthodox design. The move away from the usual aesthetic look attributed to most clinical environments was an important consideration to enhance the friendly, homely nature of the centre.

Project **New Housing**
Location **Melborne, Cambridgeshire**
Specifier **Novo Design**
Client **Plum Developments**
System **weber.therm XM**
Finish **weber.plast TF150** 1.5 mm
Features Modern building methods incorporating the combination of single leaf autoclaved aerated blockwork and external wall insulation ensured that this highly innovative project had the shortest of build programmes and the best of thermal performances. Attractively combining leading edge contemporary styling with simple clean white facades the project reflects the aspirations of modern living.

Project Jupiter, Milford and Portland Courts
Location Middlesbrough
Specifier Middlesbrough Council
System weber.therm XM
Finish **weber.sil TF** 1.5 mm
Features Following extensive repair of the concrete fabric of the tower block, the building was refurbished without disruption to the residents, stabilising the structure and bringing insulation standards nearer to current requirements.

Project Landmark Place
Location Cardiff
Specifier Powell Dobson Architects
Client St David Homes
System weber.therm XM
Finish **weber.plast TF150** 1.5 mm
Features The building contains 273 mixed size apartments and five penthouses whilst on the lower floors there are a number of bars and restaurants together with a health and fitness club. Total surface area for the project for external wall Insulation was in excess of 12,000 square metres and at fourteen storeys was the highest application of **weber.therm XM** on a new-build project to date.

Project Quay West
Location Ipswich
Specifier RMA Architects
Client Bellway Homes
System weber.therm XM
Finish **weber.plast TF150** 1.5 mm
Features Quay West is a residential development on the river Orwell that sits adjacent to the famous listed Grade 1 Maltings building and inhabits a commanding site that is highly visible from the northern quay and the marina. It is part of a large-scale ambition to revitalise the once run down docklands area and create a mixed-use development with residential properties linking from the city centre to the waterside.

Project Mercury House
Location Blythe Road, Hayes
Client Hayes General Partners Ltd
System weber.therm XM
Finish **weber.plast TF150** 1.5 mm
Features The first of four blocks of offices on the old Thorn EMI site to be refurbished on a rolling contract has undeniably breathed a complete new life into what was an otherwise redundant site. The practice of carrying the identical synthetic finish across both new external wall insulation and existing concrete features has resourced the best modern thermal wall technology while still retaining the character of the old.

Project Solent House
Location Norbury, London
Client Weston Homes
System weber.therm XM
Finish **weber.sil TF** 1.5 mm
Features The refurbishment of this prominent commercial development involved substantial remodelling and upgrading of the facade to provide a new contemporary domestic environment. An external metal frame with sheathing board was used to facilitate a new window layout and the facade considerably enhanced by the use of two colours, white and yellow, which contrast strongly with the blue metal windows and surrounds and the red brick ground storey.

Product selectors

Selectors here provide the means to narrow the selection down to a final product. Choose the system based on the type of construction and whether a thin or thick coat render is preferred.

The type of finish, colour and texture, can be related to the system and the particular product that should be used as the finish. The varying insulants that are available for use with the different systems and their primary characteristics are compared in order to assist selection.

Choice of system

Finish	Masonry				Metal frame	Non-traditional
		Machine application	Extra alignment	Increased fire protection		
Thin coat	weber.therm XM				weber.therm XM with weber.therm FT	Refer to Weber Technical Department
Thick coat	weber.therm XL weber.therm XP	weber.therm XP with weber.therm L1	weber.therm XM with extra top coat weber.therm XL weber.therm XP			Refer to Weber Technical Department
Brick	weber.therm XB					Refer to Weber Technical Department

Choice of insulant

	weber.therm XL		weber.therm XM					weber.therm XB	weber.therm XP	
Finish	Synthetic *Specification page 80*	Cementitious *Specification page 76*	Synthetic *Specification page 81*	Additional topcoat synthetic *Specification page 83*		On weber.therm FT with synthetic *Specification page 82*	On weber.therm FT with cementitious *Specification page 78*	Cementitious *Specification page 77*	*Specification page 79*	One coat mesh *Specification page 74*	One coat lath *Specification page 75*
Cost-effective	Expanded polystyrene										
Non-combustible	Mineral wool				Lamella	Mineral wool					
High thermal performance	Phenolic					Phenolic		Phenolic			
Below DPC		HD polystyrene							HD polystyrene		HD polystyrene

Synthetic NCS colour range
weber.tene/santane
Brick slips
Top coat renders – dry-dash
Top coat renders – scrape
weber.sil P

Choice of finish

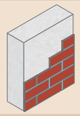
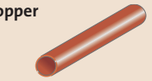
Finish	weber.therm XL	weber.therm XM	weber.therm XM on weber.therm FT	weber.therm XB	weber.therm XP
Scraped finish	weber.rend TTS	weber.rend PTS			weber.therm L1 or weber.therm M1
Dry-dash	weber.rend TTC	weber.rend PTC			weber.therm L1 or weber.therm M1
Brick		weber.rend RB		weber.therm XB	
Fine texture	weber.plast TF weber.sil TF				
Travertine	weber.plast DF				
Natural aggregate	weber.tene SG				
Smooth	weber.plast P weber.sil P				weber.sil P on weber.therm L2

U-values

Building materials have a variety of different properties that work together to define the overall performance of the building construction as a whole. Thermal performance of the construction is no different.

Any construction material will have an associated thermal conductivity, Lambda (λ) value, sometimes known as the K-value. It defines the amount of heat units that can be transmitted in a unit time through a unit thickness of material over a unit area. A low λ value indicates a good thermal insulator.

From the examples given opposite, Expanded Polystyrene is a high performance thermal insulator yet copper is a thermal conductor and will transfer heat readily.

Material	Thermal Conductivity (λ) W/mK
Expanded Polystyrene 	0.038
Plasterboard 	0.16
Copper 	400

Thermal transmittance

In order to define a building's overall thermal performance a calculation must be made that accounts for the combination of the individual components which, when built together, form the whole. For example, a wall construction may comprise an internal plaster on lightweight concrete blockwork as an internal skin, which could then be separated from the outer leaf of brickwork by a cavity. The thermal calculation should make allowances for all of the constituent materials, including mortar joints and any thermal bridges such as wall ties, as well as the surface/air interfaces.

The measure, which defines this overall performance, is the Thermal Transmittance, known as the U-value. It is calculated from the summation of the reciprocal of all the individual thermal resistances. The U-value may be defined as the rate of heat transfer through a construction from air to air.

It is therefore important when calculating U-values to know the full build-up of the wall construction with the associated properties of each constituent material and their associated thickness.

Some examples of typical wall constructions and their associated U-values are shown below.

Wall construction	U-value W/m²K
 15 mm plaster 100 mm medium density concrete block cavity 102.5 mm brick 90 mm expanded polystyrene insulation 8 mm render	0.332
 15 mm plaster 140 mm lightweight block 80 mm mineral fibre insulation 20 mm render	0.344
 2 x 12.5 mm plasterboard 100 mm lightweight steel frame 10 mm sheathing board 60 mm phenolic foam insulation 8 mm render	0.318

England and Wales

In the examples shown all of the constructions meet the current Building Regulation requirements for exposed walls in dwellings in England and Wales of 0.35 W/m²K or less. This is a prescribed figure, which can be used to show compliance with the regulations by using the so-called Elemental approach. Here, defined elements of the building must meet or better the prescribed U-values. In England and Wales, it is also a requirement of the Elemental approach that the heating system meets a minimum efficiency standard.

Northern Ireland

Northern Ireland also has its own building regulations and these set the standard for dwellings at 0.45 W/m²K, although it seems many specifiers currently choose to follow the 0.35 W/m²K requirements of England and Wales. This is because amendments to the requirements are currently being reviewed for England and Wales that could make the standard 0.25 W/m²K in January 2005. Northern Ireland seems set to adopt the same requirements at that time and the change from 0.45 W/m²K is seen to be a large step.

Scotland

In Scotland, the system for dwellings is slightly different; the heating systems do not have to meet a minimum standard but the U-value figures are slightly more onerous; 0.30 W/m²K or 0.27 W/m²K dependant upon the heating system installed.

Republic of Ireland

In the Republic of Ireland the U-Value requirement for dwellings is just as stringent at 0.27 W/m²K for all new building, however, for alterations, it remains at 0.6 W/m²K.

Target U-value

An alternative method of demonstrating compliance, whilst offering more design flexibility, is available using the Target U-value approach. This method allows for a trade-off between the U-values, the heating system, areas and performance of glazing. Thus, the Elemental U-values may be varied within certain limits. It is therefore possible under this method, to relax the values in certain areas by compensating and improving the performance in other areas.

Carbon index method

The final method of demonstrating compliance is by the Carbon Index method . Similar to the Target U-value method, it allows more design flexibility, through relaxation of the Elemental U-values within certain limits but requires the calculation of a Carbon Index, which must meet or exceed a prescribed figure. The Carbon Index method is an energy rating method that replaces the previous SAP rating, which still must be calculated and notified to Building Control Bodies.

Interstitial condensation

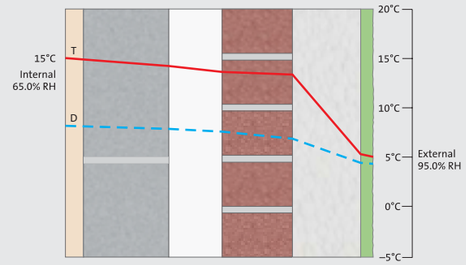
When specific temperature and humidity conditions combine, interstitial condensation can form within a structure. This may occur when the construction does not have sufficient insulation or the insulation is located incorrectly within the construction.

Condensation Risk Analysis calculations allow the designer to choose from a variety of known materials and insulants to ensure that no 'dew point' occurs within the fabric of the structure.

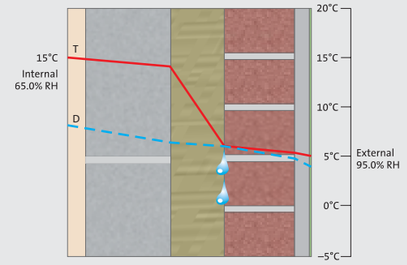
A full U-value calculation and condensation risk analysis service is available from **Weber's** technical staff. In the first instance contact 01525 722110.

Note: Values quoted are correct to the regulations at the time of going to print.

No risk of interstitial condensation



Risk of interstitial condensation



Insulation thickness to meet current regulations

		U-value	weber.therm XM				weber.therm XL		weber.therm XP	weber.therm XB	
			Polystyrene	Mineral fibre	Phenolic	Lamella	Polystyrene	Mineral fibre	Polystyrene	Polystyrene	Lamella
Cavity construction	12 mm plaster/102 mm brick/50 mm cavity/ 102 mm brick	0.35	90	80	50	90	90	80	90	80	80
		0.3	110	100	60	110	100	100	100	100	100
		0.27	120	110	70	120	120	110	120	110	120
	12 mm plaster/100 mm med dense block/50 mm cavity/102 mm brick	0.35	90	80	50	90	80	80	80	90	80
		0.3	100	100	60	110	100	100	100	100	100
		0.27	120	110	70	120	120	110	120	120	110
Solid construction	12 mm plaster/215 mm brick	0.35	100	90	60	100	90	90	90	100	90
		0.3	110	110	70	120	110	110	110	110	110
		0.27	130	120	80	130	130	120	130	130	120
	12 mm plaster/200 mm med density block	0.35	90	80	50	90	90	80	90	90	80
		0.3	100	100	60	110	100	100	100	100	100
		0.27	120	110	70	120	120	110	120	120	110
	12 mm plaster/200 mm autoclaved aerated block	0.35	70	70	50	70	70	70	70	70	70
		0.3	90	90	50	90	90	80	90	90	80
		0.27	100	100	60	110	100	100	100	100	100
	12 mm plaster/200 mm no-fines concrete	0.35	100	90	60	100	100	90	100	100	90
		0.3	120	110	70	120	110	110	110	110	110
		0.27	130	120	80	130	130	120	130	130	120
	12 mm plaster/200 mm dense concrete	0.35	100	100	60	100	100	90	100	100	90
		0.3	120	110	70	120	120	110	120	120	110
		0.27	130	130	80	140	130	120	130	130	130
Frame construction	Lightweight metal frame	0.35	90	90	60						
		0.3	110	100	70						
		0.27	120	120	70						

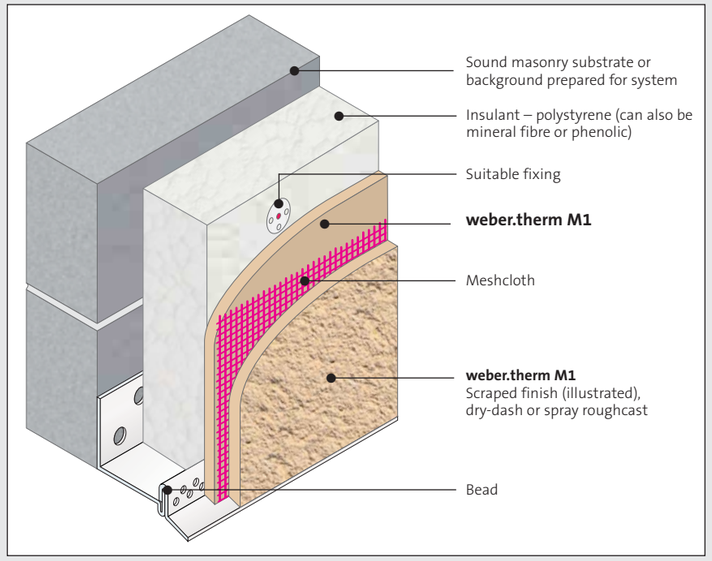
Note

1 The insulant thicknesses shown have been calculated with the latest available Lambda values (λ)for the insulation material declared by the manufacturers at the time of going to print.

2 Calculations are based on generic components and need to be verified for any particular structure, components and system.

3 Lightweight metal frame figures do not allow for any insulation medium placed within the studwork.

weber.therm XP with meshcloth and a one-coat cementitious finish on sound masonry



Abbreviated Guidance Notes

Location: Insert, e.g. *All external walls.*

Preparation: Insert *Masonry wash as clause W001* for areas affected by organic growth and/or *Hammer test as clause W002* for areas of existing render.

Thickness: Insert thickness in mm. For advice regarding U-value for the chosen insulation and relevant thickness see page 72.
For specific advice and calculations contact **Weber's** technical staff.

Render: Insert one of the following,
With a scrape finish insert ***weber.therm M1*** *as clause W204A*
With a dry-dash finish insert ***weber.therm M1*** *as clause W204B*
With a spray roughcast finish insert ***weber.therm M1*** *as clause W204C*

Thickness: Insert one of the following,
With a scrape finish insert *12 mm finished thickness (minimum)*
With a dry-dash finish insert *12 mm*
With a spray roughcast finish insert *16 – 17 mm (maximum overall)*

Colour: Insert colour reference: see colour chart in Section 2.

Aggregate colour: Insert one of the following:
For scrape and spray roughcast finishes – Delete
For dry-dash finish: see colour chart in Section 2.

W901 Accessories

- Full system and render only beads as required by system and render, supplied by **Weber**.
- Beads to be located and fixed as detailed on architect's drawings or system manufacturer's details.
- Structural, temporary or bead fixings shall be of suitable strength and durability approved and supplied by **Weber**.

Specification clauses

M21 Insulation with rendered finish

210 External wall insulation system – weber.therm XP by Weber

- Location: .....
- Background: new or existing brick or block
- Preparation: .....
- Insulation: expanded polystyrene (EPS) grade SD/FRA as clause W151
- Thickness: .....
- Reinforcement: standard meshcloth by **Weber**
- Render: .....
- Thickness: .....
- Colour: .....
- Aggregate colour: .....
- Accessories: full system and render only beads as clause W901

W001 Masonry wash

Drench surface with **weber CL150**, leave for 48 hours, brush down to remove all signs of moss/growth.

W002 Hammer test

Hammer test rendered surfaces and remove all existing bossed material. Make good areas removed using **weber.rend stipple** and **weber.rend TUC** to achieve an in-plane surface.

W151 Render carrier – *Polystyrene*

Secure to wall using **Weber** fixings to the specified fixing pattern at a rate of 7/m², minimum pull out value 0.75 kN/fixing.

W204A Render – *weber.therm M1* *(scrape finish)*

Mix and apply to a thickness of 6 mm and incorporate standard meshcloth as specified. Lay in and allow for partial take-up, apply a further 8 mm. Rule off with a straight edge to achieve satisfactory in-plane surface. Remove all trowel marks, and after partial take-up, scrape back 2 – 3 mm to develop the final colour and texture required. Minimum finished thickness 12 mm.

W204B Render – *weber.therm M1* *(dry-dash finish)*

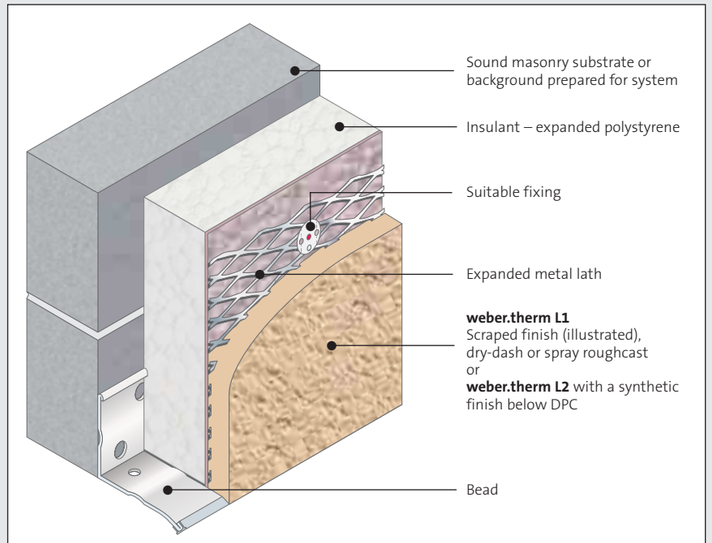
Mix and apply to a thickness of 6 mm and incorporate standard meshcloth as specified. Lay in and allow for partial take-up, apply a further 6 mm. Flatten off and dry-dash in the normal manner to give even texture and distribution. Maintain a wet edge during application.

W204C Render – *weber.therm M1* *(spray roughcast finish)*

Using a suitable spray render machine, mix and apply to a thickness of 6 mm and incorporate standard meshcloth as specified. Lay in and allow for partial take-up, apply a further 6 mm, forming a 12 mm monolithic render coat. Rule off with a straight edge to achieve a flat, level surface. When the render begins to 'take up', apply a light spray texture pass to produce an overall thickness of 16 -17 mm (maximum).

These notes are very abbreviated, must be read in conjunction with NBS M21 Preliminaries/ General Conditions and assume an understanding on the part of the specifier of the Standard NBS M21 section clauses, A full specification service is available from **Weber** – in the first instance contact our technical services staff on 01525 722110

weber.therm XP with a lath reinforcement applied to sound masonry substrates



Abbreviated Guidance Notes

Location: Insert, e.g. *All external walls.*

Preparation: Insert *Masonry wash as clause W001* for areas affected by organic growth and/or *Hammer test as clause W002* for areas of existing render.

Insulation: Insert one of the following,
Applications above DPC insert *Expanded Polystyrene (EPS) grade SD/FRA factory coated with polymer modified stipple coating by* ***Weber*** *as clause W104*
Applications below DPC insert *Extruded Polystyrene (XPS) grade UHD Type A factory coated with polymer modified stipplecoat by* ***Weber*** *as clause W104.*

Thickness: Insert thickness in mm. For advice regarding U-value for the chosen insulation and relevant thickness see page 72.
For specific advice and calculations contact **Weber's** technical staff.

Render: Insert one of the following:
Above DPC with a scrape finish insert ***weber.therm L1*** *as clause W202A*
Above DPC with a dry-dash finish insert ***weber.therm L1*** *as clause W202B*
Above DPC with a spray roughcast finish insert ***weber.therm L1*** *as clause W202C*
Below DPC insert ***weber.therm L2*** *as clause W203*

Thickness: Insert one of the following:
weber.therm L1 insert *16 mm finished thickness*
weber.therm L2 insert *15 mm*

Colour: Insert one of the following:
weber.therm L1: see colour chart in Section 2.
weber.therm L2 insert *Grey*

Aggregate colour: **weber.therm L1** with a scrape or spray roughcast finish – Delete
weber.therm L1 with a dry-dash finish: see colour chart in Section 2
weber.therm L2 – Delete

Primer: **weber.therm L1** – Delete
weber.therm L2 insert ***weber.sil P*** *diluted 10 – 15% with clean water as clause W401*

Finish: **weber.therm L1** – Delete
weber.therm L2 insert ***weber.sil P*** *as clause W413*

Colour: **weber.therm L1** – Delete
weber.therm L2: see colour chart in Section 2

W901 Accessories

- Full system and render only beads as required by system and render, supplied by **Weber**.
- Beads to be located and fixed as detailed on architect's drawings or system manufacturer's details.
- Structural, temporary or bead fixings shall be of suitable strength and durability approved and supplied by **Weber**.

These notes are very abbreviated, must be read in conjunction with NBS M21 Preliminaries/ General Conditions and assume an understanding on the part of the specifier of the Standard NBS M21 section clauses, A full specification service is available from **Weber** – in the first instance contact our technical services staff on 01525 722110

Specification clauses

M21 Insulation with rendered finish

210 External wall insulation system – weber.therm XP by Weber

- Location: .....
- Background: new or existing brick or block
- Preparation: .....
- Insulation: .....
- Thickness: .....
- Render carrier: Ferritic stainless steel lath by **Weber** – sheet 2440 x 1220 mm, mesh opening size50 x 20 mm as clause W151
- Render: .....
- Thickness: .....
- Colour: .....
- Aggregate colour: .....
- Primer: .....
- Finish: .....
- Colour: .....
- Accessories: full system and render only beads as clause W901

For clauses 001, 002 and 151, see facing page, *weber.therm XP with meshcloth*

W104 Insulation – *Coated polystyrene*

Temporary fix boards to substrate using **Weber** fixings at the rate of 1/board or part board.

W202A Render – *weber.therm L1* *(scrape finish)*

Mix and apply 18 – 19 mm thick. Rule off with a straight edge to achieve satisfactory in-plane surface. Remove all trowel marks, and after partial take-up, scrape back 2 – 3 mm to develop the final colour and texture required. Minimum finished thickness 16 mm.

W202B Render – *weber.therm L1* *(dry-dash finish)*

Mix and apply to a thickness of 10 – 12 mm, completely encapsulating the lath. When the render begins to 'take up', apply a further 6 – 8 mm, flatten off and dry-dash in the normal manner to give even texture and distribution. Maintain a wet edge during application. Minimum mortar thickness should be 16 mm (overall finished thickness would be a minimum of 18 mm).

W202C Render – *weber.therm L1* *(spray roughcast finish)*

Using a suitable spray render machine, mix and apply to a thickness of 15 mm, completely encapsulating the lath. Rule off with a straight edge to achieve a flat, level surface. When the first pass begins to 'take up', apply a second pass, textured to produce a minimum overall thickness of 18 mm.

W203 Render – *weber.therm L2* *(float finish)*

Mix and apply to the specified thickness. Rule off with a straight edge and float up to produce a satisfactory, in-plane surface. Remove all trowel marks and allow to dry.

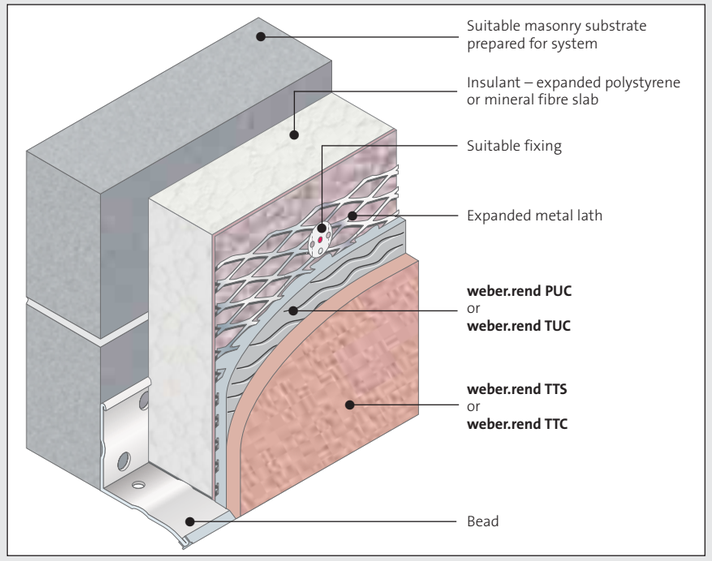
W401 Primer

Apply primer suitable for the chosen finish with brush, spray or roller to all areas to receive specified finish. Leave for 24 hours before applying finish.

W413 Finish – *weber.sil P*

Apply with a brush, spray or roller to an even finish. Maintain a wet edge during application.

weber.therm XL with a cementitious finish applied to sound masonry substrates



Abbreviated Guidance Notes

Location: Insert, e.g. *All external walls.*

Preparation: Insert *Masonry wash as clause W001* for existing surfaces and *Hammer test as clause W002* for areas of existing render.

Insulation: Insert either *Expanded polystyrene (EPS) grade SD/FRA factory coated with polymer modified stipple coating by* ***Weber*** *as clause W104* or *Mineral fibre slab cfc free rock-fibre board minimum density 115 kg/m³ by* ***Weber*** *as clause W105*. See selector charts on page 70 for advice.

Thickness: Insert thickness in mm. For advice regarding U-value for the chosen insulation and relevant thickness see page 72. For specific advice and calculations contact **Weber's** technical department.

Render carrier: Add for Polystyrene – *as clause W151* or for Mineral Fibre – *as clause A152*.

Undercoat: Insert as relevant,
Polystyrene with scraped finish insert ***weber.rend PUC*** *as clause W252*
Polystyrene with dry-dash finish insert either ***weber.rend PUC*** *or* ***weber.rend TUC*** *as clause W252*
Mineral fibre insert ***weber.rend MFU*** *as clause W252*

Topcoat: Insert as relevant,
Scraped finish insert ***weber.rend TTS*** *as clause W301*
Dry-dash finish insert ***weber.rend TTC*** *as clause W302*

Thickness: Insert as relevant,
Scraped finish insert *6 – 8 mm finished thickness*
Dry-dash finish insert *6 – 8 mm*

Colour: See colour chart in Section 2

Aggregate colour: Scraped finish – Delete
Dry-dash finish – see colour chart on page 28

W901 Accessories

- Full system and render only beads as required by system and render, supplied by **Weber**.
- Beads to be located and fixed as detailed on architect's drawings or system manufacturer's details.
- Structural, temporary or bead fixings shall be of suitable strength and durability approved and supplied by **Weber**.

Specification clauses

M21 Insulation with rendered finish

210 External wall insulation system: weber.therm XL by Weber

- Location .....
- Background: New or existing brick or block
- Preparation: .....
- Insulation: .....
- Thickness: .....
- Render carrier: Ferritic stainless steel lath by **Weber** – sheet 2440 x 1220 mm, mesh 50 x 20 mm as clause .....
- Undercoat: .....
- Thickness: 10 mm
- Topcoat: .....
- Thickness: .....
- Colour: .....
- Aggregate colour: .....
- Accessories: full system and render only beads as clause W901

W001 Masonry wash

Drench surface with **weber CL150**, leave for 48 hours, brush down to remove all signs of moss/growth.

W002 Hammer test

Hammer test rendered surfaces and remove all existing bossed material. Make good areas removed using **weber.rend stipple** and **weber.rend TUC** to achieve an in-plane surface.

W104 Insulation – *Coated polystyrene*

Temporary fix boards to substrate using **Weber** fixings at the rate of 1/board or part board.

W105 Insulation – *Mineral fibre slab*

Fix insulation slabs with **Weber** multipin sleeves to the specified fixing pattern at the rate of 7/m².

W151 Render carrier – *Polystyrene*

Secure to wall using **Weber** fixings to the specified fixing pattern at a rate of 7/m², minimum pull out value 0.75 kN/fixing.

W152 Render carrier – *Mineral fibre*

Secure to wall by fixing into **Weber** multipin sleeves with selected centre pins and lath restraining washers. Minimum pull out value 0.75 kN/fixing.

W252 Undercoat

Mix and apply to 10 mm thickness. Rule off with a straight edge to achieve a satisfactory in-plane surface. Remove all trowel marks, and after partial take-up, thoroughly comb scratch, horizontally, for key. Allow to dry.

W301 Topcoat – *Scraped finish*

Mix and apply 8 – 10 mm thick. Rule off with a straight edge to achieve satisfactory in-plane surface. Remove all trowel marks, and after partial take-up, scrape back 2 – 3 mm to develop the final colour and texture required. Minimum finished thickness 6 mm.

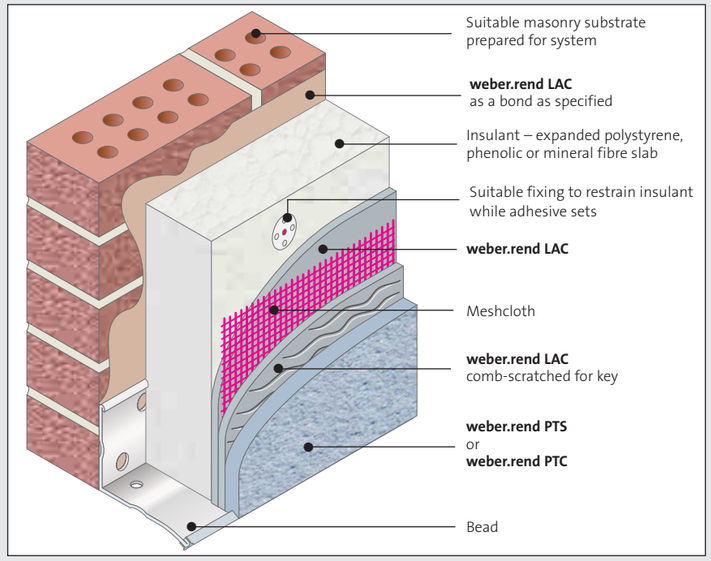
W302 Topcoat – *Dry-dash*

Mix and apply topcoat to a thickness suitable for the size of aggregate and level to produce a satisfactory in-plane surface. Remove all trowel marks and high spots in the coat and cast in pre-dampened natural aggregate as selected, to give even texture and distribution. Maintain a wet edge during application

These notes are very abbreviated, must be read in conjunction with NBS M21 Preliminaries/ General Conditions and assume an understanding on the part of the specifier of the Standard NBS M21 section clauses, A full specification service is available from **Weber** – in the first instance contact our technical services staff on 01525 722110

Weber renders: insulated systems: NBS clauses

weber.therm XM with a cementitious finish applied to sound masonry substrates



Abbreviated Guidance Notes

Location: Insert, e.g. *All external walls.*

Preparation: Insert *Masonry wash as clause W001* for existing surfaces and *Hammer test as clause W002* for areas of existing render.

Insulation: Insert either *Expanded polystyrene (EPS) grade SD/FRA, Phenolic (tissue faced,) by* ***Weber*** *as clause W101* or *Mineral fibre slab cfc free rock-fibre board minimum density 115 kg/m³ by* ***Weber*** *as clause W102.*
See selector charts on page 70 for advice.

Thickness: Insert thickness in mm. For advice regarding U-value for the chosen insulation and relevant thickness see page 72. For specific advice and calculations contact **Weber's** technical department.

Topcoat: Insert for as relevant below,
Scraped finish insert ***weber.rend PTS*** *as clause W301*
Dry-dash Finish insert ***weber.rend PTC*** *as clause W302*

Thickness: Insert for as relevant below,
weber.rend PTS insert *6 – 8 mm finished thickness*
weber.rend PTC insert *6 mm*

Colour: See colour charts in Section 2

Aggregate colour: Scraped finish – Delete
Dry-dash finish – see colour chart on page 28

W901 Accessories

- Full system and render only beads as required by system and render, supplied by **Weber**.
- Beads to be located and fixed as detailed on architect's drawings or system manufacturer's details.
- Structural, temporary or bead fixings shall be of suitable strength and durability approved and supplied by **Weber**.

Specification clauses

M21 Insulation with rendered finish

210 External wall insulation system: weber.therm XM by Weber

- Location .....
- Background: New or existing brick or block
- Preparation: .....
- Insulation: .....
- Thickness: .....
- Undercoat: **weber.rend LAC** (applied in two coats incorporating meshcloth as clause W251)
- Thickness: 5 mm
- Reinforcement: standard meshcloth by **Weber**
- Topcoat: .....
- Thickness: .....
- Colour: .....
- Aggregate colour: .....
- Accessories: full system and render only beads as clause W901

W001 Masonry wash

Drench surface with **weber CL150**, leave for 48 hours, brush down to remove all signs of moss/growth.

W002 Hammer test

Hammer test rendered surfaces and remove all existing bossed material. Make good areas removed using **weber.rend stipple** and **weber.rend TUC** to achieve an in-plane surface.

W101 Insulation – *Polystyrene/phenolic*

Mix and apply **weber.rend LAC** in four vertical strips to the back of the board approximately 100 mm wide x 25 – 30mm thick, to achieve a minimum 33% surface area when applied. Temporary fix using **Weber** fixings at the rate of two per board or part board.
or
Pin to substrate using appropriate **Weber** fixings to the specified fixing pattern to produce a fixing rate of 7/m².

W102 Insulation – *Mineral fibre slab*

Where required to reconcile surface plane, bed in **weber.rend LAC**. Pin to substrate using appropriate **Weber** fixings to the specified fixing pattern to produce a fixing rate of 7/m².

W251 Undercoat

Mix and apply to a thickness of 2 – 3 mm and incorporate **Weber** standard meshcloth as specified. Lay-in and allow for partial take-up, apply a further 3 mm. Flatten to achieve a satisfactory in-plane surface. Thoroughly key with a proprietary render comb. Allow to dry.

W301 Topcoat – *Scraped finish*

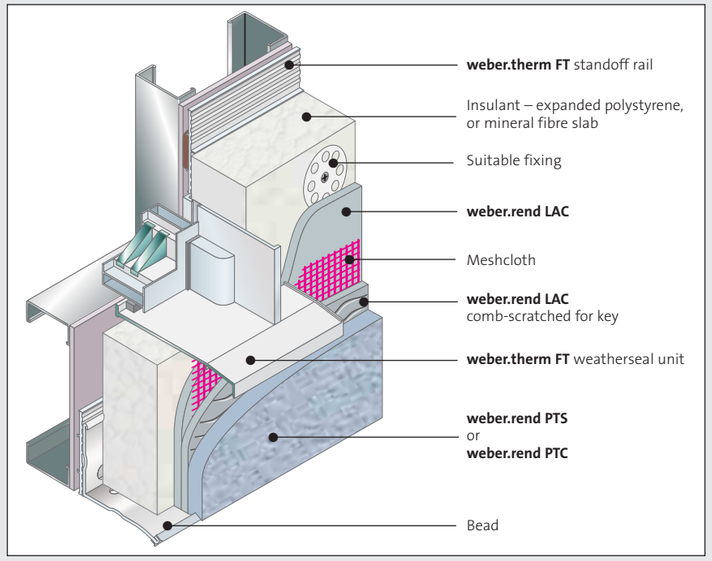
Mix and apply 8 – 10 mm thick. Flatten to achieve satisfactory in-plane surface. Remove all trowel marks, and after partial take-up, scrape back 2 – 3 mm to develop the final colour and texture required. Minimum finished thickness 6 mm.

W302 Topcoat – *Dry-dash*

Mix and apply topcoat to a thickness suitable for the size of aggregate and flatten to produce a satisfactory in-plane surface. Remove all trowel marks and high spots in the coat and cast in pre-dampened natural aggregate as selected, to give even texture and distribution. Maintain a wet edge during application

These notes are very abbreviated, must be read in conjunction with NBS M21 Preliminaries/ General Conditions and assume an understanding on the part of the specifier of the Standard NBS M21 section clauses, A full specification service is available from **Weber** – in the first instance contact our technical services staff on 01525 722110

weber.therm XM on weber.therm FT with a cementitious finish on a lightweight metal frame



Abbreviated Guidance Notes

Location: Insert, e.g. *All external walls.*

Insulation: Insert either *Expanded polystyrene (EPS) grade SD/FRA* or *Mineral fibre slab cfc free rock-fibre board minimum density 115 kg/m³, by* ***Weber*** *as clause W106.* See selector charts on page 70 for advice.

Topcoat: Insert for as relevant below,
Scraped finish insert ***weber.rend PTS*** *as clause W301*
Dry-dash Finish insert ***weber.rend PTC*** *as clause W302*

Thickness: Insert for as relevant below,
weber.rend PTS insert *6 – 8 mm finished thickness*
weber.rend PTC insert *6 mm*

Colour: See colour charts in Section 2

Aggregate colour: Scraped finish – Delete
Dry-dash finish – see colour chart on page 28

Due to design changes in the weber.therm FT system, please contact Weber for the latest information.

W301 Topcoat – *Scraped finish*

Mix and apply 8 – 10 mm thick. Rule off with a straight edge to achieve satisfactory in-plane surface. Remove all trowel marks, and after partial take-up, scrape back 2 – 3 mm to develop the final colour and texture required. Minimum finished thickness 6 mm.

W302 Topcoat – *Dry-dash*

Mix and apply topcoat to a thickness suitable for the size of aggregate and float up to produce a satisfactory in-plane surface. Remove all trowel marks and high spots in the coat and cast in pre-dampened natural aggregate as selected, to give even texture and distribution. Maintain a wet edge during application.

W901 Accessories

- Full system and render only beads as required by system and render, supplied by **Weber**.
- Beads to be located and fixed as detailed on architect's drawings or system manufacturer's details.
- Structural, temporary or bead fixings shall be of suitable strength and durability approved and supplied by **Weber**.

Specification clauses

M21 Insulation with rendered finish

210 External wall insulation system: weber.therm XM on weber.therm FT by Weber

- Location: .....
- Background: lightweight metal frame
- Preparation: sheathing board by others. **weber.therm FT** weatherseal units as clause W050
- Support system: **weber.therm FT** standoff rail as clause W051
- Insulation: .....
- Thickness: 80 mm
- Undercoat: **weber.rend LAC** (applied in two coats incorporating meshcloth as clause W251)
- Thickness: 5 mm
- Reinforcement: standard meshcloth by **Weber**
- Topcoat: .....
- Thickness: .....
- Colour: .....
- Aggregate colour: .....
- Accessories: full system and render only beads as clause W901

W050 Weatherseal unit

- Fit expanding foam strip supplied in accordance with the installation instructions and offer unit to window.
- Using the spacers provided position frame around window and fix sides of unit to substrate.
- Slide closure trims and tighten fixing screws. Fit wedge gaskets and snap in cover plates.

Note: Weatherseal units are made specifically to project requirements from the window schedule. Place orders in good time to avoid delay.

W051 Standoff rail

- Fix cavity closure trim to the sheathing at the lower edge of the bottom rail.
- Using the relevant **Weber** fixings and spacers to maintain the minimum 15 mm cavity, fix the bottom rail level, into the lightweight steel frame, with the lower edge at the lower extremity of the system.
- Butt-join rails using aluminium joint straps. Use the same bent joint straps at internal and external angles to maintain alignment.
- Fix system base bead with fixings specified into the base rail to coincide with its lower edge.
- Fix all other rails level, at centres suitable for the narrow dimension of the board. (Boards are always fixed narrow dimension vertical)
- Fix trimmers to support horizontal edges of insulation above and below openings where required.
- Fire stops should be fitted where specified.

W106 Insulation

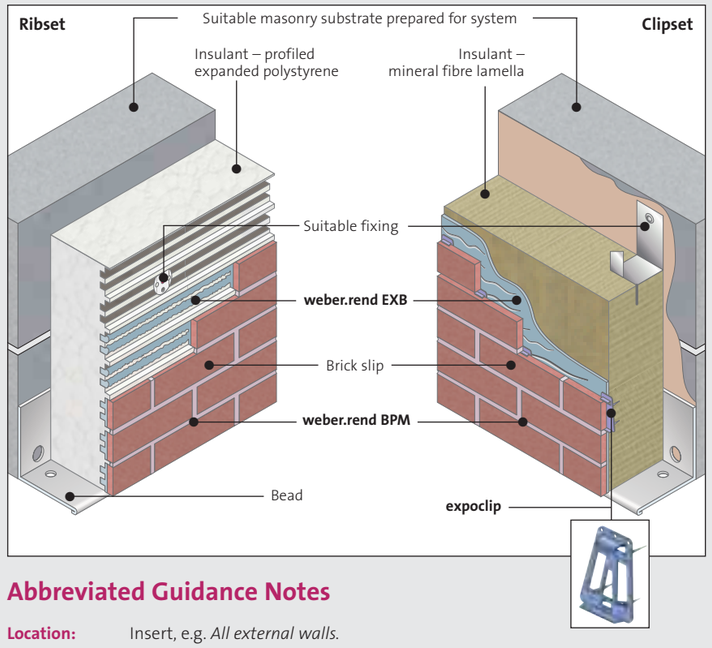
Fix insulation to rails with **Weber** fixings at a frequency of 8/m² (12/m² for mineral fibre) to the specified fixing pattern. Maintain frequency at base and top rail and at trimmers.

W251 Undercoat

Mix and apply to a thickness of 2 – 3 mm and incorporate **Weber** standard meshcloth as specified. Lay-in and allow for partial take-up, apply a further 3 mm. Flatten to achieve a satisfactory in-plane surface. Thoroughly key with a proprietary render comb. Allow to dry.

These notes are very abbreviated, must be read in conjunction with NBS M21 Preliminaries/ General Conditions and assume an understanding on the part of the specifier of the Standard NBS M21 section clauses, A full specification service is available from **Weber** – in the first instance contact our technical services staff on 01525 722110

weber.therm XB applied to sound masonry substrates



Abbreviated Guidance Notes

Location: Insert, e.g. *All external walls.*

Preparation: Insert *Masonry wash as clause W001* for existing surfaces and *Hammer test as clause W002* for areas of existing render.

Insulation: Insert either *Profiled expanded polystyrene (EPS) grade SD/FRA by* ***Weber*** *as clause W121*, or *Mineral fibre lamella cfc free rock-fibre board minimum density 95 kg/m³ by* ***Weber*** *as clause W103.* See selector charts on page 70 for advice.

Thickness: Insert thickness in mm. For advice regarding U-value for the chosen insulation and relevant thickness see page 72. For specific advice and calculations contact **Weber's** technical department.

Brick slip: Add one of the following;
For mineral fibre lamella, insert *As clause W450*
For polystyrene, insert *As clause W451*

Colour: See colour charts on page 30

Pointing mortar colour: See colour charts on page 30

Accessories: For mineral fibre lamella – full system, render only beads and **expoclips** as clause W903
For polystyrene ribset – full system and render only beads as clause W904

W450 Brick slip – *Mineral fibre lamella*

- Set out the work carefully to give a convincing brick pattern and to avoid awkward cuts.
- Coat an area approximately 500 mm high x 1500 mm wide with **weber.rend EXB**, starting at top of boarded wall, to a nominal thickness of 4 mm (2 passes) and comb coated area as directed then fix brick slips.
- Alternatively apply nominal 2 mm coat of adhesive to face of insulation batts, butter back of slip (nominal 6 mm thick), and then offer up to the pre-coated insulant face.
- Fix brick slips, starting at the top, using **Weber expoclip** to locate the slips while adhesive sets. Slips positioned to emulate face brickwork bonding.
- Brick slip returns used at all external arrises, reversed on alternate courses to maintain bond.

W451 Brick slip – *Polystyrene ribset*

- Set out the work carefully to give a convincing brick pattern and to avoid awkward cuts.
- To prevent staining from polymer bonding mortar spillage where possible work from the top of the wall panel downwards.
- Using a paintbrush apply a thin coat of **weber.rend EXB** adhesive to the front edge of the nibs of the course being applied to provide a key for the **weber.rend BPM** to follow.
- Apply a generous ribbon of **weber.rend EXB** adhesive mortar into the keyed grooves in the board recess using a pointing gun. Ensure that sufficient mortar is applied to fill the keyed grooves and cover at least 60% of the slip surface.
- Press the brick slips firmly into place, checking alignment and surface plane.

W460 Pointing

- Mix **weber.rend BPM** and apply using an appropriate pointing gun, fully filling each joint.
- Using pointing tool work the bedding joints to a weathered, flush or bucket handle profile. Recessed joints are not acceptable.
- On completion, lightly brush down using a soft brush.

Specification clauses

M21 Insulation with rendered finish

210 External wall insulation system: weber.therm XB by Weber

- Location: .....
- Background: new or existing brick or block
- Preparation: .....
- Insulation: .....
- Thickness: .....
- Brick slip adhesive: **weber.rend EXB** by **Weber**
- Brick slip: **weber.therm XB** brick slips shall be in accordance with BS 3921 covering shape and size, approved and supplied by **Weber** as clause .....
- Colour: .....
- Pointing mortar: **weber.rend BPM** by **Weber** as clause W460
- Colour: .....
- Accessories: .....

W001 Masonry wash

Drench surface with **weber CL150**, leave for 48 hours, brush down to remove all signs of moss/growth.

W002 Hammer test

Hammer test rendered surfaces and remove all existing bossed material. Make good areas removed using **weber.rend stipple** and **weber.rend TUC** to achieve an in-plane surface.

W121 Insulation – *Polystyrene ribset*

Fix to substrate, to give continuous alignment, using **Weber** fixings at rate of 10/m² (min.) (approx 6/board), with a minimum pull-out value 0.75kN/fixing. Take care to ensure proper setting out at apertures.

W103 Insulation – *Mineral fibre lamella*

Mix and apply **weber.rend LAC** approx. 6 mm thick to the insulation at a rate of approx. 5 kg/m², fully comb prior to fitting to the masonry substrate and temporary fix using **Weber** bondfast clips at the rate of 2/board or part board every 4th course.

W903 Accessories

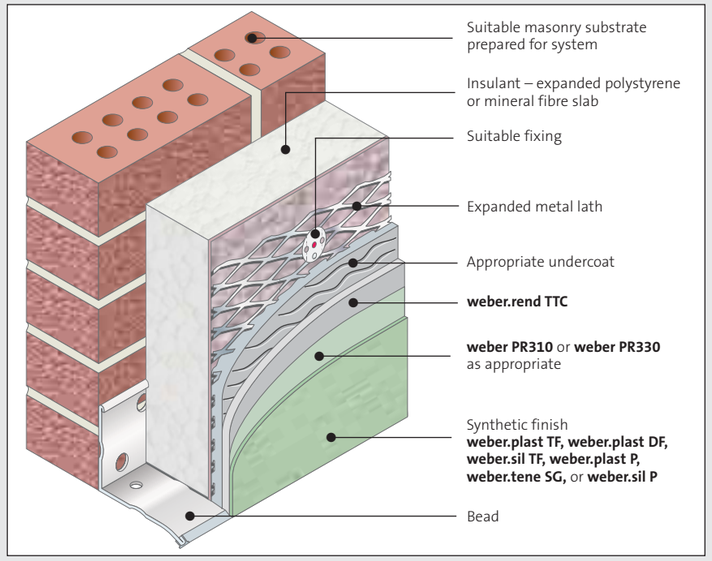
- Full system beads as required by system and render, supplied by **Weber.**
- Beads to be located and fixed as detailed on architect's drawings or system manufacturer's details.
- Structural, temporary or bead fixings shall be of suitable strength and durability approved and supplied by **Weber.**
- **expoclip** special plastic locating and supporting clip as designed and supplied by **Weber.**
- Brick slip returns for use on all external arrises in the **weber.therm XB** system shall be in accordance with BS 3921 covering shape and size, all as approved and supplied by **Weber.**

W904 Accessories

- Full system beads as required by system, supplied by **Weber.**
- Structural, temporary or bead fixings shall be of suitable strength and durability approved and supplied by **Weber.**
- Brick slip returns for use on all external arrises in the **weber.therm XB** system shall be in accordance with BS 3921 covering shape and size, all as approved and supplied by **Weber.**

These notes are very abbreviated, must be read in conjunction with NBS M21 Preliminaries/ General Conditions and assume an understanding on the part of the specifier of the Standard NBS M21 section clauses, A full specification service is available from **Weber** – in the first instance contact our technical services staff on 01525 722110

weber.therm XL with a synthetic finish applied to sound masonry substrates



Abbreviated Guidance Notes

Location: Insert, e.g. *All external walls.*

Preparation: Insert *Masonry wash as clause W001* for existing surfaces and *Hammer test as clause W002* for areas of existing render.

Insulation: Insert either *Expanded polystyrene (EPS) grade SD/FRA factory coated with polymer modified stipple coating by* ***Weber*** *as clause W104* or *Mineral fibre slab cfc free rock-fibre board minimum density 115 kg/m³ by* ***Weber*** *as clause W105*. See selector charts on page 70 for advice.

Thickness: Insert thickness in mm. For advice regarding U-value for the chosen insulation and relevant thickness see page 72. For specific advice and calculations contact **Weber's** technical staff.

Render carrier: Add for Polystyrene – *as clause W151* or for Mineral Fibre – *as clause A152*.

Undercoat: Insert as relevant,
Polystyrene, insert ***weber.rend PUC*** *as clause W252*
Mineral fibre, insert ***weber.rend MFU*** *as clause W252*

Primer: Insert one of the following suitable for the chosen finish;
For **weber.plast TF, weber.plast DF** and **weber.sil TF** insert ***weber PR310***
For **weber.plast P** insert ***weber PR310***
For **weber.tene SG** insert *two coats* ***weber PR330***
For **weber.sil P** insert ***weber.sil P*** *diluted by 10 – 15% with clean water*

Finish: Insert one of the following:
weber.plast TF *as clause W410*
weber.plast DF *as clause W411*
weber.sil TF *as clause W412*
weber.plast P/weber.sil P *as clause W413*
weber.tene SG *as clause W415*

Thickness: Insert thickness of specified finish where applicable, (see data sheets in Section 10 for textures)
weber.plast TF insert *1.5 mm* or *3 mm*
weber.plast DF insert *1 mm* or *3 mm*
weber.sil TF insert *1.5 mm* or *3 mm*
weber.plast P/weber.sil P – Delete
weber.tene SG insert *3 mm*

Colour: See colour charts in Section 2

These notes are very abbreviated, must be read in conjunction with NBS M21 Preliminaries/ General Conditions and assume an understanding on the part of the specifier of the Standard NBS M21 section clauses, A full specification service is available from **Weber** – in the first instance contact our technical services staff on 01525 722110

Specification clauses

M21 Insulation with rendered finish

210 External wall insulation system: weber.therm XL by Weber

- Location: .....
- Background: new or existing brick or block
- Preparation: .....
- Insulation: .....
- Thickness: .....
- Render carrier: Ferritic stainless steel lath by **Weber** – sheet 2440 x 1220 mm – mesh 50 x 20 mm as clause .....
- Undercoat: .....
- Thickness: 10 mm
- Topcoat: **weber.rend TTC** as clause W305
- Thickness: 6 mm
- Colour: grey
- Primer: prime all areas to receive finish with .....as clause W401
- Finish: .....
- Thickness: .....
- Colour: .....
- Accessories: full system and render only beads as clause W901

W001 Masonry wash

Drench surface with **weber CL150**, leave for 48 hours, brush down to remove all signs of moss/growth.

W002 Hammer test

Hammer test rendered surfaces and remove all existing bossed material. Make good areas removed using **weber.rend stipple** and **weber.rend TUC** to achieve an in-plane surface.

W104 Insulation – *Coated polystyrene*

Temporary fix boards to substrate using **Weber** fixings at the rate of 1/board or part board.

W105 Insulation – *Mineral fibre slab*

Fix insulation slabs with **Weber** multipin sleeves to the specified fixing pattern at the rate of 7/m².

W151 Render carrier – *Polystyrene*

Secure to wall using **Weber** fixings to the specified fixing pattern at a rate of 7/m², minimum pull out value 0.75 kN/fixing.

W152 Render carrier – *Mineral fibre*

Secure to wall by fixing into **Weber** multipin sleeves with selected centre pins and lath restraining washers. Minimum pull out value 0.75 kN/fixing.

W252 Undercoat

Mix and apply to 10 mm thickness. Rule off with a straight edge to achieve a satisfactory in-plane surface. Remove all trowel marks, and after partial take-up, thoroughly comb scratch, horizontally, for key. Allow to dry.

W304 Topcoat – *Synthetic finish*

Mix and apply 6 mm, rule off with a straight edge and float up to produce a satisfactory in-plane surface. Remove all trowel marks and allow to dry.

W401 Primer

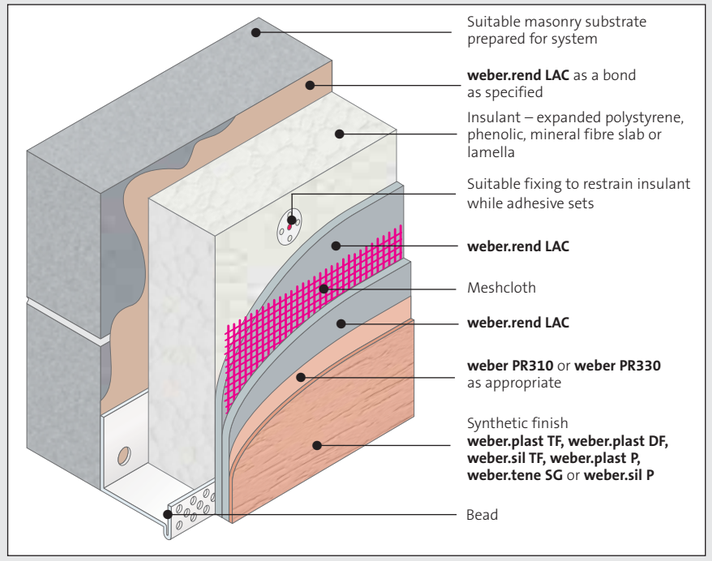
Apply primer suitable for the chosen finish with brush, spray or roller to all areas to receive specified finish. Leave for 24 hours before applying finish.

W410 Finish – *weber.plast TF*

Apply with a stainless steel trowel to the thickness specified. Finish with a stainless steel/thin plastic float to a standard of finish agreed with the specifier. Maintain a wet edge during application.

For clauses 411, 412, 413, 415 and 901 see facing page, *weber.therm XM*.

weber.therm XM with a synthetic finish applied to sound masonry substrates



Abbreviated Guidance Notes

Location: Insert, e.g. *All external walls.*

Preparation: Insert *Masonry wash as clause W001* for existing surfaces and *Hammer test as clause W002* for areas of existing render.

Insulation: Insert either *Expanded polystyrene (EPS) grade SD/FRA, Phenolic (Tissue faced), by* ***Weber*** *as clause W101, Mineral fibre slab cfc free rock-fibre board minimum density 115 kg/m³ by* ***Weber*** *as clause W102*, or *Mineral fibre lamella cfc free rock-fibre board minimum density 95 kg/m³ by* ***Weber*** *as clause W103*. See selector charts on page 70 for advice.

Thickness: Insert thickness in mm. For advice regarding U-value for the chosen insulation and relevant thickness see page 72. For specific advice and calculations contact **Weber's** technical department.

Primer: Insert one of the following suitable for the chosen finish;
For **weber.plast TF**, **weber.plast DF** and **weber.sil TF** insert ***weber PR310***
For **weber.plast P** insert ***weber PR310***
For **weber.tene SG** insert *two coats* ***weber PR330***
For **weber.sil P** insert ***weber.sil P*** *diluted by 10 – 15% with clean water*

Finish: Insert one of the following:
weber.plast TF *as clause W410*
weber.plast DF *as clause W411*
weber.sil TF *as clause W412*
weber.plast P/weber.sil P *as clause W413.*
weber.tene SG *as clause W415*

Thickness: Insert thickness of specified finish where applicable, (see data sheets in Section 10 for textures)
weber.plast TF insert *1.5 mm* or *3 mm*
weber.plast DF insert *1 mm* or *3 mm*
weber.sil TF insert *1.5 mm* or *3 mm*
weber.plast P/weber.sil P – Delete
weber.tene SG *insert 3 mm*

Colour: See colour charts in Section 2

W412 Finish – *weber.sil TF*

Apply with a stainless steel trowel to the thickness specified. Finish with a stainless steel/thin plastic float to a standard of finish agreed with the specifier. Maintain a wet edge during application.

W413 Finish – *weber.plast P/weber.sil P*

Apply with a brush, spray or roller to an even finish. Maintain a wet edge during application.

W415 Finish – *weber.tene SG*

Apply with a stainless steel trowel to the thickness specified. Finish with a stainless steel trowel to a standard of finish agreed with the specifier. Maintain a wet edge during application.

W901 Accessories

- Full system and render only beads as required by system and render, supplied by **Weber.**
- Beads to be located and fixed as detailed on architect's drawings or system manufacturer's details.
- Structural, temporary or bead fixings shall be of suitable strength and durability approved and supplied by **Weber.**

These notes are very abbreviated, must be read in conjunction with NBS M21 Preliminaries/ General Conditions and assume an understanding on the part of the specifier of the Standard NBS M21 section clauses, A full specification service is available from **Weber** – in the first instance contact our technical services staff on 01525 722110

Specification clauses

M21 Insulation with rendered finish

210 External wall insulation system: weber.therm XM by Weber

- Location: .....
- Background: New or existing brick or block
- Preparation: .....
- Insulation: .....
- Thickness: .....
- Render: **weber.rend LAC** (applied in two coats incorporating meshcloth as W201)
- Thickness: 6 mm
- Reinforcement: standard meshcloth by **Weber**
- Primer: prime all areas to receive finish with ..... as clause W401
- Finish: .....
- Thickness: .....
- Colour: .....
- Accessories: full system and render only beads as clause W901

W001 Masonry wash

Drench surface with **weber CL150**, leave for 48 hours, brush down to remove all signs of moss/growth.

W002 Hammer test

Hammer test rendered surfaces and remove all existing bossed material. Make good areas removed using **weber.rend stipple** and **weber.rend TUC** to achieve an in-plane surface.

W101 Insulation – *Polystyrene/phenolic*

Mix and apply **weber.rend LAC** in four vertical strips to the back of the board approximately 100 mm wide x 25 – 30 mm thick, to achieve a minimum 33% surface area when applied. Temporary fix using **Weber** fixings at the rate of two per board or part board.
or
Pin to substrate using appropriate **Weber** fixings to the specified fixing pattern to produce a fixing rate of 7/m².

W102 Insulation – *Mineral fibre slab*

Where required to reconcile surface plane, bed in **weber.rend LAC**. Pin to substrate using appropriate **Weber** fixings to the specified fixing pattern to produce a fixing rate of 7/m².

W103 Insulation – *Mineral fibre lamella*

Mix and apply **weber.rend LAC** approx. 6 mm thick to the insulation at a rate of approx. 5 kg/m², fully comb prior to fitting to the masonry substrate and temporary fix using **Weber** bondfast clips at the rate of 2/board or part board every 4th course.

W201 Render

Mix and apply to a thickness of 3 mm and incorporate **Weber** standard meshcloth as specified. Lay-in and allow for partial take-up, apply a further 3 mm. Flatten to achieve a satisfactory in-plane surface. Remove all trowel marks and dress off the surface smooth with a sponge. Allow to dry.

W401 Primer

Apply primer suitable for the chosen finish with brush, spray or roller to all areas to receive specified finish. Leave for 24 hours before applying finish.

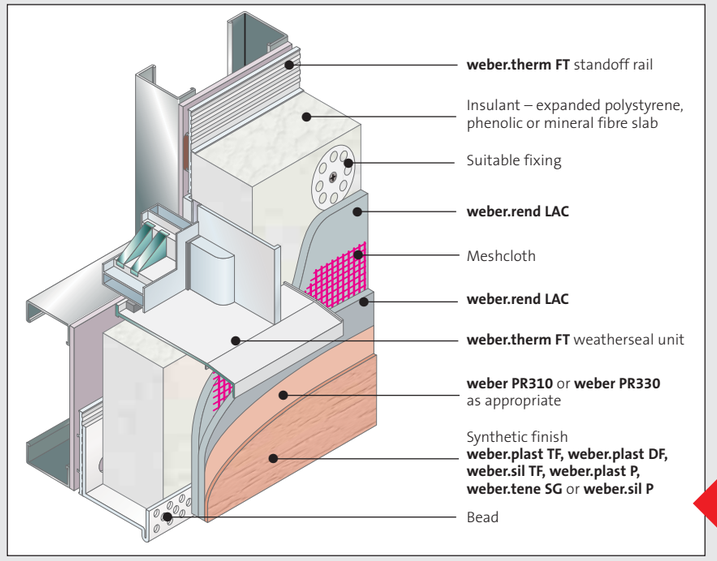
W410 Finish – *weber.plast TF*

Apply with a stainless steel trowel to the thickness specified. Finish with a stainless steel/thin plastic float to a standard of finish agreed with the specifier. Maintain a wet edge during application.

W411 Finish – *weber.plast DF*

Apply with a stainless steel trowel to the thickness of the aggregate. Finish with a wood/plastic float to a standard of finish agreed with the specifier. Maintain a wet edge during application.

weber.therm XM on weber.therm FT with a synthetic finish on a lightweight metal frame



Abbreviated Guidance Notes

Location: Insert, e.g. *All external walls.*

Insulation: Insert either *Expanded polystyrene (EPS) grade SD/FRA, Phenolic (tissue faced)* or *Mineral fibre slab cfc free rock-fibre board minimum density 115 kg/m³, by* ***Weber*** *as clause W106.* See selector charts on page 70 for advice.

Primer: Insert one of the following suitable for the chosen finish;
For **weber.plast TF**, **weber.plast DF** and **weber.sil TF** insert ***weber PR310***
For **weber.plast P** insert ***weber PR310***
For **weber.tene SG** insert *two coats* ***weber PR330***
For **weber.sil P** insert ***weber.sil P*** *diluted by 10 – 15% with clean water*

Finish: Insert one of the following:
weber.plast TF *as clause W410*
weber.plast DF *as clause W411*
weber.sil TF *as clause W412*
weber.plast P/weber.sil P *as clause W413*
weber.tene SG *as clause W415*

Thickness: Insert thickness of specified finish where applicable, (see data sheets in Section 10 for textures)
weber.plast TF insert *1.5 mm* or *3 mm*
weber.plast DF insert *1 mm* or *3 mm*
weber.sil TF insert *1.5 mm* or *3 mm*
weber.plast P/weber.sil P – Delete
weber.tene SG insert *3 mm*

Colour: See colour charts in Section 2

W410 Finish – *weber.plast TF*

Apply with a stainless steel trowel to the thickness specified. Finish with a stainless steel/thin plastic float to a standard of finish agreed with the specifier. Maintain a wet edge during application.

W411 Finish – *weber.plast DF*

Apply with a stainless steel trowel to the thickness of the aggregate. Finish with a wood/plastic float to a standard of finish agreed with the specifier. Maintain a wet edge during application.

W412 Finish – *weber.sil TF*

Apply with a stainless steel trowel to the thickness specified. Finish with a stainless steel/thin plastic float to a standard of finish agreed with the specifier. Maintain a wet edge during application.

W413 Finish – *weber.plast P/weber.sil P*

Apply with a brush, spray or roller to an even finish. Maintain a wet edge during application.

W415 Finish – *weber.tene SG*

Apply with a stainless steel trowel to the thickness specified. Finish with a stainless steel trowel to a standard of finish agreed with the specifier. Maintain a wet edge during application.

W901 Accessories

- Full system and render only beads as required by system and render, supplied by **Weber**.
- Beads to be located and fixed as detailed on architect's drawings or system manufacturer's details.
- Structural, temporary or bead fixings shall be of suitable strength and durability approved and supplied by **Weber**.

These notes are very abbreviated, must be read in conjunction with NBS M21 Preliminaries/ General Conditions and assume an understanding on the part of the specifier of the Standard NBS M21 section clauses, A full specification service is available from **Weber** – in the first instance contact our technical services staff on 01525 722110

Specification clauses

M21 Insulation with rendered finish

210 External wall insulation system: weber.therm XM on weber.therm FT by Weber

- Location: .....
- Background: lightweight metal frame
- Preparation: sheathing board by others. **weber.therm FT** weatherseal units as clause W050
- Support system: **weber.therm FT** standoff rail as clause W051
- Insulation: .....
- Thickness: 90 mm
- Render: **weber.rend LAC** (applied in two coats incorporating meshcloth as W201)
- Thickness: 6 mm
- Reinforcement: standard meshcloth by **Weber**
- Primer: prime all areas to receive finish with ..... as clause W401
- Finish: .....
- Thickness: .....
- Colour: .....
- Accessories: full system and render only beads as clause W901

Due to design changes in the weber.therm FT system, please contact Weber for the latest information.

W050 Weatherseal unit

- Fit expanding foam strip supplied in accordance with the installation instructions and offer unit to window.
- Using the spacers provided position frame around window and fix sides of unit to substrate.
- Slide closure trims and tighten fixing screws. Fit wedge gaskets and snap in cover plates.

Note: Weatherseal units are made specifically to project requirements from the window schedule. Place orders in good time to avoid delay.

W051 Standoff rail

- Fix cavity closure trim to sheathing at the lower edge of the reverse face of the bottom rail.
- Using the relevant **Weber** fixings and spacers to maintain the minimum 15 mm cavity, fix the bottom rail level, into the lightweight steel frame, with the lower edge at the lower extremity of the system.
- Butt-join rails using aluminium joint straps. Use the same bent joint straps at internal and external angles to maintain alignment.
- Fix system base bead with fixings specified into the base rail to coincide with its lower edge.
- Fix all other rails level, at centres suitable for the narrow dimension of the board. (Boards are always fixed narrow dimension vertical)
- Fix trimmers to support horizontal edges of insulation above and below openings where required.
- Fire stops should be fitted where specified.

W106 Insulation

Fix insulation to rails with **Weber** fixings at a frequency of 8/m² (12/m² for mineral fibre) to the specified fixing pattern. Maintain frequency at base and top rail and at trimmers.

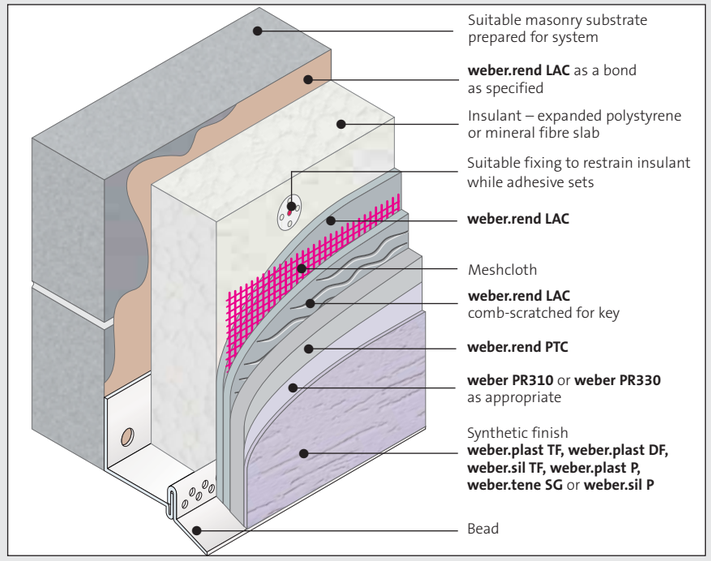
W201 Render

Mix and apply to a thickness of 3 mm and incorporate **Weber** standard meshcloth as specified. Lay-in and allow for partial take-up, apply a further 3 mm. Flatten to achieve a satisfactory in-plane surface. Remove all trowel marks and dress off the surface smooth with a sponge. Allow to dry.

W401 Primer

Apply primer suitable for the chosen finish with brush, spray or roller to all areas to receive specified finish. Leave for 24 hours before applying finish.

weber.therm XM with a topcoat and synthetic finish applied to sound masonry substrates



Abbreviated Guidance Notes

Location: Insert, e.g. *All external walls.*

Preparation: Insert *Masonry wash as clause W001* for existing surfaces and *Hammer test as clause W002* for areas of existing render.

Insulation: Insert either *Expanded polystyrene (EPS) grade SD/FRA by* ***Weber*** *as clause W101* or *Mineral fibre slab cfc free rock-fibre board minimum density 115 kg/m³ by* ***Weber*** *as clause W102.*
See selector charts on page 70 for advice.

Thickness: Insert thickness in mm. For advice regarding U-value for the chosen insulation and relevant thickness see page 72. For specific advice and calculations contact **Weber's** technical department.

Primer: Insert one of the following suitable for the chosen finish;
For **weber.plast TF**, **weber.plast DF** and **weber.sil TF** insert ***weber PR310***
For **weber.plast P** insert ***weber PR310***
For **weber.tene SG** insert *two coats* ***weber PR330***
For **weber.sil P** insert ***weber.sil P*** *diluted by 10 – 15% with clean water*

Finish: Insert one of the following:
weber.plast TF *as clause W410*
weber.plast DF *as clause W411*
weber.sil TF *as clause W412*
weber.plast P/weber.sil P *as clause W413*
weber.tene SG *as clause W415*

Thickness: Insert thickness of specified finish where applicable, (see data sheets in Section 10 for textures)
weber.plast TF insert *1.5 mm* or *3 mm*
weber.plast DF insert *1 mm* or *3 mm*
weber.sil TF insert *1.5 mm* or *3 mm*
weber.plast P/weber.sil P – Delete
weber.tene SG insert *3 mm*

Colour: See colour charts in Section 2

These notes are very abbreviated, must be read in conjunction with NBS M21 Preliminaries/ General Conditions and assume an understanding on the part of the specifier of the Standard NBS M21 section clauses, A full specification service is available from **Weber** – in the first instance contact our technical services staff on 01525 722110

Specification clauses

M21 Insulation with rendered finish

210 External wall insulation system: weber.therm XM by Weber

- Location: .....
- Background: new or existing brick or block
- Preparation: .....
- Insulation: .....
- Thickness: .....
- Undercoat: **weber.rend LAC** (applied in two coats incorporating meshcloth as clause W251)
- Thickness: 5 mm
- Reinforcement: standard meshcloth by **Weber**
- Topcoat: **weber.rend PTC** as clause W304
- Thickness: 6 mm
- Colour: grey
- Primer: prime all areas to receive finish with ..... as clause W401
- Finish: .....
- Thickness: .....
- Colour: .....
- Accessories: full system and render only beads as clause W901

W001 Masonry wash

Drench surface with **weber CL150**, leave for 48 hours, brush down to remove all signs of moss/growth.

W002 Hammer test

Hammer test rendered surfaces and remove all existing bossed material. Make good areas removed using **weber.rend stipple** and **weber.rend TUC** to achieve an in-plane surface.

W101 Insulation – *Polystyrene/phenolic*

Mix and apply **weber.rend LAC** in four vertical strips to the back of the board approximately 100 mm wide x 25 – 30 mm thick, to achieve a minimum 33% surface area when applied. Temporary fix using **Weber** fixings at the rate of two per board or part board.
or
Pin to substrate using appropriate **Weber** fixings to the specified fixing pattern to produce a fixing rate of 7/m².

W102 Insulation – *Mineral fibre slab*

Where required to reconcile surface plane, bed in **weber.rend LAC**. Pin to substrate using appropriate **Weber** fixings to the specified fixing pattern to produce a fixing rate of 7/m².

W251 Undercoat

Mix and apply to a thickness of 2 – 3 mm and incorporate **Weber** standard meshcloth as specified. Lay-in and allow for partial take-up, apply a further 3 mm. Flatten to achieve a satisfactory in-plane surface. Thoroughly key with a proprietary render comb. Allow to dry.

W304 Topcoat – *Synthetic finish*

Mix and apply 6 mm, rule off with a straight edge and float up to produce a satisfactory in-plane surface. Remove all trowel marks and allow to dry.

W401 Primer

Apply primer suitable for the chosen finish with brush, spray or roller to all areas to receive specified finish. Leave for 24 hours before applying finish.

For clauses 410, 411, 412, 413, 415 and 901 see facing page, *weber.therm XM on weber.therm FT*

Best practice: solutions

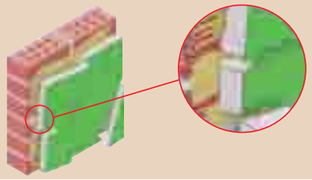
In this Solutions section, each subject is, in the main, designed with two sections laid out on facing pages. The left hand page explains why the situation provides a technical challenge or what the critical issues are that need to be addressed, while the right hand page describes the options available or the procedure that should be followed for success. By explaining the issues before outlining the solution, this format provides the explanation why a particular procedure must be followed. With a complete understanding of the reasons why certain procedures are important, details of the solutions are more readily followed.

For specific advice tailored to meet the requirements of a particular project, in the first instance contact **Weber's** Technical Service staff on 01525 722110.

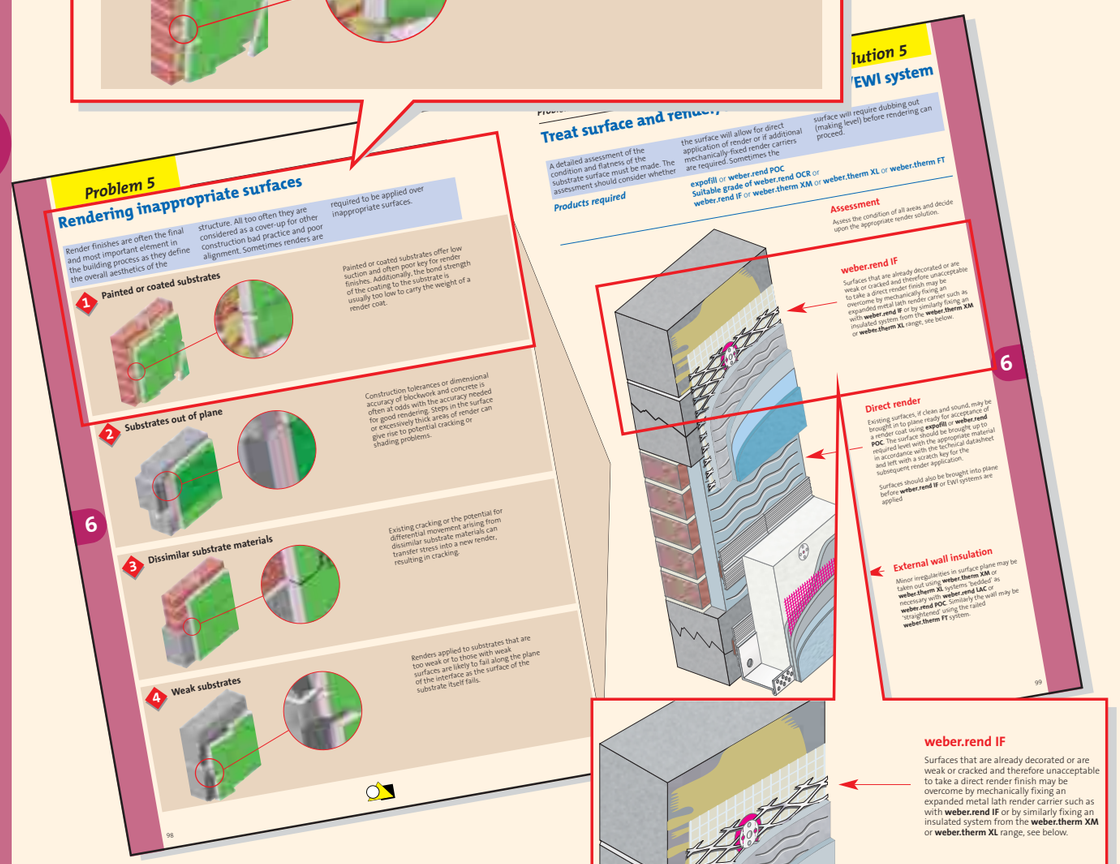
Rendering inappropriate surfaces

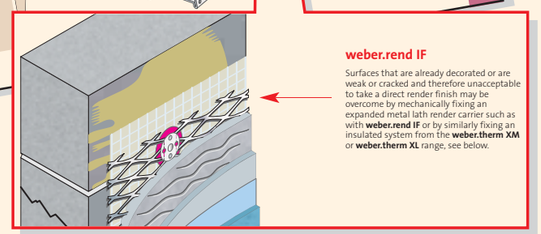
Render finishes are often the final and most important element in the building process as they define the overall aesthetics of the structure. All too often they are considered as a cover-up for other construction bad practice and poor alignment. Sometimes renders are required to be applied over inappropriate surfaces.

1 Painted or coated substrates



Painted or coated substrates offer low suction and often poor key for render finishes. Additionally, the bond strength of the coating to the substrate is usually too low to carry the weight of a render coat.





weber.rend IF

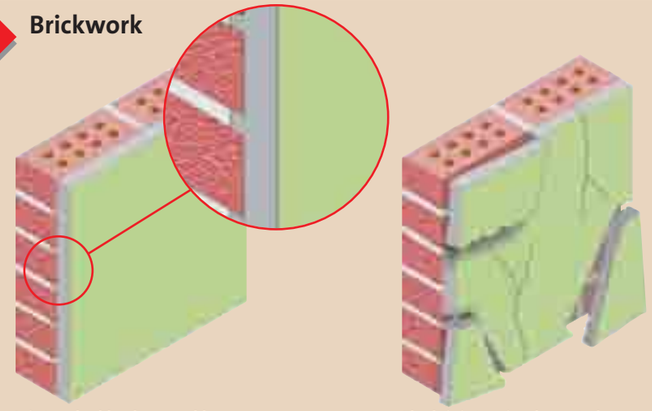
Surfaces that are already decorated or are weak or cracked and therefore unacceptable to take a direct render finish may be overcome by mechanically fixing an expanded metal lath render carrier such as with **weber.rend IF** or by similarly fixing an insulated system from the **weber.therm XM** or **weber.therm XL** range, see below.

Contents

Direct-applied rendering to surfaces with a poor key

Renders are not adhesives and require a combination of suction (drawing of the most liquid elements into the substrate) and mechanical key (texture or roughness) to bond to its substrate.

1 Brickwork



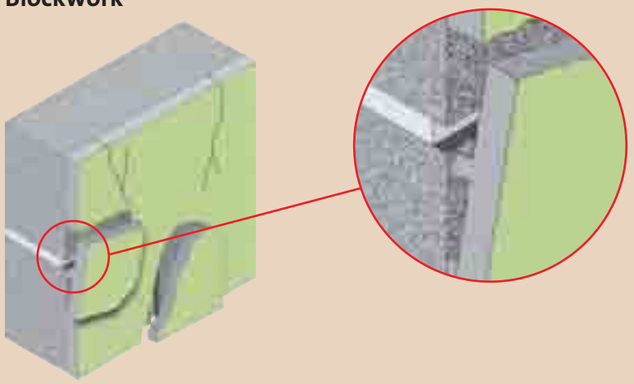
Joints raked back – good key

Flush joints – inadequate key

Brickwork with the mortar joints raked back will provide sufficient mechanical key for rendering.

However, if the joints are flush, a key has to be provided by other means.

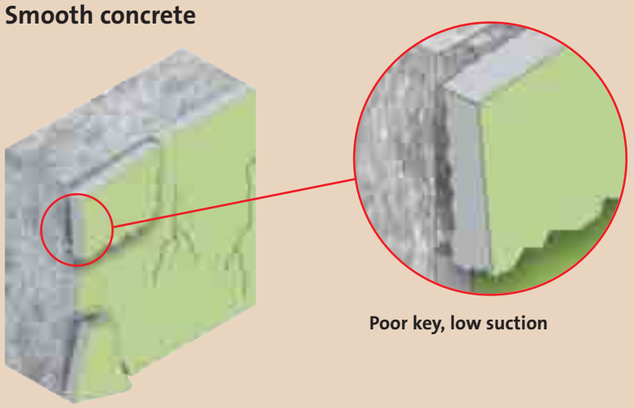
2 Blockwork



As the density of blockwork increases the finished surfaces often have much smoother faces.

Raking the joints on blockwork will not provide sufficient key for rendering as the frequency of joints are considerably less than in brickwork.

3 Smooth concrete



Poor key, low suction

Smooth concrete may offer the worst of all conditions for rendering, with the possibility of residual traces of release agents and both poor key and low suction.

Apply weber.rend aid and suitable render

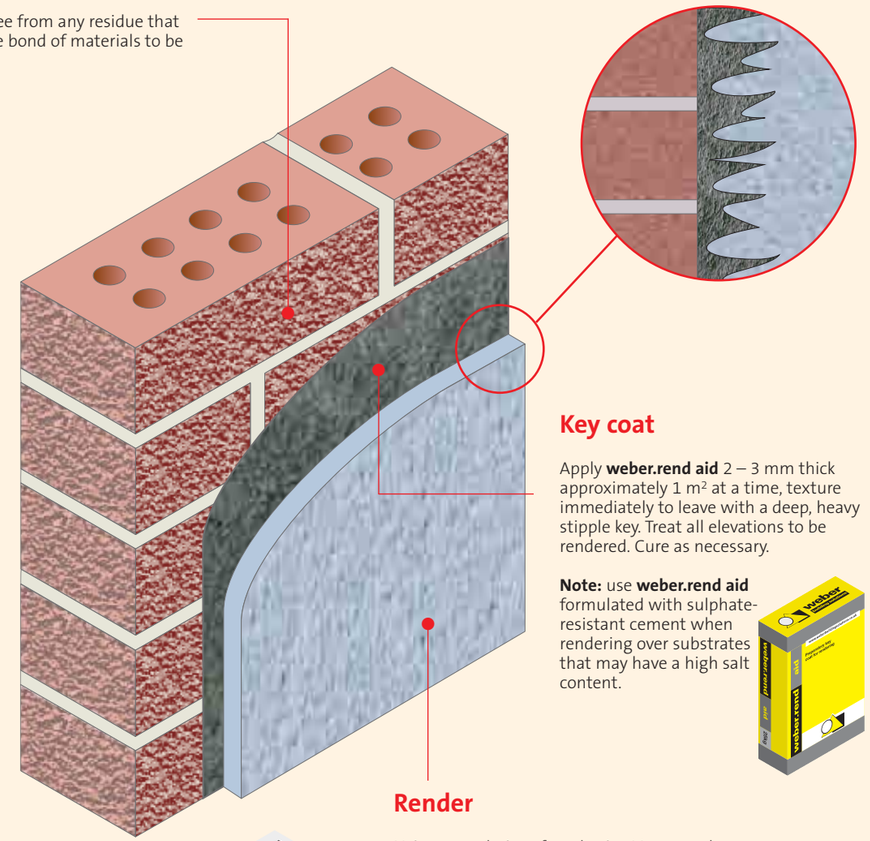
Preparatory key coats are very heavily polymer modified to `stick' to poor key substrates and are finished with a pronounced texture to hold the new render.

Products required

weber.rend aid
Monocouche render
or **weber.rend OCR and synthetic finish**

Preparation

Ensure all areas are free from any residue that may interfere with the bond of materials to be applied.



Key coat

Apply **weber.rend aid** 2 – 3 mm thick approximately 1 m² at a time, texture immediately to leave with a deep, heavy stipple key. Treat all elevations to be rendered. Cure as necessary.

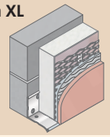
Note: use **weber.rend aid** formulated with sulphate-resistant cement when rendering over substrates that may have a high salt content.

Render

Using your choice of render, i.e. Monocouche or **weber.rend OCR** and synthetic finish, apply and finish new render as directed for the relevant materials.

Note: External Wall Insulation systems such as **weber.therm XL**, or render systems such as **weber.rend IF**, are mechanically fixed to the underlying substrate. In this way many of the inadequacies of the substrate are overcome and the construction's properties enhanced.

weber.therm XL
page 152



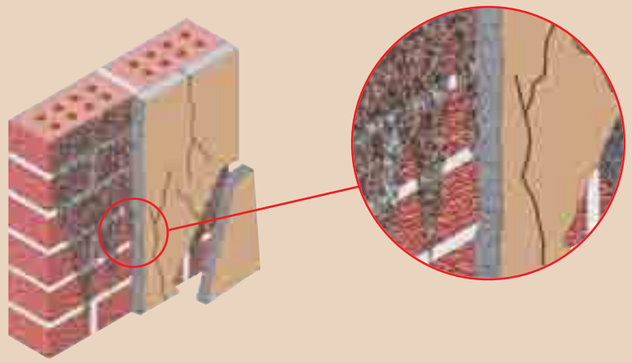
weber.rend IF
page 160

For detailed instructions, please refer to the relevant product data sheet.
For further information, please contact our Technical Helpline.

Direct-applied rendering over existing masonry

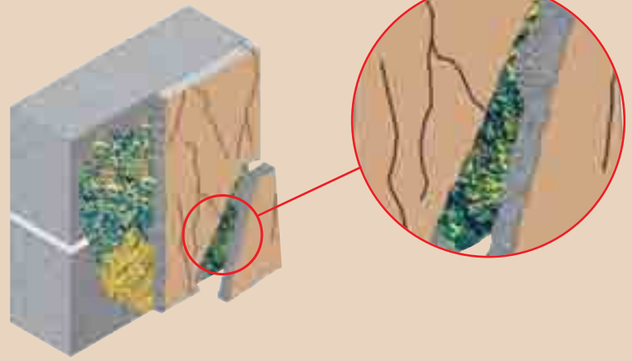
Existing masonry is designed as a finish in its own right. It may not be suitable to accept a direct application of render.

1 Dirty deposits accumulated over a period of time



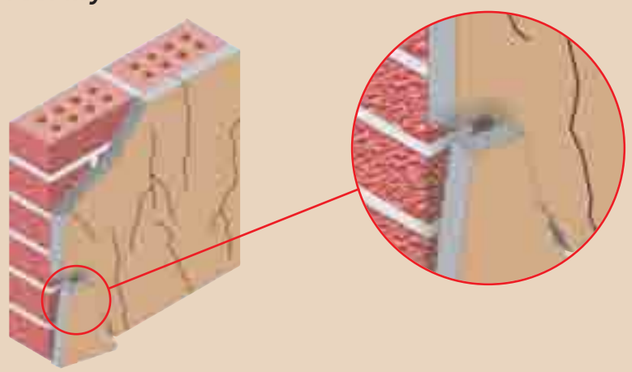
Dirty deposits can form a weak intermediate layer that interferes with the development of the bond of newly applied render.

2 Organic growth



Organic growth, even though it may be brushed from the surface, remains in the pores of the substrate and can continue to grow, delaminating the new render from the substrate.

3 Poor key



Renders need a combination of mechanical key (texture or roughness) and suction (absorption of the most liquid elements into the substrate) to bond to the wall. Existing masonry surfaces seldom have sufficient key to hold a new render.

Treat, then apply **weber.rend aid** and suitable render

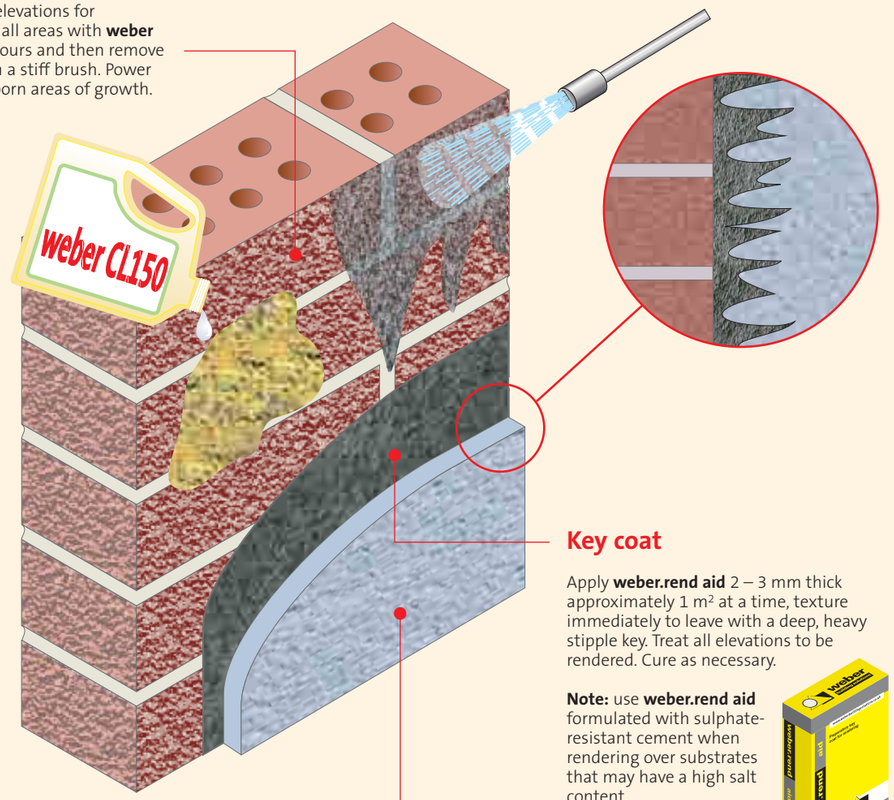
Assessment and preparation is of paramount importance. Preparatory key coats are very heavily polymer modified to `stick' to `smooth' substrates and are finished with a deep mechanical key to hold the new render.

Products required

weber CL150
weber.rend aid
Monocouche render
or **weber.rend OCR and synthetic finish**

Preparation

Assess all areas and elevations for contamination. Treat all areas with **weber CL150**. Leave for 48 hours and then remove surface material with a stiff brush. Power wash dirty and stubborn areas of growth.



Key coat

Apply **weber.rend aid** 2 – 3 mm thick approximately 1 m² at a time, texture immediately to leave with a deep, heavy stipple key. Treat all elevations to be rendered. Cure as necessary.

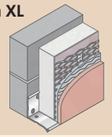
Note: use **weber.rend aid** formulated with sulphate-resistant cement when rendering over substrates that may have a high salt content.

Render

Using your choice of render, i.e. Monocouche or **weber.rend OCR** and synthetic finish, apply and finish new render as directed for the relevant materials.

Note: External Wall Insulation systems such as **weber.therm XL**, or render systems such as **weber.rend IF**, are mechanically fixed to the underlying substrate. In this way many of the inadequacies of the substrate are overcome and the construction's properties enhanced.

weber.therm XL
page 152



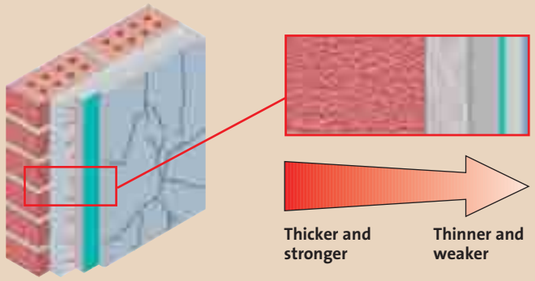
weber.rend IF
page 160

For detailed instructions, please refer to the relevant product data sheet.
For further information, please contact our Technical Helpline.

Direct-applied rendering over existing render

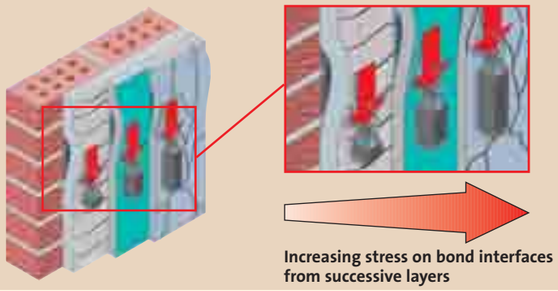
The Codes of Practice do allow for further render coats to be applied over existing render materials, however, there are hidden dangers in the process.

1 Render coats are applied in successive layers



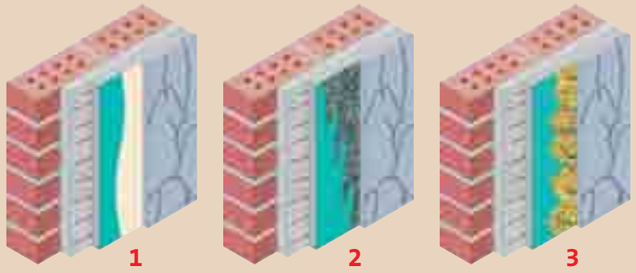
Render coats are applied in successive layers in decreasing thicknesses and strengths. Topcoats therefore may be relatively weak. It is difficult to assess the strength of existing materials and their bond strength to previous layers.

2 Stresses from additional materials



Additional materials put increasing stresses on the bond interfaces of existing materials.

3 Paint, dirty deposits or organic growth

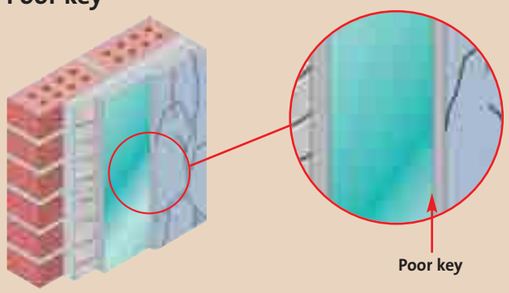


1 Existing renders are often finished with a thin coating or paint which will form a weak interface which is not suitable for rendering over.

2 Dirty deposits accumulated over a period of time can form a weak intermediate layer that interferes with the development of the bond of newly applied render.

3 Organic growth, even though it may be brushed from the surface, remains in the pores of the substrate and can continue to grow, delaminating the new render from the substrate.

4 Poor key



Renders need a combination of mechanical key and suction to bond to the wall. Existing render surfaces, even though unpainted or coated, are usually 'plain face' and seldom have sufficient key to hold a new render.

Treat, then apply **weber.rend aid** and suitable render

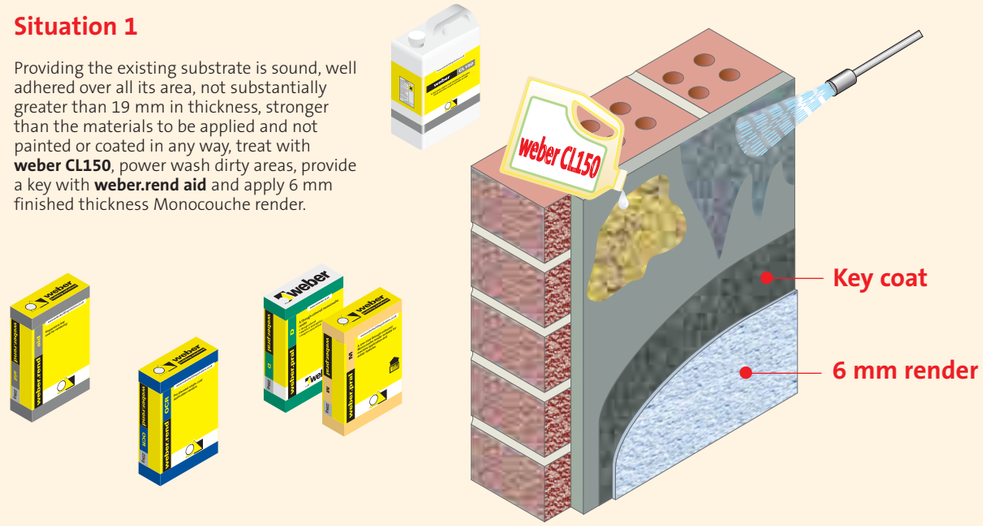
A detailed assessment of all areas of the existing materials and a choice of action minimising the risks based on that assessment is the key.

Products required

weber CL150
weber.rend aid
Monocouche render
or **weber.rend OCR and synthetic finish**

Situation 1

Providing the existing substrate is sound, well adhered over all its area, not substantially greater than 19 mm in thickness, stronger than the materials to be applied and not painted or coated in any way, treat with **weber CL150**, power wash dirty areas, provide a key with **weber.rend aid** and apply 6 mm finished thickness Monocouche render.

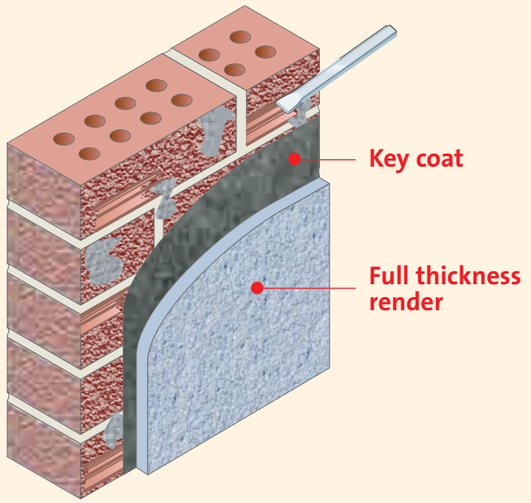


Situation 2

If the above criteria cannot be established, remove existing materials, provide a key with **weber.rend aid** and apply full specification thickness render with either Monocouche or **weber.rend OCR** and synthetic finish.

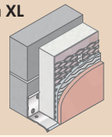
Note: use **weber.rend aid** formulated with sulphate-resistant cement when rendering over substrates that may have a high salt content.

Note: weber.rend fibrelite is a lightweight material that has been specifically designed to apply a new dashed finish to existing dashed background.



Note: External Wall Insulation systems such as **weber.therm XL**, are mechanically fixed to the underlying substrate. In this way many of the inadequacies of the substrate are overcome and the construction's properties enhanced.

weber.therm XL
page 152



For detailed instructions, please refer to the relevant product data sheet.
For further information, please contact our Technical Helpline.

Problem 4

Insulating structural frames

A proven fast-track method of concrete or steel frame construction. Infill walls need to be provided and the structural frame kept warm and dry.

1 Corrosion

The frame is structural and load bearing and steel, although of relatively thick section, vulnerable to corrosion if subjected for long periods to damp conditions.

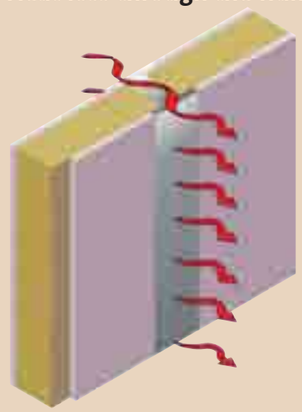
Although the steelwork is not exposed in reinforced concrete frames, structures need to be protected to ensure long life.

2 Structural framework only provides a skeleton

The structural frame is merely a skeleton and needs a facade.

Lightweight metal framing or single skin masonry can be used to provide walls, however the insulation issue needs to be addressed to comply with building regulations.

3 Heat loss through the frame structure



The frame structure itself could provide a cold bridge to the exterior.

Insulation must be placed at the correct position in the structure to avoid interstitial condensation, cold bridging and the conditions under which corrosion could take place.

Solution 4

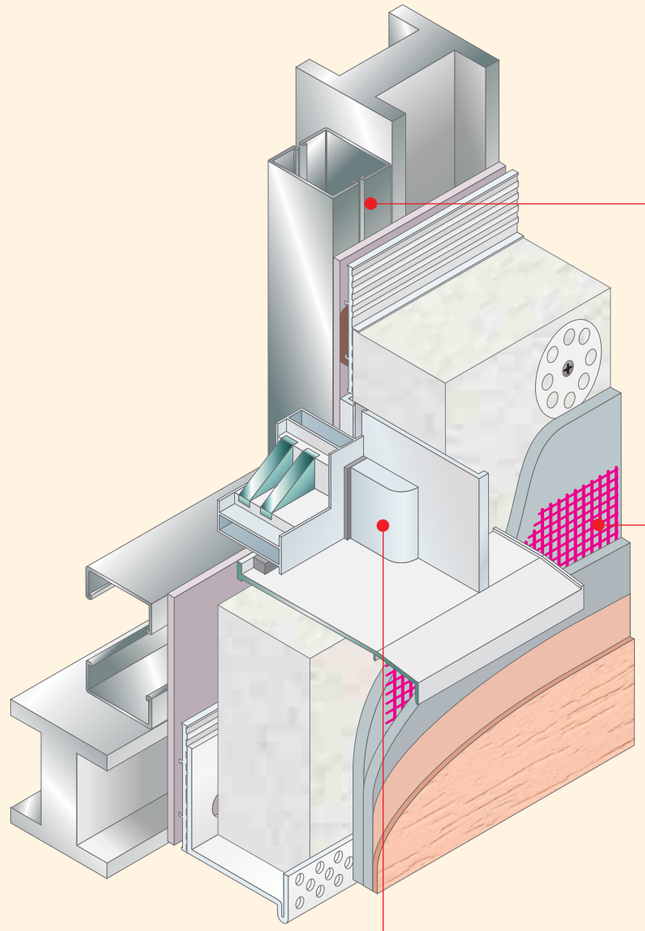
Construct in-fill panels and insulate with EWI system

Construct in-fill panels with lightweight steel frame or single skin masonry and insulate the total structure with a **Weber** insulated render system. Use the **weber.therm FT** components to provide extra levels of protection with a water defence cavity and robust detailing.

Products required

weber.therm XM
weber.therm FT

Due to design changes in the weber.therm FT system, please contact Weber for the latest information.



Preparation

Construct infill walls with either lightweight steel frame and cover with a suitable sheathing board or single skin masonry.

Insulate

weber.therm XM provides the insulation capability to completely envelop both the structural frame and lightweight infill panels, keeping them in ideal warm and dry conditions, free from the dangers of interstitial condensation. Several external finish options are available.

Waterproof detailing

For further levels of protection, **weber.therm FT** components could be used in conjunction with **weber.therm XM** to provide a water defence cavity and the highest level of robust detailing.

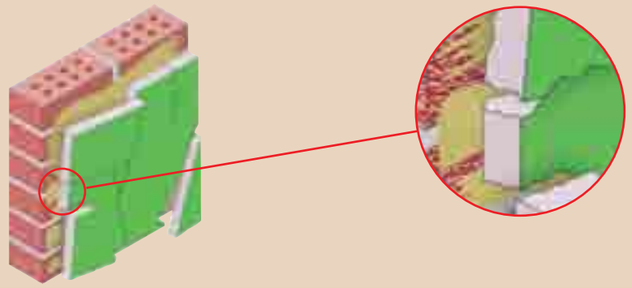
For detailed instructions, please refer to the relevant product data sheet.
For further information, please contact our Technical Helpline.

6

Rendering inappropriate surfaces

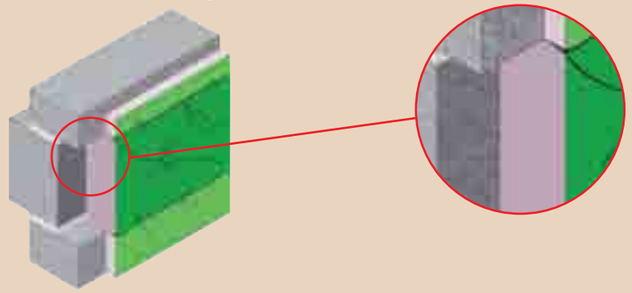
Render finishes are often the final and most important element in the building process as they define the overall aesthetics of the structure. All too often they are considered as a cover-up for other construction bad practice and poor alignment. Sometimes renders are required to be applied over inappropriate surfaces.

1 Painted or coated substrates



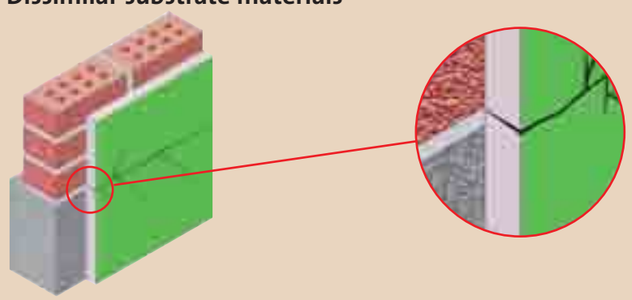
Painted or coated substrates offer low suction and often poor key for render finishes. Additionally, the bond strength of the coating to the substrate is usually too low to carry the weight of a render coat.

2 Substrates out of plane



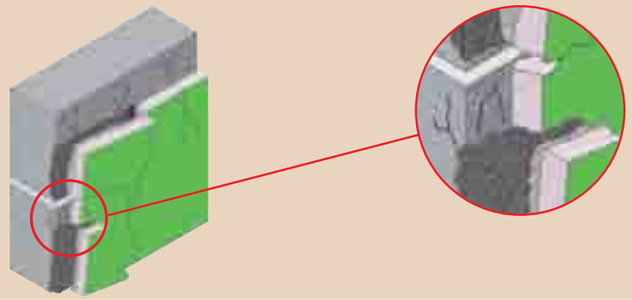
Construction tolerances or dimensional accuracy of blockwork and concrete is often at odds with the accuracy needed for good rendering. Steps in the surface or excessively thick areas of render can give rise to potential cracking or shading problems.

3 Dissimilar substrate materials



Existing cracking or the potential for differential movement arising from dissimilar substrate materials can transfer stress into a new render, resulting in cracking.

4 Weak substrates



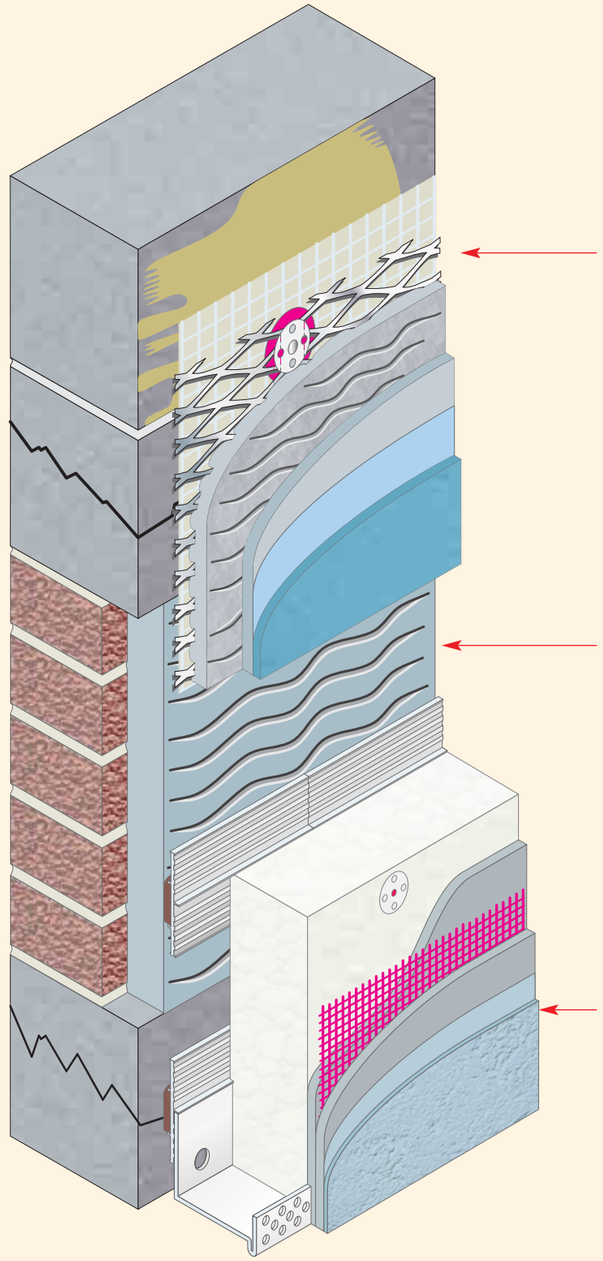
Renders applied to substrates that are too weak or to those with weak surfaces are likely to fail along the plane of the interface as the surface of the substrate itself fails.

Treat surface and render/use weber.rend IF/EWI system

A detailed assessment of the condition and flatness of the substrate surface must be made By the specifier. The assessment should consider whether the surface will allow for direct application of render or if additional mechanically-fixed render carriers are required. Sometimes the surface will require dubbing out (making level) before rendering can proceed.

Products required

weber.rend POC
Suitable grade of weber.rend OCR or
weber.rend IF or **weber.therm XM** or **weber.therm XL** or **weber.therm FT**



Assessment

Assess the condition of all areas and decide upon the appropriate render solution.

weber.rend IF

Surfaces that are already decorated or are weak or cracked and therefore unacceptable to take a direct render finish may be overcome by mechanically fixing an expanded metal lath render carrier such as **weber.rend IF** or by fixing an insulated system from the **weber.therm XM** or **weber.therm XL** range, see below.

Direct render

Existing surfaces, if unpainted, clean and sound, may be brought in to plane ready for acceptance of a render coat using **weber.rend POC**. The surface should be brought up to required level with the appropriate material in accordance with the technical datasheet and left with a scratch key for the subsequent render application.

Surfaces should also be brought into plane before **weber.rend IF** or EWI systems are applied

External wall insulation

Minor irregularities in surface plane may be taken out using **weber.therm XM** or **weber.therm XL** systems 'bedded' as necessary with **weber.rend LAC** or **weber.rend POC**. Similarly the wall may be 'straightened' using the railed **weber.therm FT** system.

For detailed instructions, please refer to the relevant product data sheet.
For further information, please contact our Technical Helpline.

Problem 6

Remodelling facades

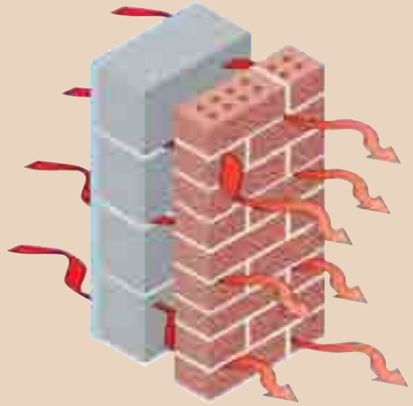
Change of use of existing structures often require physical changes to external fenestration to completely re-shape the structure into a form more suitable for its new use. Thermal performance criteria also need to change in line with the intended occupancy.

1 Changing a property's use

Buildings originally designed as offices may need window openings and intervals re-designed when changing the property's use.

Complete remodelling to cover over alterations and upgrade the overall appearance of the facade is often required.

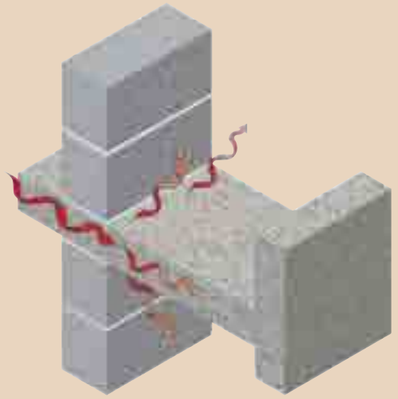
2 Poor insulation in walls



Due to increasing requirements for thermal insulation, buildings undergoing change of use may often require upgraded insulation in walls.

A decision needs to be made regarding the positioning of new insulation. Cavity sizes are restricted and internal insulation reduces the floor space available for use.

3 Heat loss through walkways and wing walls



Some features, especially those that puncture the facade e.g. wing walls and balcony walkways can provide thermal spikes and cold spots that are subject to condensation internally.

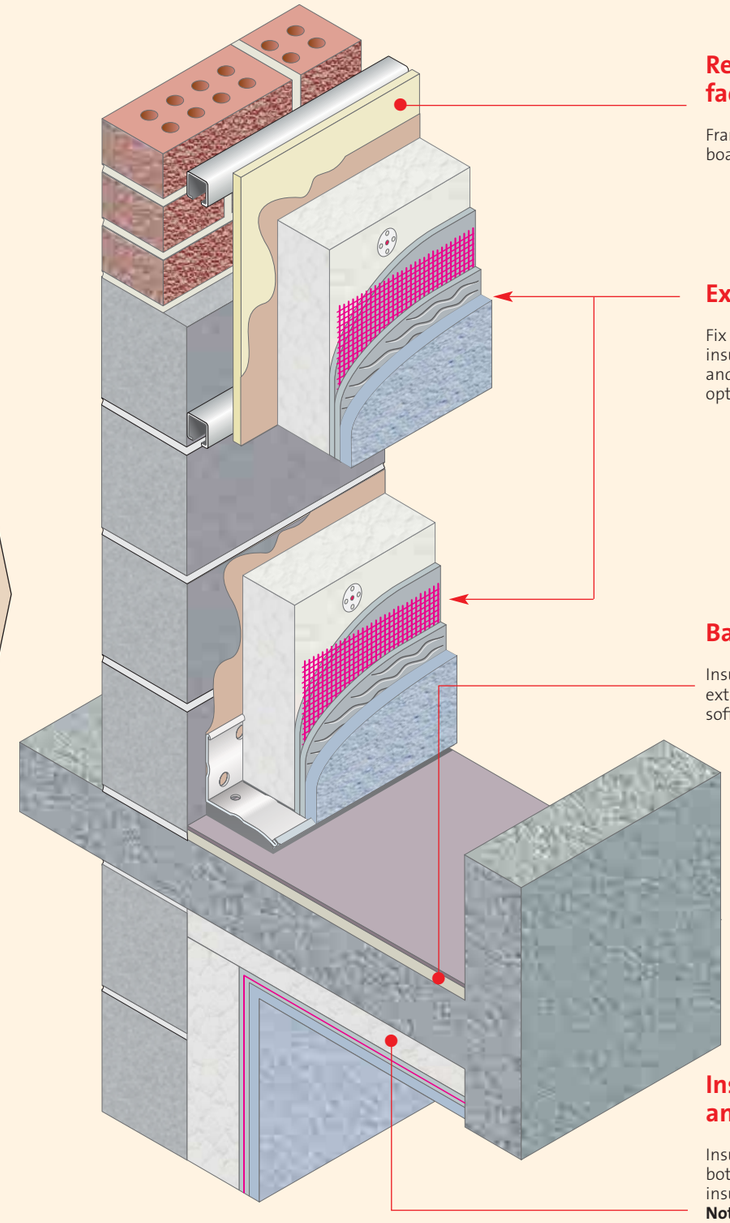
Condensation leads to other problems such as mould growth and musty odours in environments that are becoming more and more enclosed in order to reduce heating costs.

Solution 6

Re-fenestrate and insulate exterior of building

Use steel framing and external sheathing board to re-fenestrate and external wall insulation to protect, insulate and upgrade the structure's facade. In doing so, the whole construction is kept warm with condensation risks and cold spots eliminated.

Products required **weber.therm XM wall insulation system**



Re-fenestrate external facades

Frame and fix suitable external sheathing board to refenestrate external facade.

External wall insulation

Fix **weber.therm XM** external wall insulation system to sheathing board and choose from a range of finish options.

Balconies

Insulate in the walkway decking and use external wall insulation on the exposed soffits.

Insulate walkways and wing walls

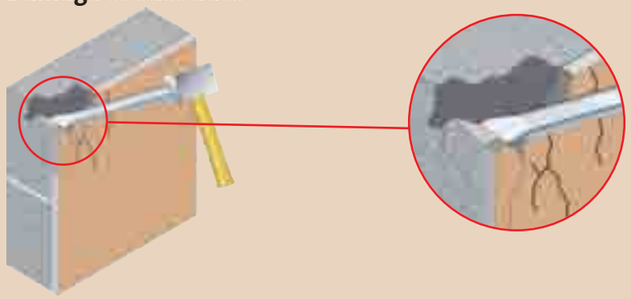
Insulate undersides of balcony walkways or both sides wing walls with external wall insulation.
Note: Insulation does not need to encapsulate large walls. Concrete and masonry have their own insulation properties in thickness. Insulate out each side of the element for a distance at which the wall itself provides the required insulation characteristics.

For detailed instructions, please refer to the relevant product data sheet.
For further information, please contact our Technical Helpline.

Refurbishing sound cracked rendering

The evidence that well designed and applied renders have proved to be reliable over many years is evident for all to see. However, some aging renders may need minor repair and refurbishment. Complete removal and reinstatement may not be justified.

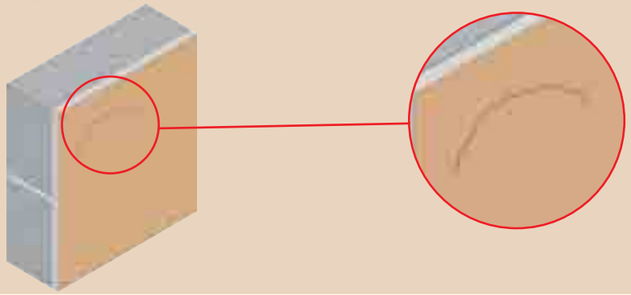
1 Damage to substrate



Renders are fully bonded to the substrate to which they are applied. In many cases, this bond is substantial.

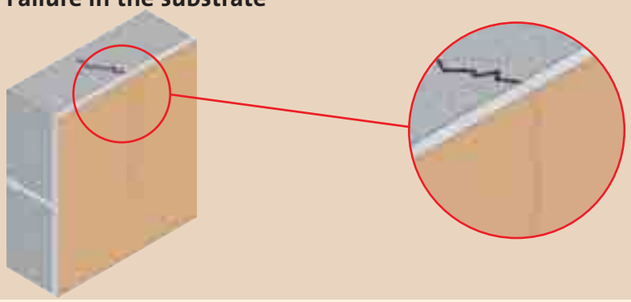
While it may be desirable to remove existing material completely, there is a high risk of damaging the underlying substrate during the removal process, therefore an alternative solution may need to be considered.

2 Static cracks



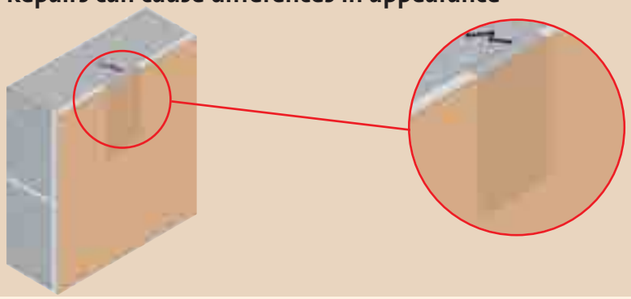
Although the rendering is well adhered and basically sound, static cracks may collect atmospheric dirt and become unsightly over a period of time.

3 Failure in the substrate



Inconspicuous cracks that remain dry and sound are usually best left alone. However, cracking may be a reflection of failure in the substrate and give cause for concern.

4 Repairs can cause differences in appearance



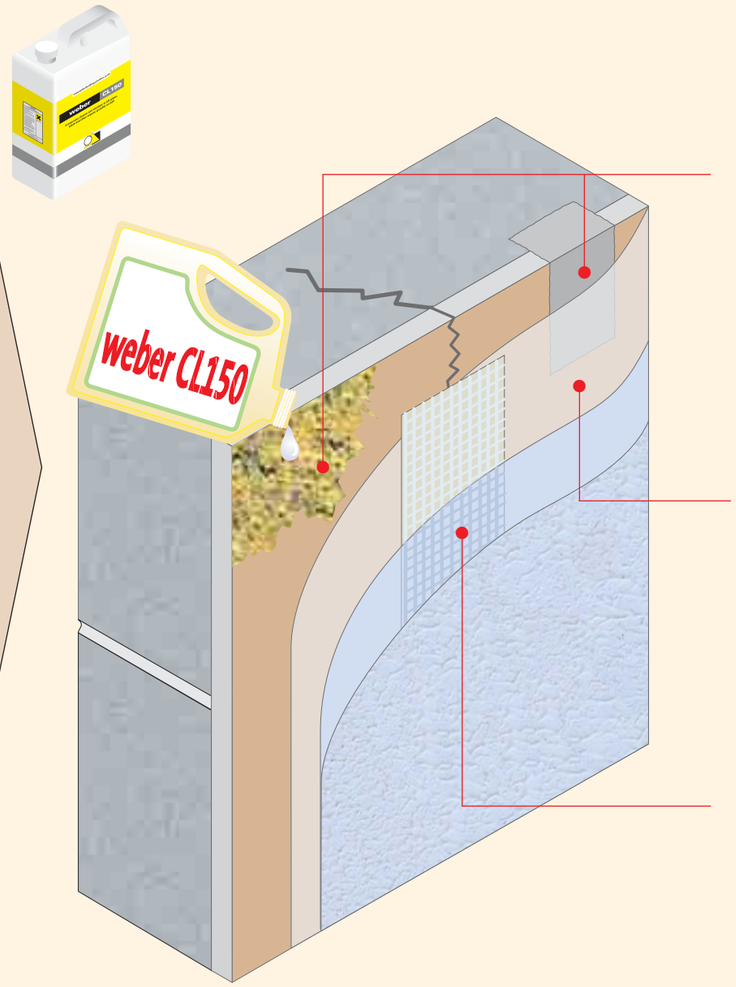
No matter how carefully done, cutting out and repairing cracks may not address the underlying problem and is likely to result in some differences in appearance over the area of the repair.

Treat cracks and finish with santane system

Existing materials need to be thoroughly investigated over all their areas, localised repairs carried out and the **Weber santane** system employed to upgrade the facade.

Products required

weber CL150
weber.rend OCR
renovex P
santane EFL or **santane TL**



Assessment

Identify the cause of cracking. Repair live cracks with a suitable **Weber** repair system to stabilise the structure. Refer to **Weber's** Technical Mortars team for specific project advice.

Localised repairs

Treat areas of with **weber CL150** and ensure that all areas are well adhered. Remove suspect areas, prepare substrate and carry out localised repairs with **weber.rend OCR** .

Surface levelling

Remove any loose or suspect coating. Where repairs result in differences in appearance, level the area with **renovex P**.

Crack treatment and finishing

Revitalise the facade with the **Weber santane** system. Treat repaired and static cracks with **meshcloth** incorporated in the system. Finish off with a further coat of **santane** (**note:** precise build up of **santane** depends on system empoyed).

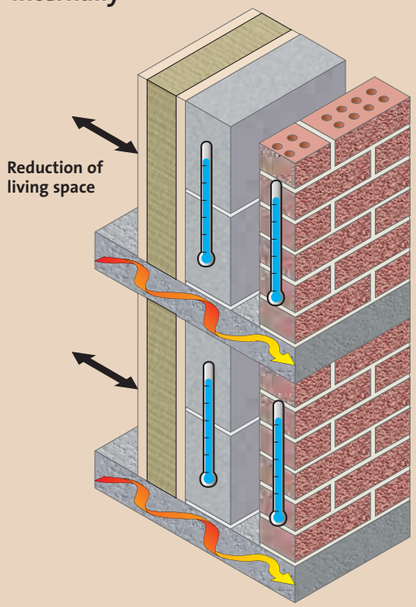
See page 27 for the **santane** colour range.

For detailed instructions, please refer to the relevant product data sheet.
For further information, please contact our Technical Helpline.

Upgrading the thermal insulation of a building

Initially a choice needs to be made regarding where to position additional insulation in the structure.

1 Internally

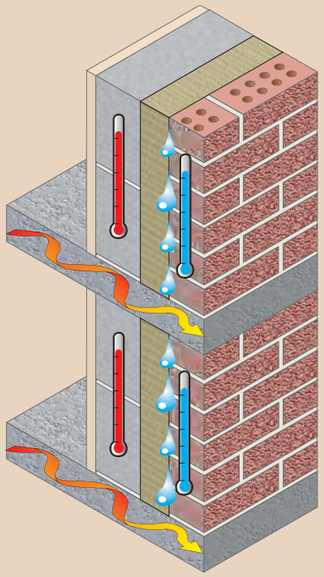


Insulation here encroaches on the usable space and causes major disruption to tenants in refurbishment situations.

It does not address cold bridging where floors are supported on the external walls. There is a high risk of condensation at these locations as a result.

The main external envelope ends up considerably colder than before and as a consequence is vulnerable to freeze thaw degradation.

2 In the cavity



Popular over the years, cavity insulation is limited due to available space.

The external leaf ends up considerably colder than before and therefore vulnerable to freeze thaw degradation.

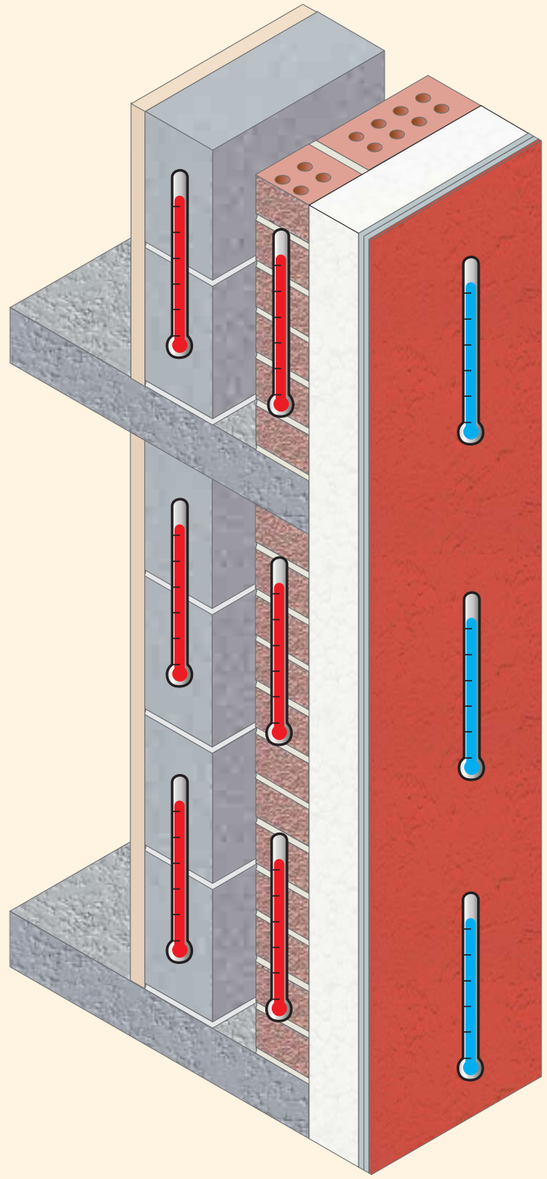
It does not address cold bridging where floors are supported on the external walls. There is a high risk of condensation at these locations as a result.

Fully filled cavities may provide a bridge that carries moisture between the wet external and dry internal leaves that wets the insulation and turns it, contrary to purpose, into a very effective cold bridge.

Use external wall insulation (EWI) system

External wall insulation arguably provides the technically best option for upgrading thermal insulation in existing construction and for simplifying new construction.

Products required **weber.therm** external wall insulation system



Assessment

External insulation effectively wraps the complete wall structure in a duvet. Insulation thickness is in effect limitless. Thermal spikes and interstitial condensation are eliminated. The whole structure is stabilised and kept warm – free from degradation.

Refurbishment

In refurbishment, the appearance of the building is significantly improved providing a better living environment for the tenant and the community with minimal disruption during installation.

New build

In new-build, external wall insulation offers the opportunity to simplify construction details, contributing to fast track build and reliable high performance buildings.

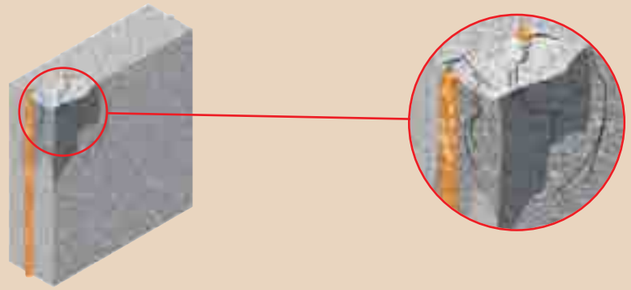
For detailed instructions, please refer to the relevant product data sheet.
For further information, please contact our Technical Helpline.

Problem 9

Refurbishing decaying concrete facades

Concrete structures often show signs of degradation over a period of time and these detract from the appearance and can eventually affect the structure.

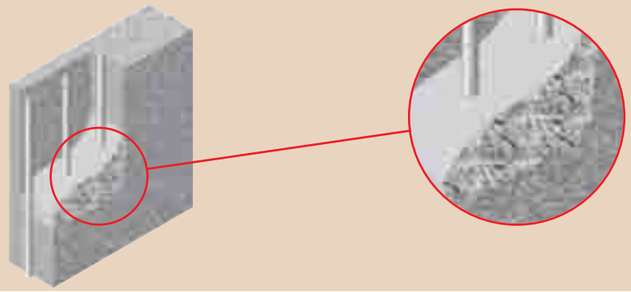
1 Corroded rebar affects concrete cover



Over a period of time, carbonation will affect concrete cover to reinforcing steel and lead to its corrosion. Unattended this will in time make the structure unsafe and eventually uninhabitable.

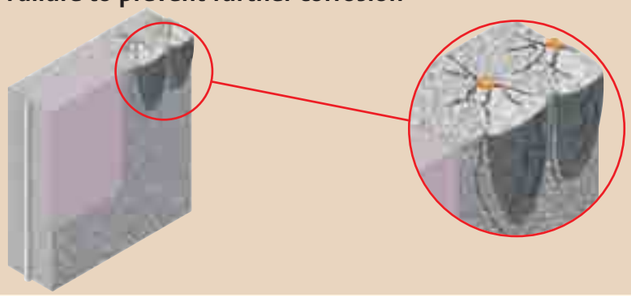
This effect is especially associated with construction where there is insufficient concrete cover to reinforcing steel.

2 Inadequate patch repairs



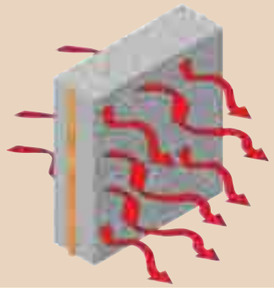
Simple cutting out and repair of decayed areas can leave uneven surfaces and even after fairing coats are used buildings retain their original, often dated, appearance.

3 Failure to prevent further corrosion



Even when repaired, the process of deterioration will continue in other areas if no action is taken to protect the structure from the elements.

4 Low thermal insulation



Old structures that have degraded over time often have low levels of thermal insulation when compared to modern standards and are more likely to suffer from related condensation and damp problems.

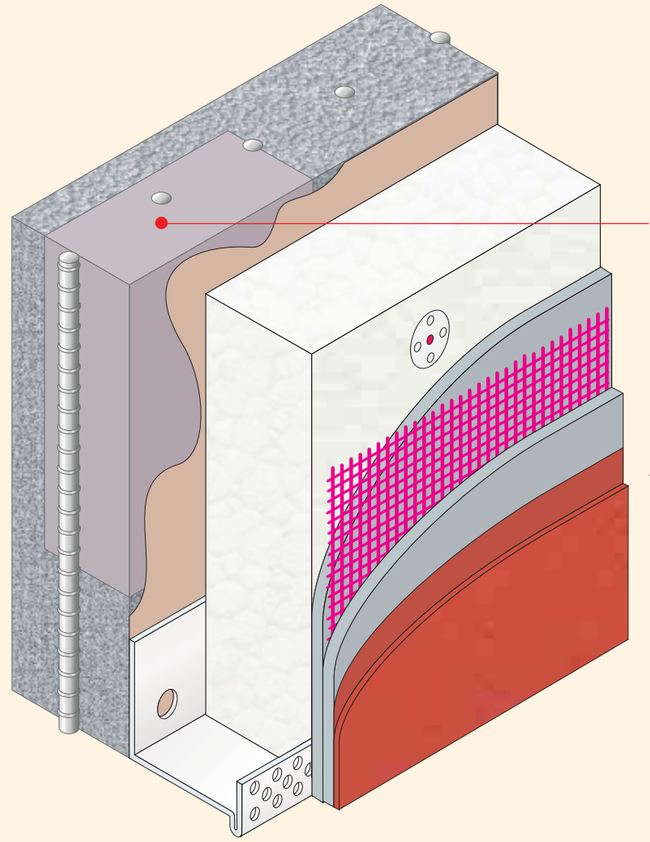
Solution 9

Repair damage and insulate with EWI system

Repair damage to concrete elements to stabilise the structure and then enhance the finish and prevent further degradation with an External Wall Insulation System.

Products required

weber.cem concrete repair system
weber.therm external wall insulation system



Assessment

Assess and cut out areas of damaged reinforced concrete. Assess structural strength and stability.

Repair

Clean steel and repair with a suitable concrete repair system from **Weber**.

Each situation will need to be addressed on an individual basis.

In the first instance contact **Weber** technical staff for advice on 01525 722110.

Insulate

Protect/upgrade, insulate and, if desired, remodel the structure with an External Wall Insulation System from the **Weber** range.

See page 70 for selection advice.

For detailed instructions, please refer to the relevant product data sheet.
For further information, please contact our Technical Helpline.

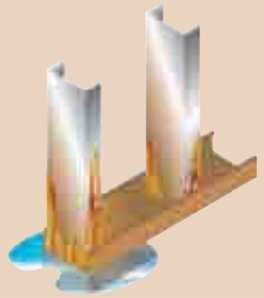
6

Problem 10

Insulating lightweight metal frame constructions

The use of a lightweight metal frame is a fast-track modern construction method. However, the structure needs to be kept warm and dry to avoid all possibilities of corrosion.

1 Steel frame is vulnerable to corrosion



Lightweight steel frame is structural and load bearing and, although galvanised, vulnerable to corrosion if subjected for long periods to wet conditions.

2 Cold bridging and interstitial condensation

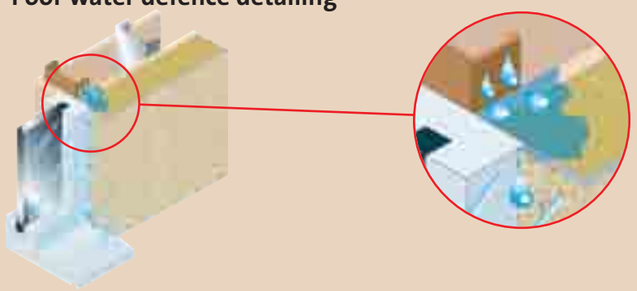
Steel frame has no insulation properties of its own.

Insulation must be placed at the correct position in the structure to avoid cold bridging, interstitial condensation and the conditions under which corrosion could take place.

3 Water defence cavity recommended

The NHBC recommends a water defence cavity between the frame and external cladding.

4 Poor water defence detailing



Water defence detailing at openings is critical to the longevity of the structure.

Solution 10

Use weber.therm FT and EWI system

weber.therm FT's components have been designed to be used with the **weber.therm XM** external wall insulation system to satisfy all requirements for cavity and robust detailing. The system has been accepted for guarantee purposes by the NHBC.

Products required

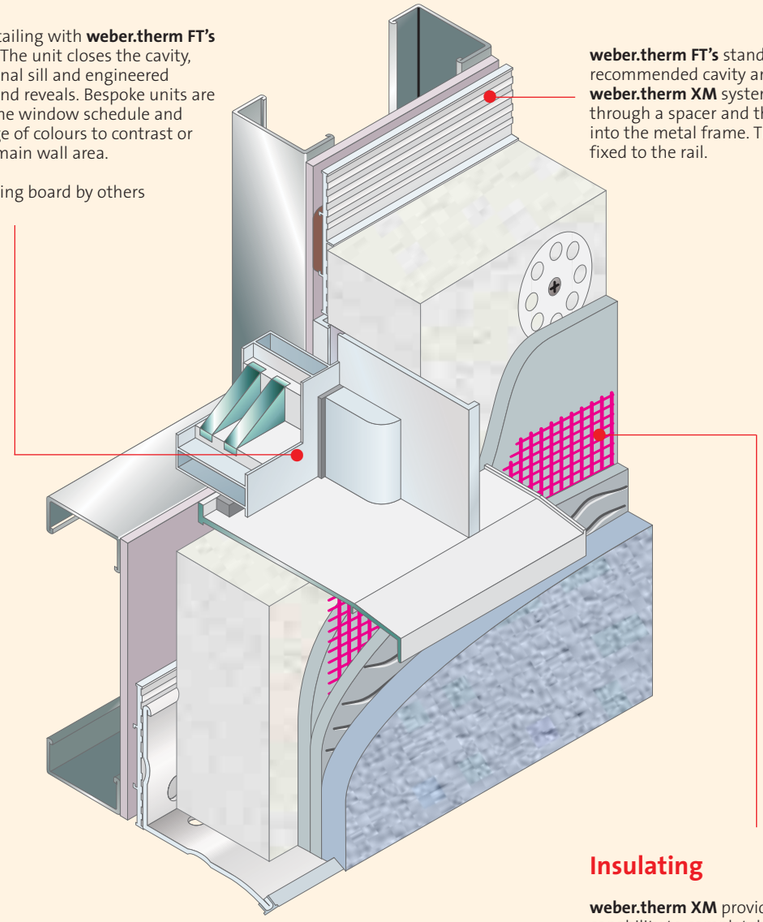
weber.therm FT
weber.therm XM

Due to design changes in the weber.therm FT system, please contact Weber for the latest information.

Sealing

Provide robust detailing with **weber.therm FT's** weatherseal unit. The unit closes the cavity, provides the external sill and engineered finished to head and reveals. Bespoke units are made usually to the window schedule and available in a range of colours to contrast or complement the main wall area.

Frame and sheathing board by others



weber.therm FT's stand-off rail provides the recommended cavity and support for the **weber.therm XM** system. The rail is fixed through a spacer and the sheathing board into the metal frame. The system is then fixed to the rail.

Insulating

weber.therm XM provides the insulation capability to completely envelop the vulnerable frame keeping it in ideal warm and dry conditions, free from the dangers of interstitial condensation. Several external finish options are available.

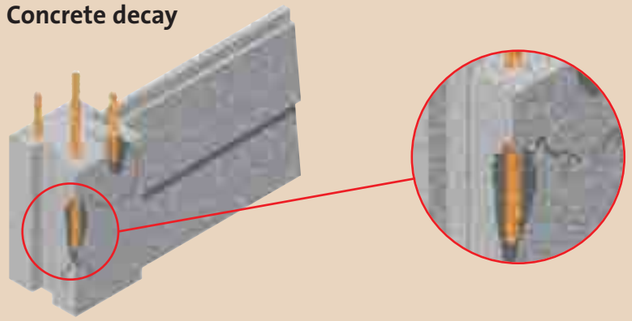
For detailed instructions, please refer to the relevant product data sheet.
For further information, please contact our Technical Helpline.

6

Upgrading non-traditional housing

Early non-traditional or system built housing was not built to today's thermal standards and some prefabricated units were only ever intended to be temporary accommodation which, while much appreciated at the time, were not intended to have a long life.

1 Concrete decay



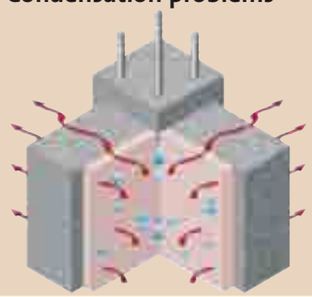
These are often concrete structures which show signs of decay after along period of time.

2 Movement

System built prefabricated units are often subject to relatively high building movement.

Due to the construction methods this movement often continues throughout the life of the property, driven by thermal cycles.

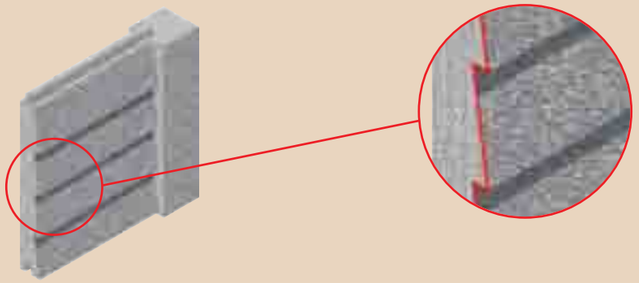
3 Condensation problems



Low thermal resistance of the wall construction often means that these properties are plagued by condensation problems.

Where a steel frame was used with a mixture of steel cladding and masonry, condensation is a big problem and in the extreme can cause failure in the steel structure.

4 Uneven surface for rendering



These construction methods often feature infill panels. These may not offer a flat, in-plane surface suitable for traditional rendering.

Repair and insulate with an EWI system

As a major part of the programme to produce a mortgageable property, address any structural issues and insulate externally with a **Weber** insulated render system incorporating a fixing method suitable for the particular construction.

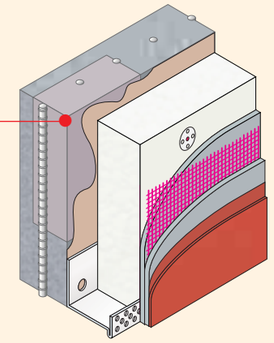
Products required

weber.cem concrete repair system
weber.therm external wall insulation system

Assess and repair

Cut out and repair defective concrete. Inspect for and ensure structural integrity.

Repair concrete with a suitable **Weber** concrete repair product. Requirements will vary – contact **Weber** team for advice.



Insulate

Thermally stabilise the structure by insulating externally with a suitable **Weber** insulated render system.

See page 70 for selection advice.

External Wall Insulation for Refurbishment

A guide to the thermal improvement, external redecoration and concrete repair of solid wall and non-traditional buildings is now available from Weber.

System-built non-traditional or traditional brick construction, low or high rise – **Weber** has a rich background of providing EWI systems to refurbishment projects going back over 30 years (under its previous name of Eglinton).

So-called 'hard-to-treat' homes are being renovated daily and **Weber** can make the process easy by offering an extensive variety of systems, full technical and sales back-up, an established installer network and contacts with potential funding providers.

Because many properties require the repair of concrete structures before external wall insulation systems can be installed, this guide also includes a section covering **Weber** concrete repair and protection.

This brochure provides a step-by-step guide to tackling one of the most important issues facing our existing housing stock.

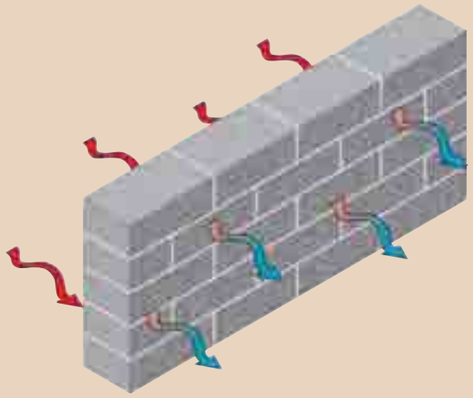
For your copy, contact **Weber** on **01525 722100** or download the brochure from **www.netweber.co.uk**.

Problem 12

Insulating single-skin construction

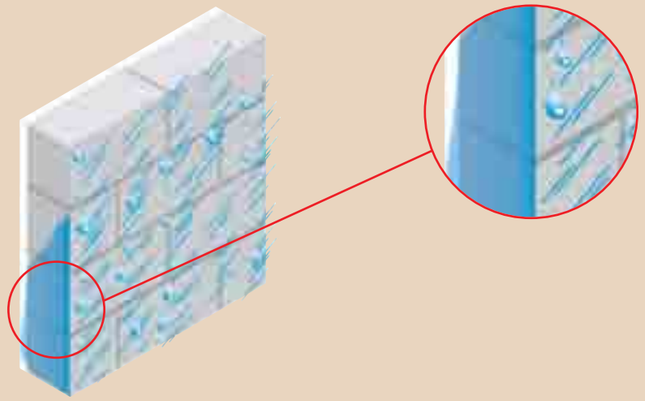
A fast-track, simple and reliable form of construction. Detailing at openings is of vital importance to avoid moisture tracking around seals to the inner face. Simple traditional sealants are of concern to designers as there is a very short distance between the elements and the substrate at openings.

1 Thick materials required



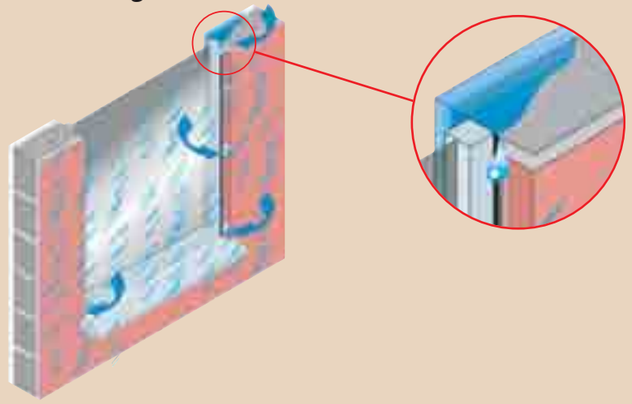
Single-skin solid wall construction may need relatively thick materials to provide thermal requirements, thereby increasing the building footprint.

2 Poor resistance to weather



The masonry available to provide thermal resistance at reasonable thickness for single-skin construction often needs a protective and decorative cladding.

3 Poor sealing



Without careful detailing at openings water can track around windows and door frames etc. bypassing seals at openings.

Good quality and reliable seals are paramount. Simple gun-applied sealants used with cavity construction are often poorly applied. If they fail for whatever reason with single-skin construction, the construction is immediately exposed.

Solution 12

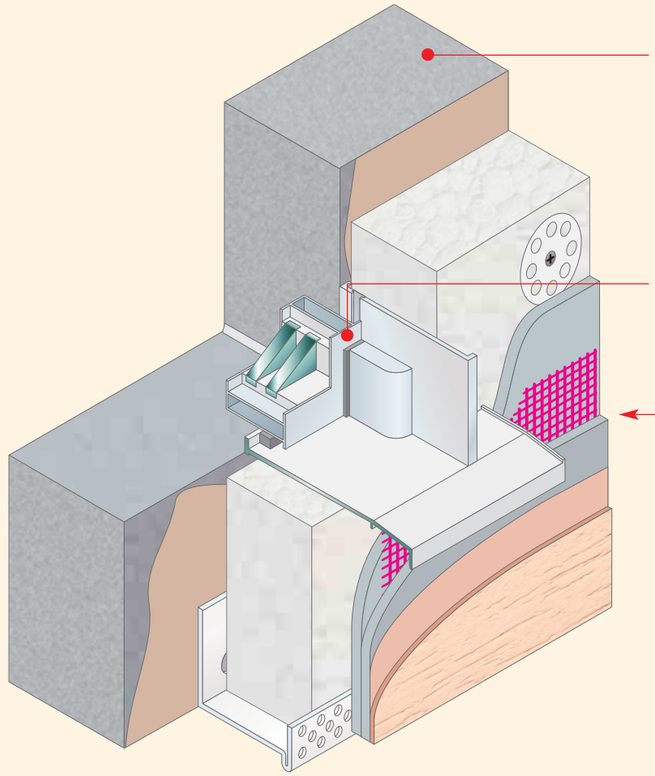
Use weber.therm XM and weber.therm FT system

weber.therm XM and the weatherseal unit from the **weber.therm FT** components insulate the structure while providing robust multi level defence to water ingress at openings.

Products required

weber.therm XM
weber.therm FT's weatherseal unit

Due to design changes in the weber.therm FT system, please contact Weber for the latest information.



Single skin construction in a thickness suitable for load bearing purposes only.

Sealing

weber.therm FT weatherseal unit fixed back to the masonry provides multi-level defence against water ingress at openings in the structure.

See pages 78, 82 and 160 for full details of the **weber.therm FT** system.

Insulating

weber.therm XM external wall insulation system provides thermal insulation, protects the structure and offers several external finish options. It keeps the footprint low and does not encroach on usable space.

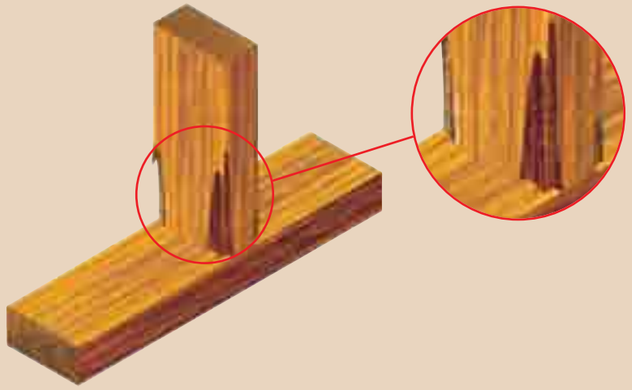
See pages 77, 78, 81, 82, 83 and 158 for full details of the **weber.therm XM** system.

For detailed instructions, please refer to the relevant product data sheet.
For further information, please contact our Technical Helpline.

Insulating timber-framed construction

Timber frame methods of building offer many benefits in the way of fast-track and off-site construction. However, timber, although treated, is vulnerable to rot and needs to be kept in a warm, dry environment.

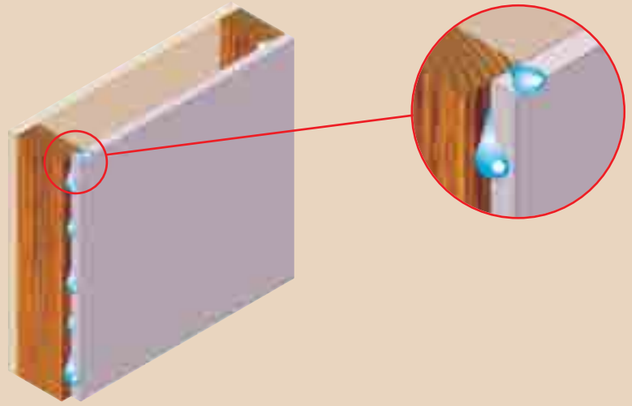
1 Bad construction may lead to rot



For complete peace of mind even treated timber needs to be kept in a dry environment.

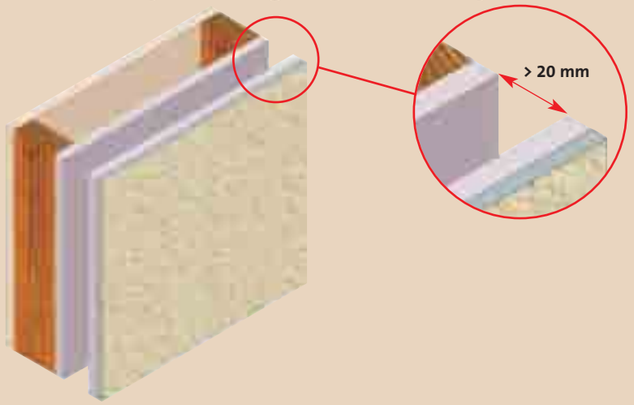
Poor detailing and bad construction may lead to water penetration of the facade, which if allowed to reach the timber frame, may result in rot and at worst, structural failure.

2 Interstitial condensation



Interstitial condensation may form within the structure when insulation is not placed in the correct position. Timber constructions often rely on a vapour barrier on the warm internal face.

3 No benefit by insulating outside the cavity

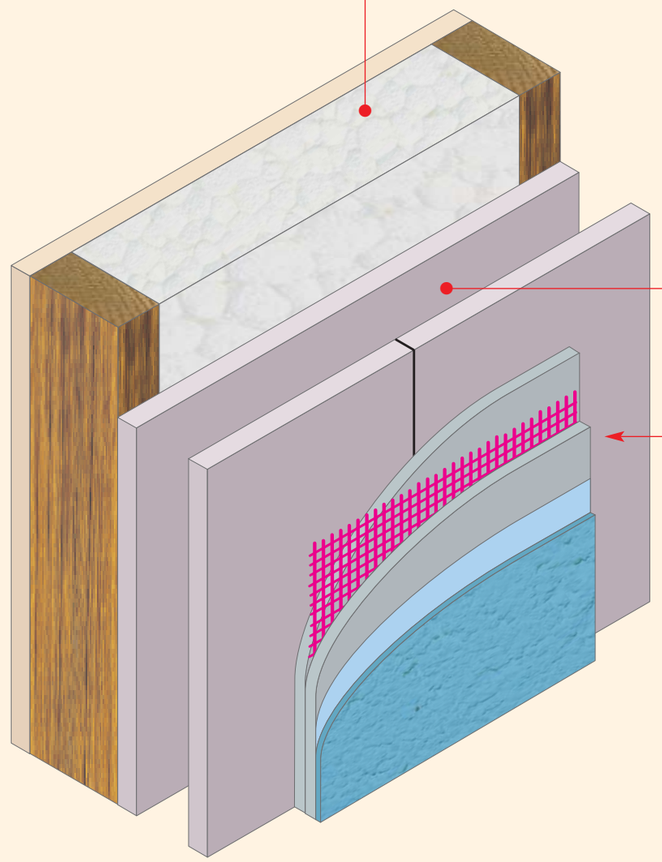


The NHBC recommend and require that a ventilated and drained cavity be installed between the cladding system and the timber frame. The ventilation helps control the moisture levels of the timber. As the cavity is ventilated, there is no benefit gained by insulating outside of the cavity.

Insulate and finish with weber.rend MT

Insulate the frame within the stud, provide a minimium 40 mm cavity (20 mm if backed by breather membrane or similar). Fix suitable sheathing board spaced off to create drained/ventilated cavity and finish with **weber.rend MT**.

Products required **weber.rend MT**



Insulate

Fix insulation within the stud

Ventilate

Provide suitable sheathing board spaced off the insulation/stud to maintain the drained and ventilated cavity.

Finish

Finish with **weber.rend MT** system with choice of finishes .

Note: Due to space constraints, full specification details for panel based systems are not included in this guide. They are however, readily available from **Weber's** technical services staff.

Specification advice for direct-applied renders

Thickness and coats

Introduction

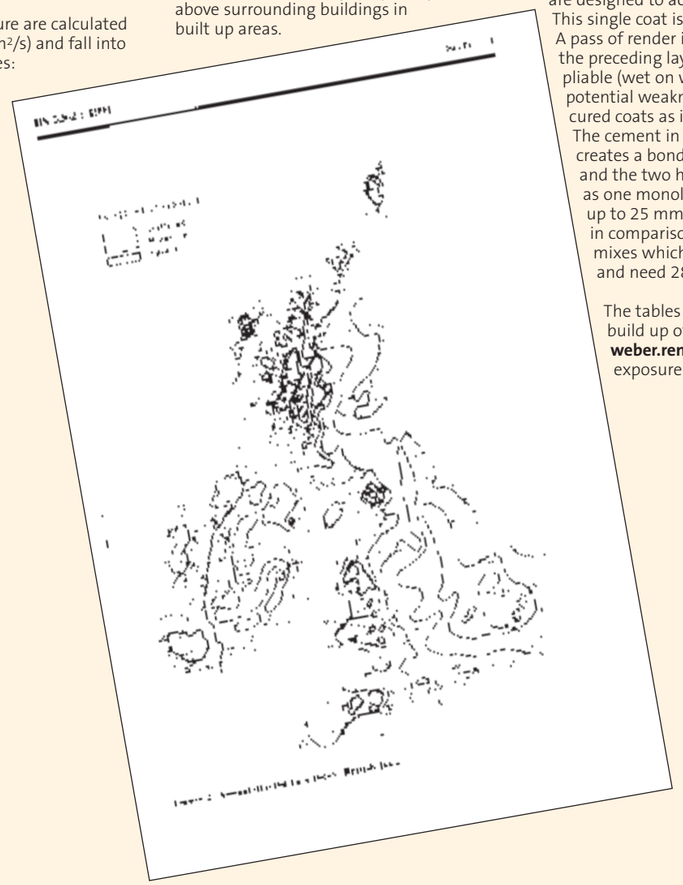
The thickness of a render and the number of coats required is largely dependent on the exposure of the building to which the material is to be applied. The following information provides guidance on the suitable thickness of **Weber** Monocouche for the range of exposure categories.

Exposure

The *Code of practice for external renderings* BS 5262, defines categories of exposure for areas of the United Kingdom and Ireland, thus enabling the designer to determine the correct render thickness for a given geographical area (see extract from Section 3 of the British Standard below).

The categories for exposure are calculated for a driving rain index (m^2/s) and fall into the following three ranges:

- Sheltered
- Moderate
- Severe



BS definitions

Sheltered
Areas of moderately low rainfall in which walls are protected from the weather by overhanging eaves and by the close proximity of buildings of similar, or greater heights. Ground and first storeys in towns.

Moderate
Walls are partially protected from the weather by overhanging eaves and by other buildings of similar height in the neighourhood. Applies to buildings in towns and in suburban districts generally.

Severe
Exposure to the full force of wind and rain. Applies to buildings on hill sites and near the coast, and buildings projecting well above surrounding buildings in built up areas.

This method of exposure classification is basic and not site specific. For accurate measurement of exposure to a particular site the guidance given in BS 8104:1992 provides the specifier with a method of calculation for his project. This method of calculation is defined in cycles of wet and drying conditions called *spells* and is measured in litres/m^2/spell.

Traditional renders are built up in coats. Each is allowed to cure for between 3 – 7 days prior to the application of subsequent coats. Normally the thickness of this type of rendering should not be less than 20 mm and in 3 coats for exposures classified as severe. For moderate and sheltered classifications the application would consist of 2 coats to a minimum thickness of 16 mm.

Monocouche and **weber.rend OCR** renders are designed to achieve a monolithic coat. This single coat is built up in 1 or 2 passes. A pass of render is normally applied whilst the preceding layer is still 'green' or pliable (wet on wet) to avoid forming potential weakness between separately cured coats as in traditional rendering. The cement in the two passes then creates a bond across their interface and the two hydrate and cure together as one monolithic coat. Applications of up to 25 mm can be achieved in 1 day in comparison to traditional site mixes which take 21 days to cure and need 28 days before decoration.

The tables opposite describe the build up of Monocouche and **weber.rend OCR** for the different exposure categories.

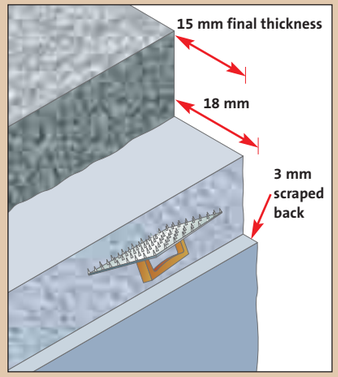
Exposure category (BS 5262:1991): Sheltered/Moderate

(0 – 75 litres/m^2/spell – see notes below)

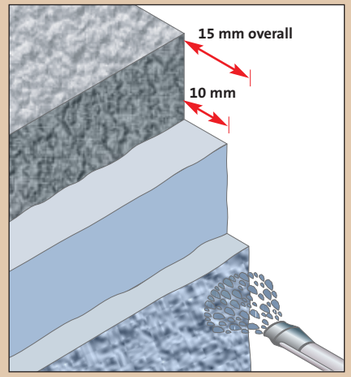
Thickness of each pass and build up

Monocouche

Scrape texture
Up to 18 mm in one or two passes, scraped back to 15 mm

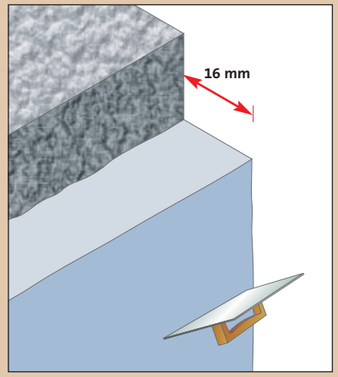


Spray texture
An initial pass of 10 mm with a further spray-textured pass of 5 mm to achieve a minimum thickness of 15 mm overall



weber.rend OCR

Float finish
A single pass of 16 mm



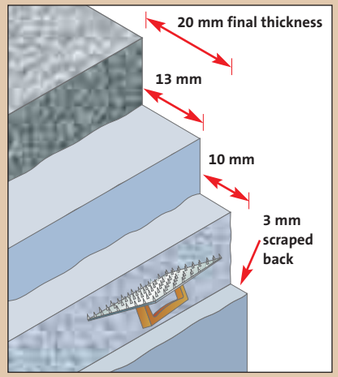
Exposure category (BS 5262:1991): Severe

(>75 litres/m^2/spell – see notes below)

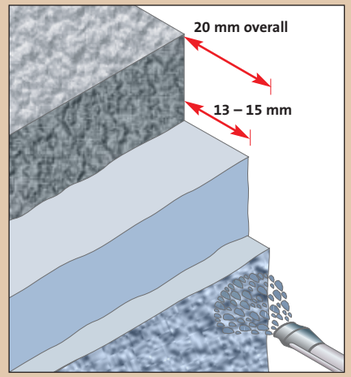
Thickness of each pass and build up

Monocouche

Scrape texture
An initial pass of 13 mm with a further pass of 10 mm scraped back to achieve 20 mm thickness

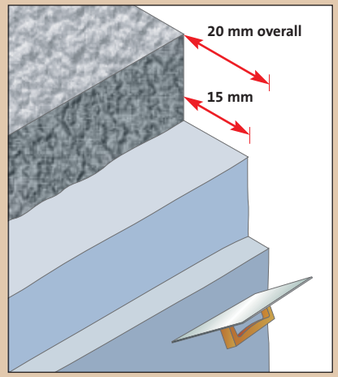


Spray texture
An initial pass of 13 – 15mm with a further spray-textured pass of 5 – 7mm to achieve a minimum thickness 20 mm overall



weber.rend OCR

Float finish
An initial pass of 15 mm with a further pass of 5 mm to achieve 20 mm overall



Notes

- For exposed elevations a **weber.rend aid** key coat can be used to enhance the performance of the applied facade (see review of BS 5262 on page 227).
- In severe locations over 75 litres/m^2/spell and up to 100 litres/m^2/spell Monocouche renders should not be used on this form of construction. Consideration should be given to **Weber** external insulation systems.
- **Weber** Monocouche renders have been tested by the British Board of Agrément (BBA), Certificate No. 05/4268, at a finished thickness of 15 mm to be suitable in areas where the local wind-driven rain wall spell index is less than 75 litres/m^2/spell (BS 8104:1992). For areas with a higher rain wall spell index a minimum of 20 mm finished thickness is required as detailed in the severe category above.
- **Weber** Monocouche renders have been tested by the Irish Agrément Board (IAB), Certificate No. 03/0180, and when applied in accordance with the above, will have adequate resistance to wind and wind-driven rain in all exposures in Ireland.

Substrates

The substrate should be constructed of durable and moderately strong materials specifically designed to receive modern renders.

Renderings adhere by a combination of moderate suction and good mechanical key. In a designed background the cement particles in the material are drawn, by capillary action, into the pores of the substrate. In addition, the larger render constituents lock into the physical key of the background to provide a strong durable bond. To ensure this occurs, all substrates should be clean, suitably dry, sound and free from anything that may interfere with the adhesion, such as oil, grease, organic matters and soluble salts.

The main characteristics for a substrate are: strength, suction and key

Strength

The substrate should be designed and constructed so that it adequately supports and restrains the rendering.

The substrate, including any joints in masonry, should be no weaker than the rendering material used.

Suction

Good adhesion of a cement render is greatly reliant on the suction in the substrate. Excessive suction will impair the hydration of the rendering and therefore affect its bond with the substrate. On the other extreme, low suction substrates will not offer sufficient capillary action to gain a good bond.

Key

For the background to give support it must provide an open or preformed textured surface to allow the render material to penetrate and promote aggregate interlock between the render and the substrate.

Forms of substrate for new build construction with applied rendering are typically: blockwork, concrete and brickwork.

Blockwork

Generally a block is manufactured with an open texture or a designed key for rendering. Relying on the raking of mortar joints is not sufficient to provide the key alone.

Smooth dense blocks with little mechanical key should have the key enhanced by an application of **weber.rend aid** stipple coat.

The strength and density of the blockwork should be assessed in regard to its compatibility with the proportion of cement content of the chosen rendering. Low density blockwork such as Aerated Autoclaved in some cases may not be compatible with a render mix having a cement:lime:sand ratio stronger than a 1:1:6 for example.

Block manufacturers can advise on the recommended mortar/render strengths for the chosen block. Strength or classification of renders is detailed in the individual product literature in *Section 10*.

Concrete

Concrete offers minimal suction and generally insufficient key for the rendering to adhere. The aggregate should be exposed during construction of the concrete, or after the concrete has cured by the use of bush hammering or other suitable mechanical means. Alternatively, the concrete should be coated with a **weber.rend aid** stipple coat to provide key for the subsequent render application. No-fines concrete will provide a satisfactory key.
Please note that advice should be sought regarding concrete curing agents that may interfere with the bond of the **weber.rend aid** application.

Brickwork

To provide key, new brickwork should be laid with the mortar joint recessed 10 – 12 mm by width and depth squarely.

Existing brickwork will require the joints raking back to the above dimensions. If the joint is too hard, the key should be provided by a stipple coat of **weber.rend aid**.

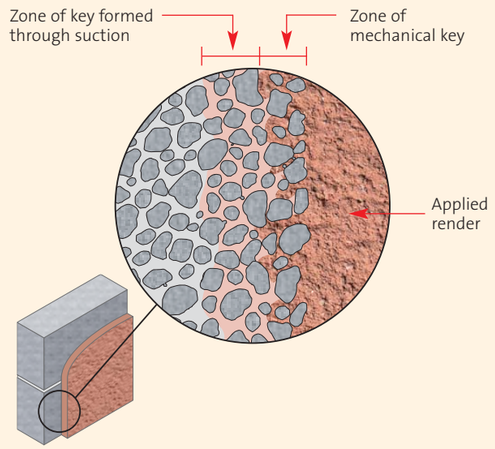
Some common bricks may contain deleterious sulphate salts. If possible, advice should be sought from the brick manufacturer regarding their use as a substrate for rendering in that location, particularly in high exposure or potentially damp areas.

An application of **weber.rend aid** manufactured with sulphate-resistant cement will deter sulphates from crystallising and impairing the bond of the render.

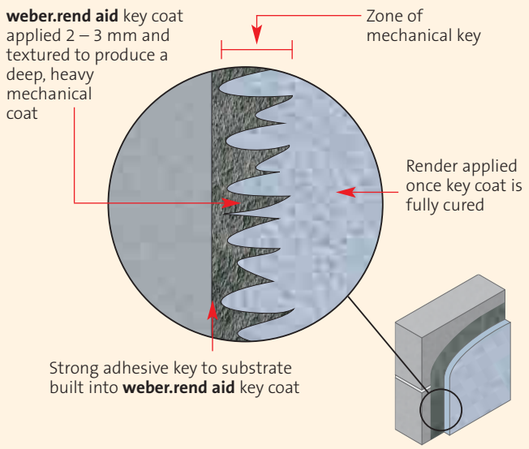
Suction control

Suction control, particularly when using lower density block, should be achieved by spraying the wall with an even mist of clean water prior to rendering. If there are a combination of issues, such as varying suction or insufficient key in addition to high suction, then an application of **weber.rend aid** is in order. Please note that mist spraying with water should be done in a controlled manner in order to avoid saturating the blockwork. Excessive watering will increase drying shrinkage and can induce cracking in the block. Any such cracking is likely to be reflected in applied materials.

Section through substrate with suitable key and suction



Section through substrate requiring mechanical key



Crack control

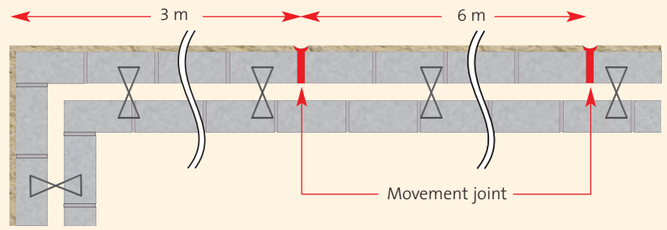
Weber renders are manufactured from carefully selected and graded aggregates to minimise drying shrinkage of the applied render. Providing that good practice, appropriate design and suitable preparation is undertaken, the rendering will be fully bonded to the substrate and restrained from movement by that surface and will not crack. It is therefore most important that stress/crack control is considered prior to construction in order to reduce the likelihood of cracking.

When the construction is correctly divided into appropriate panels separated by suitable movement joints, the stresses caused by drying shrinkage and normal building movement will dissipate to the detailed relief joints. Movement joints are not a requirement in the render alone as this is fully bonded to the substrate. They should however, reflect and follow through from the relief joints detailed in the construction.

Movement joints

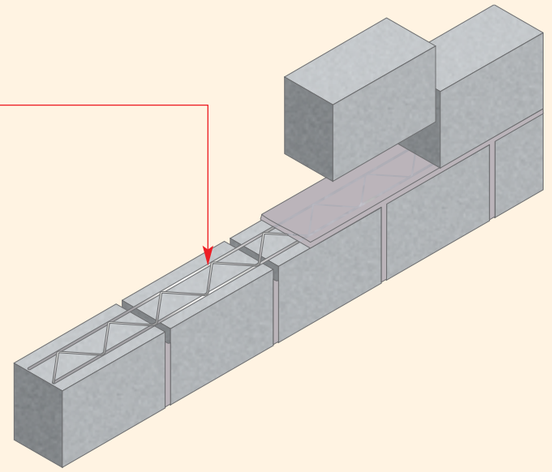
Guidance on the placement of movement joints should be gained from the specified block manufacturer and used in conjunction with the BS 5628-3 *Code of practice for use of masonry* and BS 6093 *Code of practice for design of joints and jointing in building construction.*

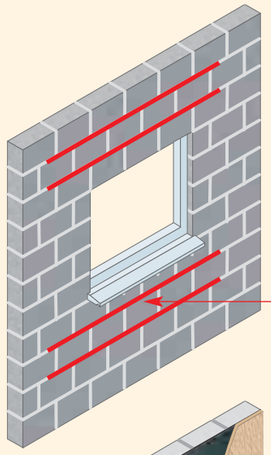
The guidance given in these standards is that joints should usually be included at 6 m intervals and 3 m from corners, however, this will vary depending upon the type of construction and the strength of the brick or block.



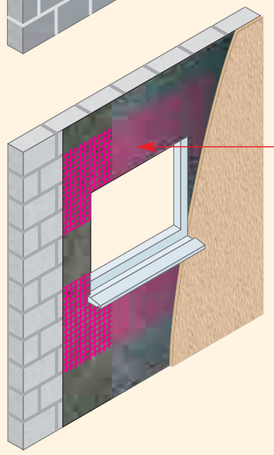
Mortar bedding joint reinforcement

The exact spacing of joints can be adjusted by the use of mortar bedding joint reinforcement. The amount and positioning of this reinforcement should be detailed by the block manufacturer.





In **Weber's** experience cracking of the substrate can be considerably minimised if mortar bedding joint reinforcement is used, specifically at weak points in the construction, such as above and below window and door openings .



Glass fibre mesh reinforcement

The render's ability to distribute and resist stresses can be enhanced by the inclusion of glass fibre reinforcement mesh cloth at positions of localised high stress i.e. at the corners of openings, at junctions of differing materials or around crack inducers such as weep holes. For more detail regarding the inclusion of mesh please refer to best practice recommendations in Section 9.

Straight line cracking that can sometimes be seen in completed render panels is not typical of render failure, but rather the reflection of a crack in the substrate. Stress/crack control must be given serious consideration prior to construction.

Accessories

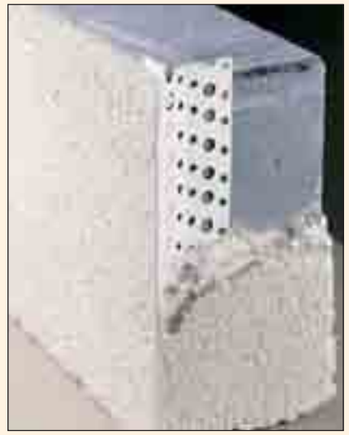
Arrises, features and stops can be formed with the use of purpose made profile beads or by the traditional method using timber rules.

Proprietary beads are available for detailing angles, pre-sealed movement joints and both stop and bellcast details. Suitable beads are manufactured for external rendering in stainless steel and plastic. For coloured renders, purpose-made plastic beads and stainless steel beads with plastic nosings, are manufactured in a range of colours. Please note that proprietary beads will always be evident in the finished elevation.

Forming angles

Angles in floated, scraped and spray textured finishes can be formed by splayed timber rules that are temporarily fixed during application. This method is a necessity when specifying an Ashlar render finish, as profiled beads will interfere with the continuity of the Ashlar joint. For scraped renders, some render may spall away from the nose of a standard angle bead profile during the scraping process. Proprietary Y-section plastic beads are available and form the best solution, after traditional methods, by promoting an even thickness of render right up to the corner point. Stainless steel profiles can be used with floated and spray textured work along with the above.

Plastic nose corner bead



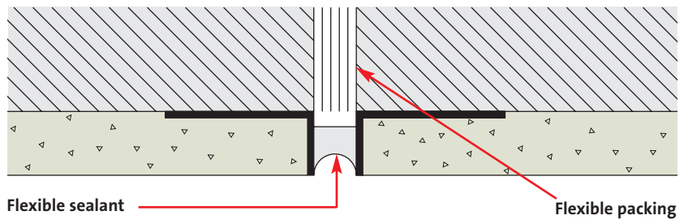
Y-section corner bead

Movement joints

The traditional method of expressing a movement joint is with the use of 'greased' temporary battens to create the joint in the fresh rendering. The formed joint is then filled with a suitable elastomeric sealant after rendering. This method is recommended for Ashlar work where the cut detail may pass through the movement joint position.

In all other finishes, the use of proprietary sealed movement beads is acceptable. These can be obtained in either plastic or stainless steel depending on the finish required.

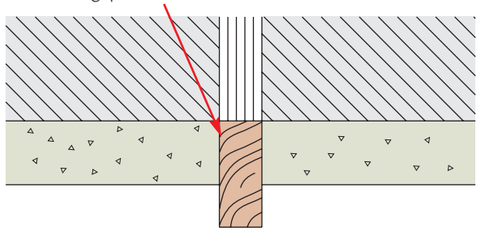
Using two 'back to back' stop beads



Movement joints can also be formed through the render using the following methods

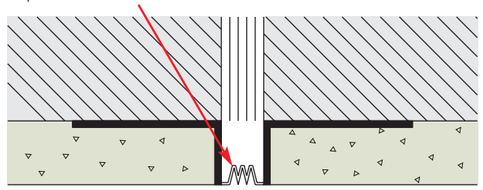
Using a temporary timber batten

Take care removing the timber so that the edges are not damaged and fill the gap as above.



Using a proprietary accessory

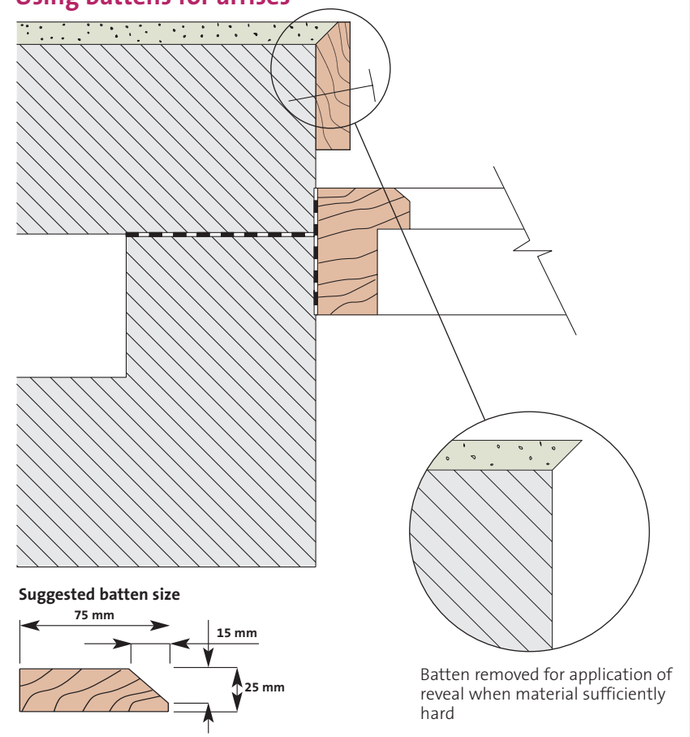
Many manufacturers make this type of bead, which does not require the use of sealants.



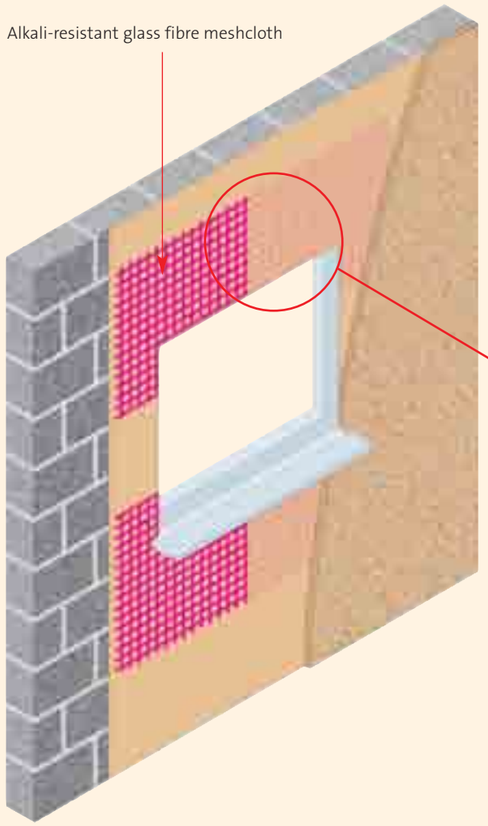
Stop beads and bellcast beads

Temporary timber battens can be used to form stops and bellcast details, particularly when Ashlar work is specified. For all other finishes, the use of proprietary beads in stainless steel or plastic can be used to form bellcast details, or to promote a clean stop detail for all render finishes and at typical abutments to other building features where a mastic sealant will be required, i.e. at window and door frames.

Using battens for arrises



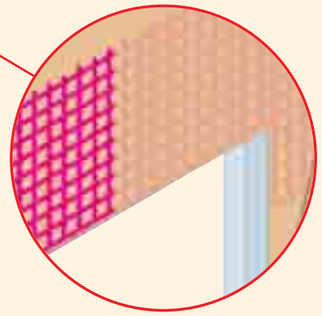
Batten removed for application of reveal when material sufficiently hard



Meshcloth

The ability of the render to resist cracking and spread any stresses transmitted from the substrate can be increased by the inclusion of **Weber** standard meshcloth, alkali resistant fibre mesh, in the render in areas of typical stress points in the construction, i.e. above and below all openings such as windows and doors and at horizontal junctions of dissimilar substrates e.g. ring beams.

Mesh should be cut into strips that will extend past the junction or point of weakness by 200 – 500 mm and pressed evenly into the freshly applied render with a trowel or spatula, ensuring that it is not in contact with the substrate, and then overlaid with further render to encapsulate the mesh. If using a **weber.rend aid** key coat it may be embedded in this application.



Meshcloth shown being embedded in the first pass of monocouche.

Construction issues

Alignment

The background construction should be sufficiently true, in line and plumb to accommodate the product specified and its constraints. The render alone should not be used to correct gross irregularities. As a guide, the maximum that can be achieved is a correction of a 5 mm deviation underneath a 2 m straight edge placed anywhere on the surface of the substrate.

BS 5628-3 makes this commentary.
The permissible deviations given in Table A2 and Table A3 are intended to provide satisfactory structural performance of the masonry. They should not be regarded as defining acceptability of appearance. Furthermore they do not necessarily accord with standards of accuracy required for the fit of associated building components (e.g. door and window frames) or with the provision of flat backgrounds for wall finishes or linings. Higher levels of accuracy may need to be specified where such components or finishes are to be installed.

Table A2 quotes a straightness in any 5 m length as ± 5 mm

Applied render will follow the line of its substrate and cannot be expected to correct all deviations in the background especially over long distances. While there are no tolerances quoted in current standards for the alignment of what is basically a hand-finished material, **Weber** would expect that a standard of 3 mm deviation underneath a 1.8 metre rule placed anywhere on the surface can be achieved. Over longer lengths the render will follow the general line of the background.

Curing

It is important that a freshly constructed substrate is allowed to cure properly before the application of any render materials. If the substrate is not fully cured, creep and drying-shrinkage of the background can occur. This could result in the formation of cracks in the substrate, which will more than likely be reflected through into the finished render material. It is recommended that the substrate is allowed to cure for a minimum of 28 days before the application of render.

Cleanliness

Substrates to receive render must be clean, sound and dry. The construction must be free from oil contamination, dust, fungal growth, crystallised salt and any other factors that may impair the adhesion of the applied system or form a weak intermediate layer.

Moisture content

Temporary guttering should be in place prior to rendering to avoid the substrate getting saturated and the resulting increased drying shrinkage of the construction. Temporary down pipes should direct water away from the wall throughout the project.

Saturation of the substrate can mobilise any salts that it contains and allow them to pass to the face of the background. It will also encourage algae/fungal growth. Both of the above will have an adverse effect on the bond between the substrate and the render.

In addition, saturation of the substrate will prolong the drying and curing of the applied render increasing the likelihood of limebloom (efflorescence) on the finished elevation and allow adverse environmental effects such as freeze/thaw to take place.

Protection

A building fabric exposed to rain and allowed to become saturated will be subject to a greater amount of movement due to drying shrinkage than one that is protected from the elements. This will put additional strain on the building envelope increasing the risk of cracking within the substrate, which will inevitably be reflected in the applied render.

Protecting elevations during the construction programme has the additional benefit of helping to enable application to continue during inclement or cold weather. For further information on working with the weather see page 138.

Building fittings

Before rendering is started on an elevation, all the major building components must be fitted. This includes copings, cappings and flashings, windows and doors, soffits and fascias etc. The fittings must be detailed to protect the finished render from staining due to localised water run off.

Flue pipes, air bricks and weep holes should also be in final position prior to the application of render to remove the need to breakout and repair finished render after their installation. Repairs in finished render often result in differences of appearance compared to main wall areas and are often visible on completion.

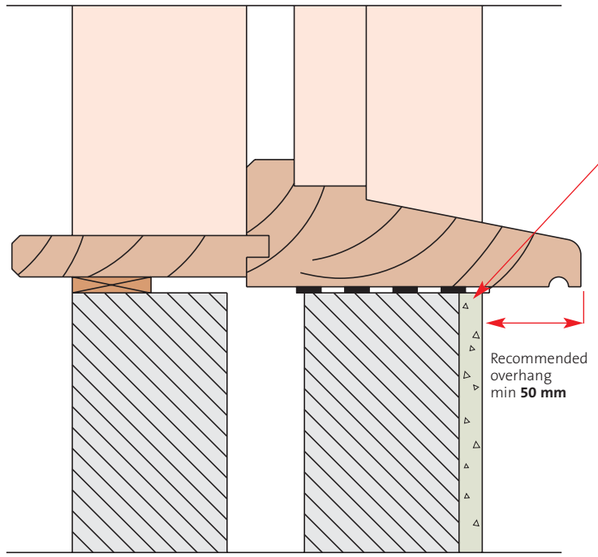
Architectural detailing

With regard to detailing, there are two main considerations. The vulnerable part of any render is the vertical bond to the wall and as such, protection from water ingress at this point is important. Isolated run-offs of water from sills and the like are likely to lead to staining over a period of time especially in areas where the atmospheric conditions are polluted. Detailing therefore has to protect the vertical bond interface and throw water away from the wall.

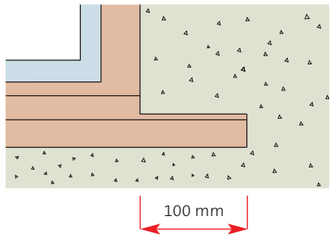
Careful design is required at the base of walls to prevent the rendering bridging the damp proof course (DPC). A bell cast feature as shown in the illustration on page 120 shows how this detail will assist in the shedding of water and providing a drip. The DPC should never be bridged, as doing so will allow water to track up behind the render face.

In addition to the DPC detail, consideration should be given to the use of a French drain at the base of the wall to prevent any splash-back staining the completed render and promoting fungal/algae growth. A minimum of 150 mm should be allowed between the base of the render and ground level.

Window sills



The use of a stop bead at this point would support the DPC while rendering and assist application.

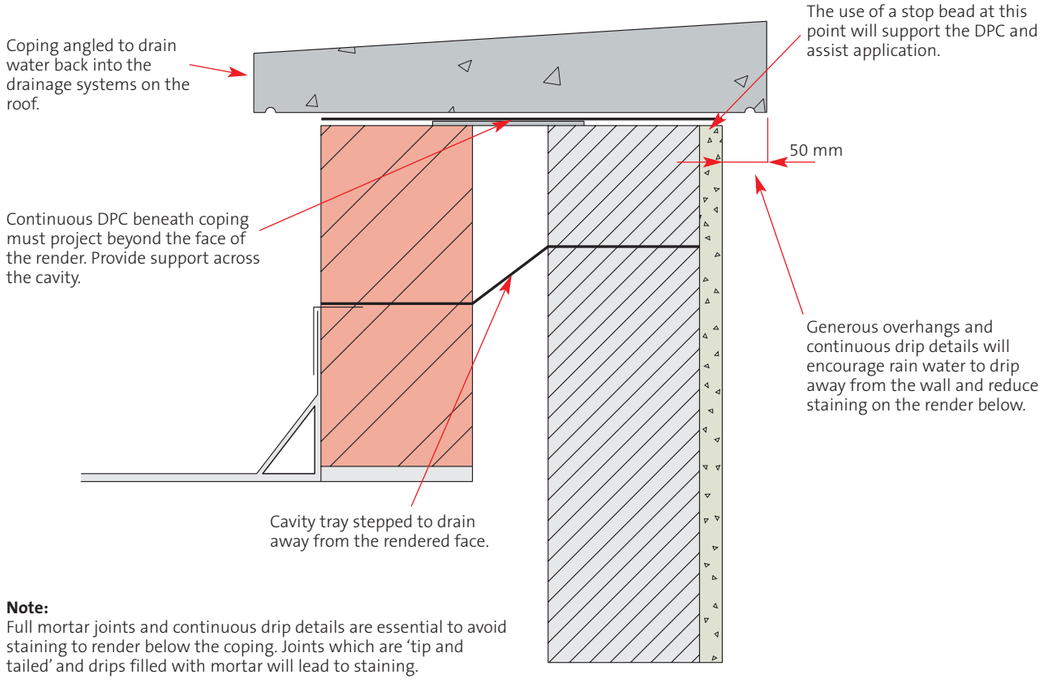


Sills should return in the order of 100 mm into the main wall area. This will encourage all rainwater to pass over the front of the sill and avoid staining down the wall at the ends.

Note:
The *Codes of practice for external renderings* BS 5262, specifically discourages the practice of using render to form sills or horizontal surfaces, 'even when given a considerable weathering slope'.

Parapets

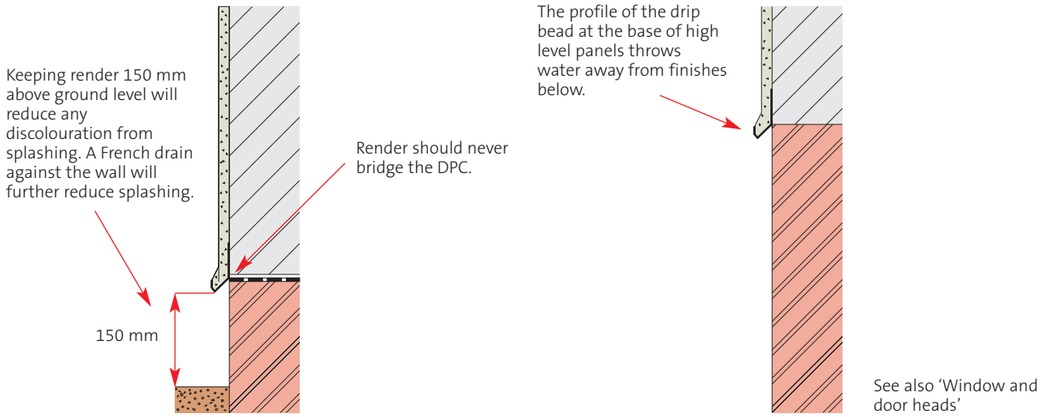
Parapets and screen walls are usually, because of their position, in exposed situations and subject to very severe weather conditions. For this reason, the Codes of Practice recommend that they are of cavity construction and rendered only on one face. This method of construction will assist the evaporation of absorbed water from the parapet and reduce the risk of future render delamination.



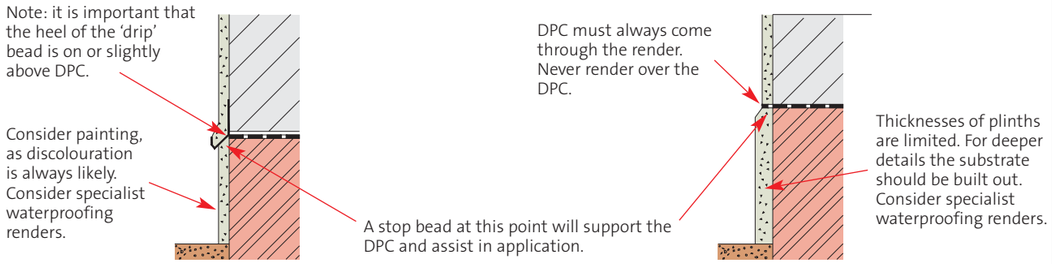
Note:
Full mortar joints and continuous drip details are essential to avoid staining to render below the coping. Joints which are 'tip and tailed' and drips filled with mortar will lead to staining.

Construction issues *(continued)*

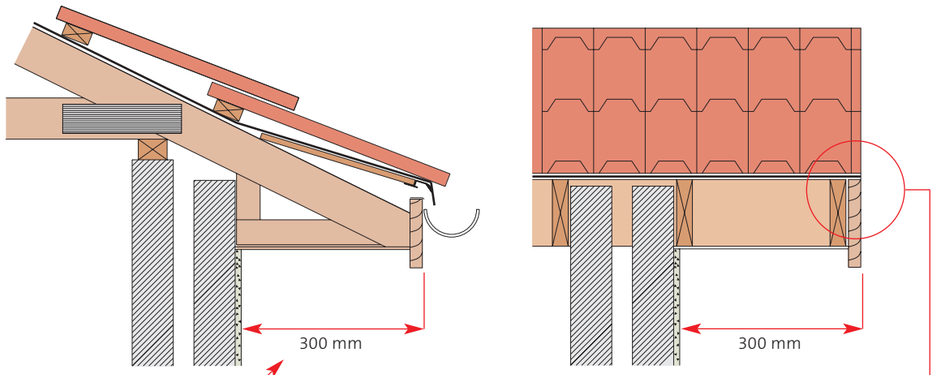
'Drip' beads and treatment at DPC



Rendering below DPC level is always likely to be damp and discolour. For this reason the Codes of Practice maintain that it is best avoided. However, the following options may be considered where it is unavoidable.



Eaves

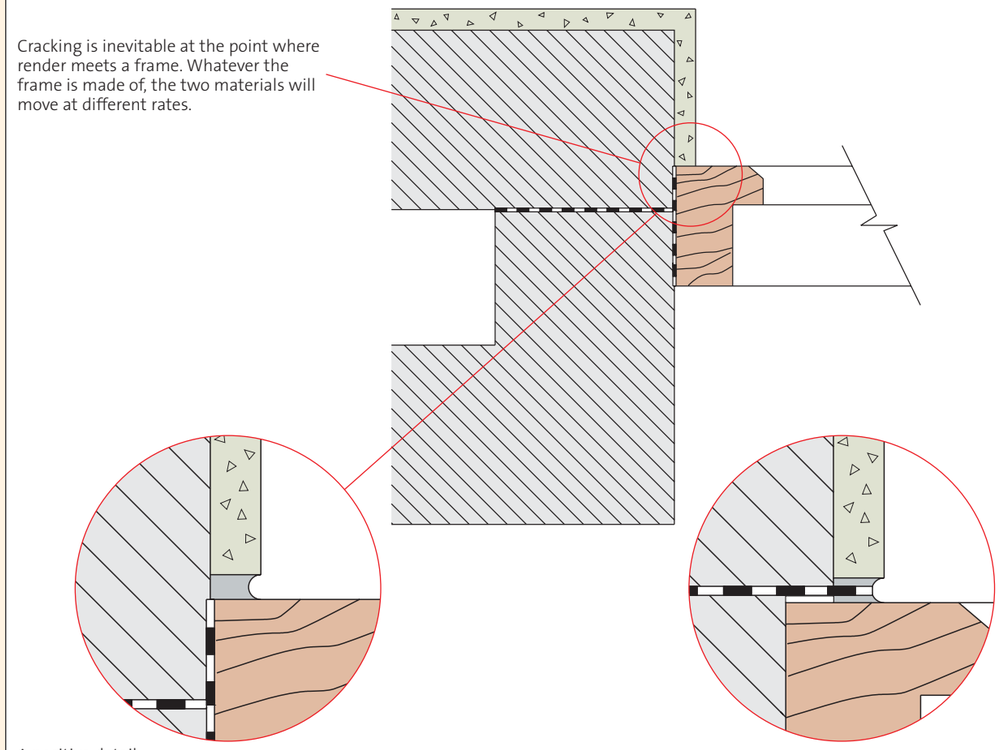


Generous overhangs, in the region of 300 mm, are recommended to both protect the vulnerable top edge of the render and prevent staining at the eaves.

Tile edge may be finished in the traditional manner or with a purpose made 'dry verge unit'.

However, where the overhang is dispensed with and 'dry verge units' are used tight against the rendering, staining may occur if the units leak water down the face of the render.

Render to frame

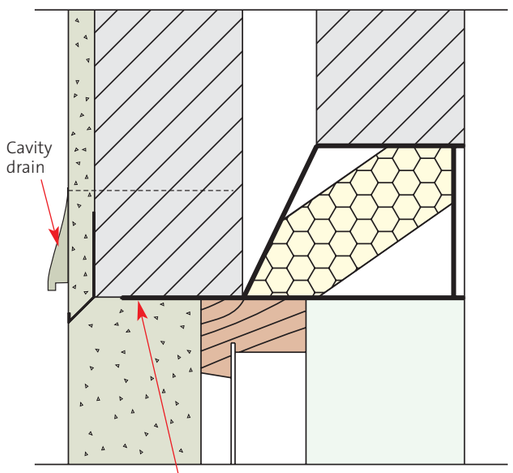


A positive detail.
Recommended for areas of high exposure.
Gap may be formed with a stop bead or temporary timber batten.

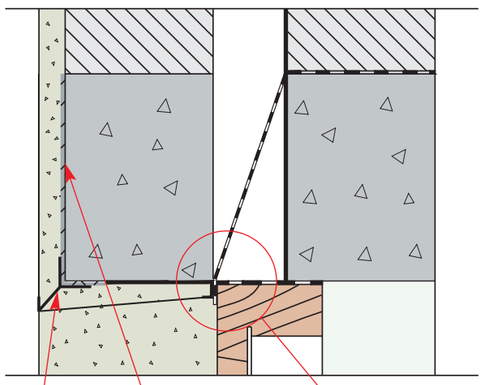
Alternative detail

Window and door heads

Steel lintels



Concrete lintels



Specification advice for insulated render systems

Construction issues

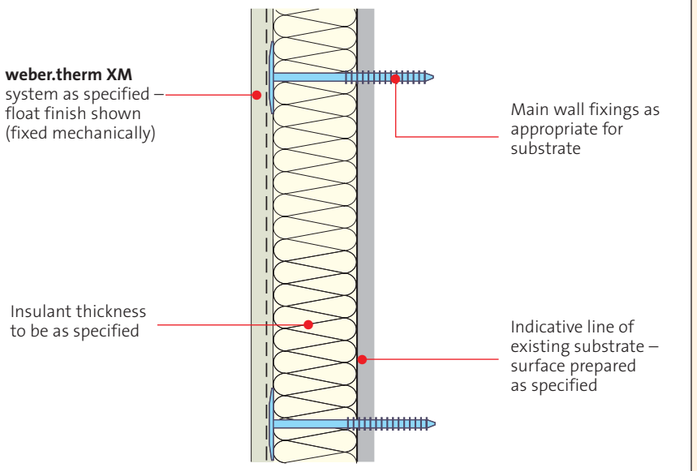
The rendering processes involved with insulated systems are closely related to the principles of direct applied renders. The principles in Section 7 are therefore well worth reviewing when considering insulated systems.

Scaffold, however, needs to allow for the application of full thickness of insulation and render. If, because of working at height on multi storey construction, scaffold does have to be physically tied to the wall to which the system is to be applied, it must be accepted that the area of what will basically be a repair, may be visible when the tie is removed.

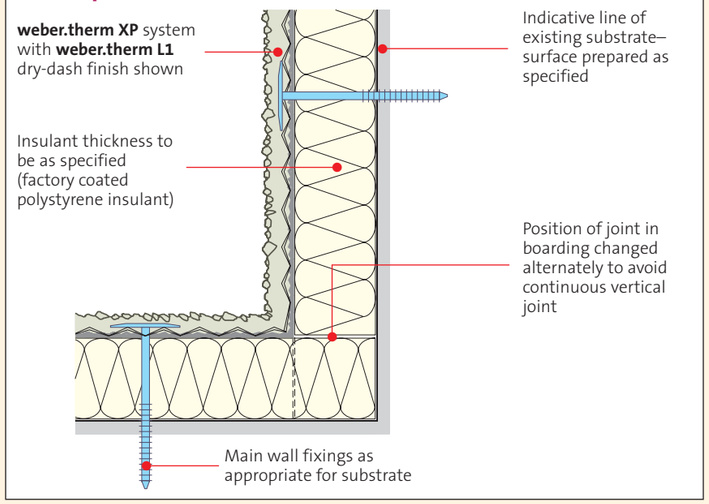
Substrates

With the use of correctly chosen mechanical fixings, Insulated Render Systems (EWI) can be applied to most sound substrates including no-fines concrete. Substrates to accept systems that rely on an adhesive bond must be clean, sound and dry, free from anything that may interfere with the bond of the adhesive to be applied. Any existing coatings must themselves be well bonded to the substrate.

Detail section – main wall



Detail plan – internal corner

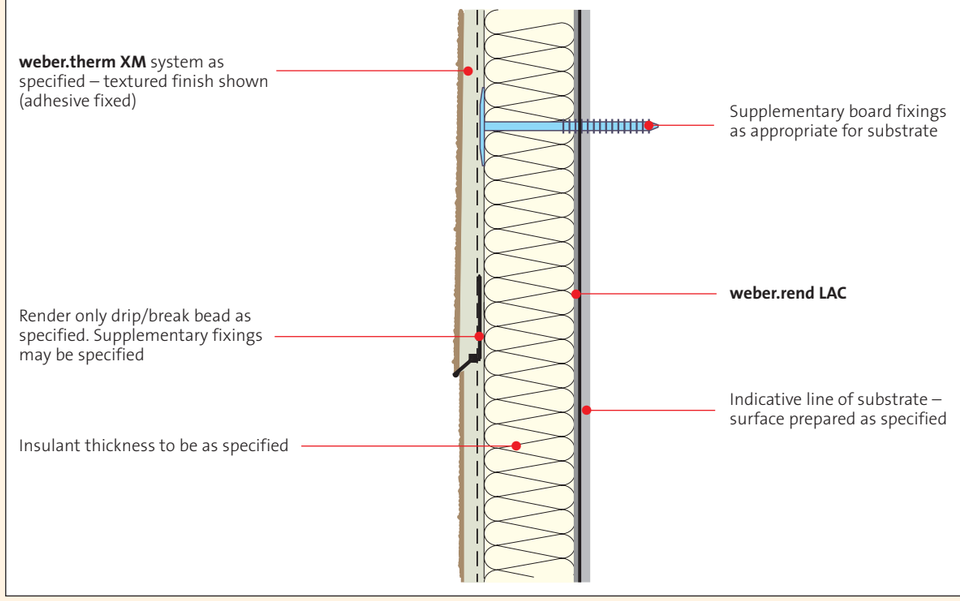


Construction issues *(continued)*

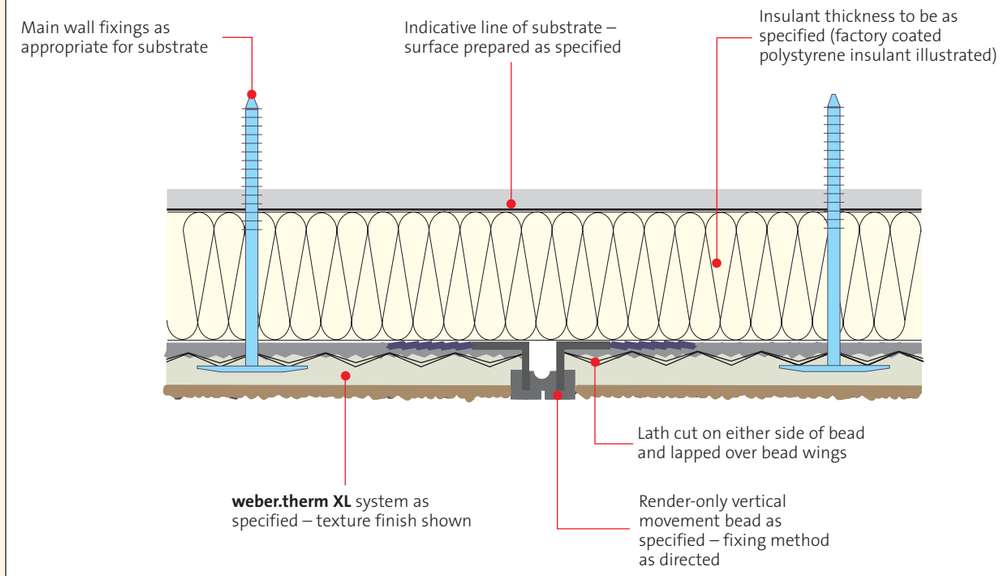
Accessories

Accessories for use with insulated systems are again used for much the same purposes as they are with direct applied renders and, apart from the extra physical size involved with system base and stop beads, look much the same. System closure beads are always fixed back to the substrate whereas horizontal drip beads, vertical break beads and angle beads etc, are normally temporarily fixed to the insulation in meshcloth systems or wired on to the metal lath carrier in **weber.therm XL** systems, to restrain them in position during application of the first render coat.

Detail section – horizontal drip bead



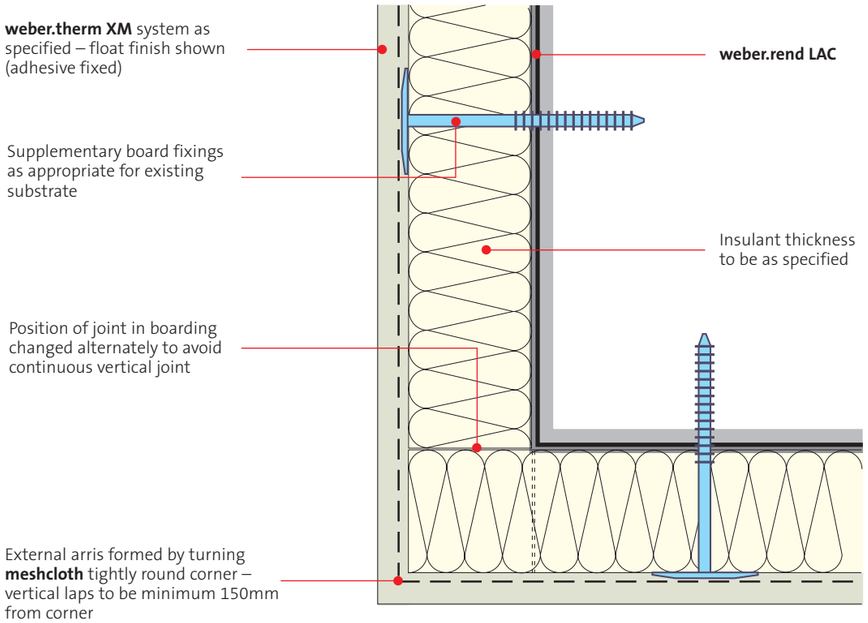
Detail section – vertical day joint



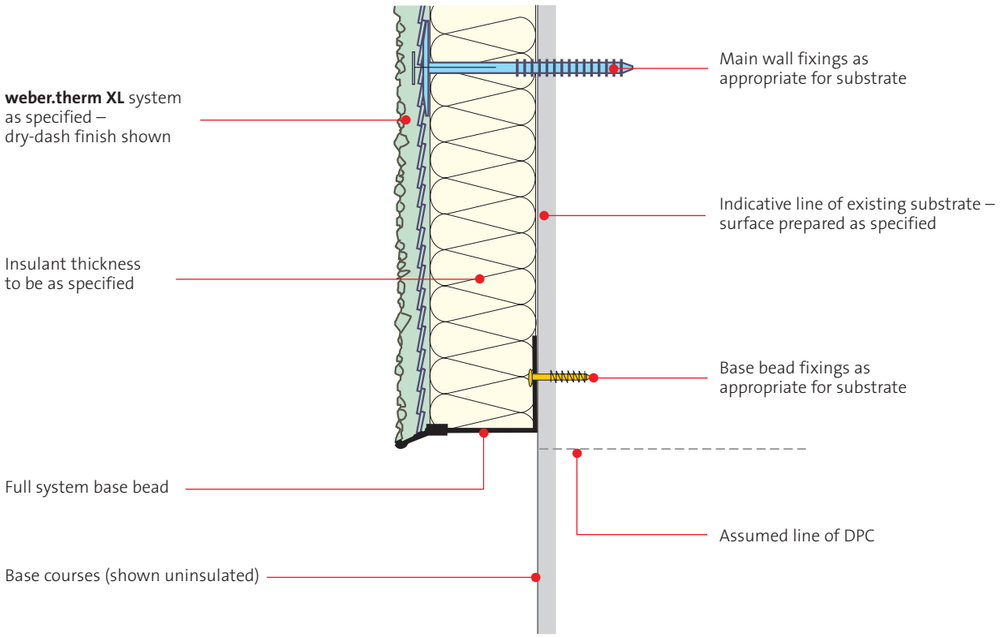
Construction issues *(continued)*

Accessories *(continued)*

Detail plan – external corner



Detail section – base bead



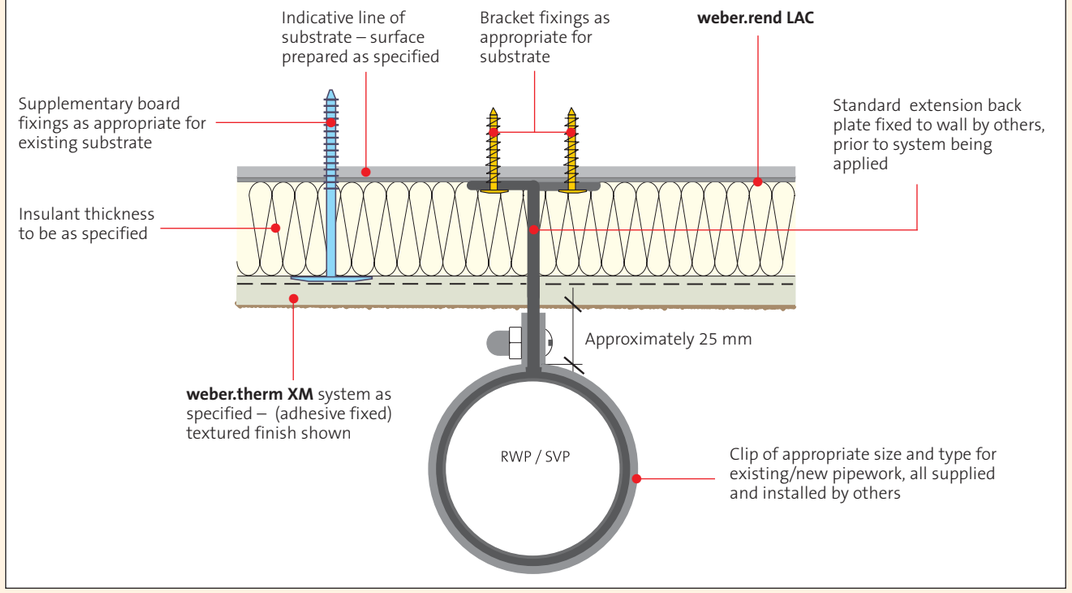
Construction issues *(continued)*

Fixtures and fittings

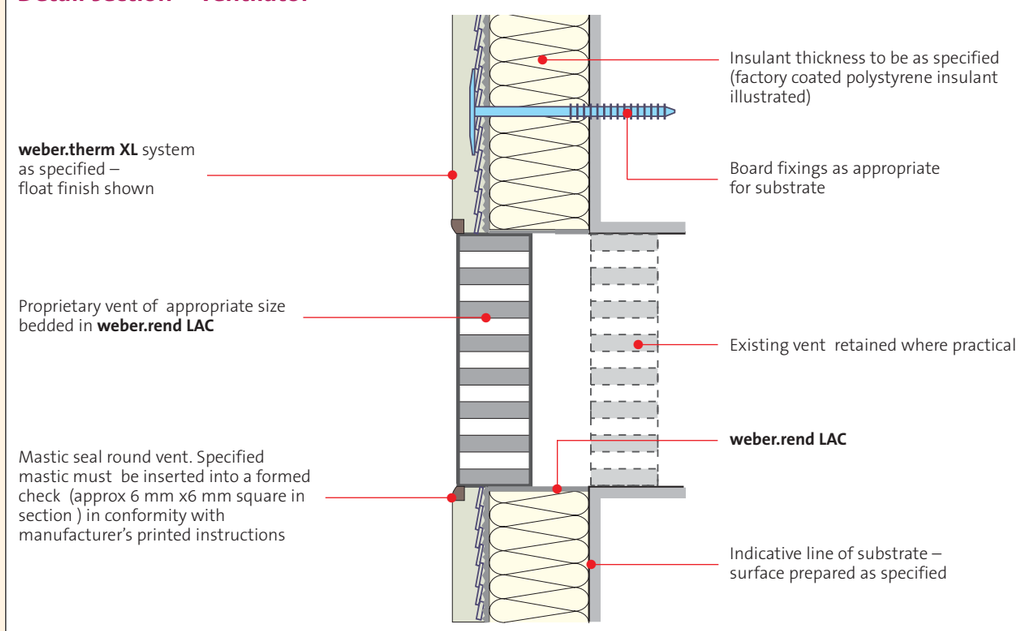
Insulated systems by nature add significant thickness to the outside of the wall. Fixings for down pipes and the like therefore have to be extended before insulation is applied. Air vents and the like will also have to be brought forward so that they finish flush with the render face.

Continued on next page

Detail plan – pipe extender bracket



Detail section – ventilator

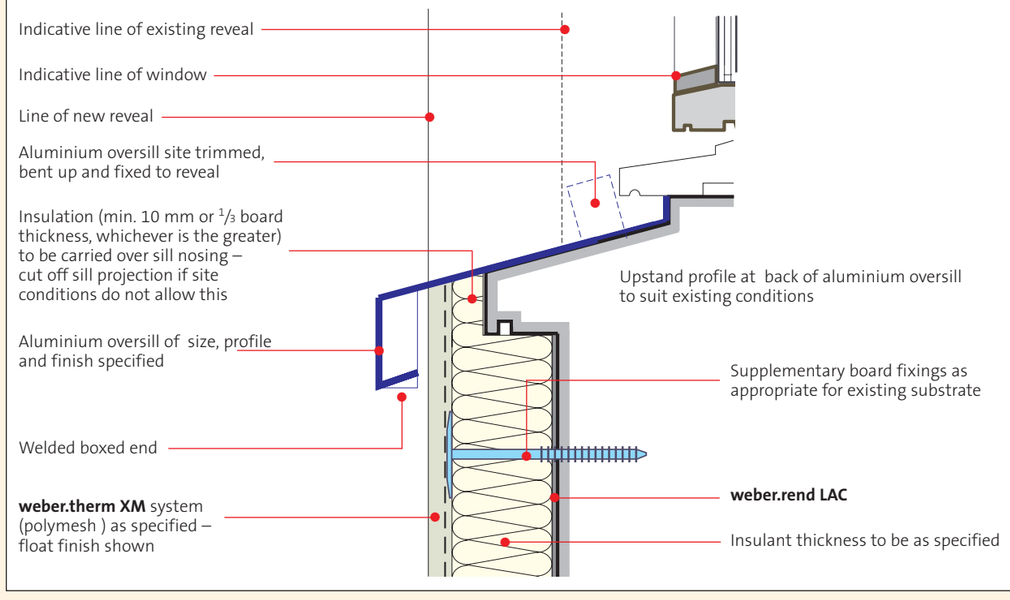


Construction issues *(continued)*

Fixtures and fittings *(continued)*

Standard windows seldom have sills that will extend suitably beyond the face of any insulated system. Consideration must therefore be given to the employment of either under or over sills.

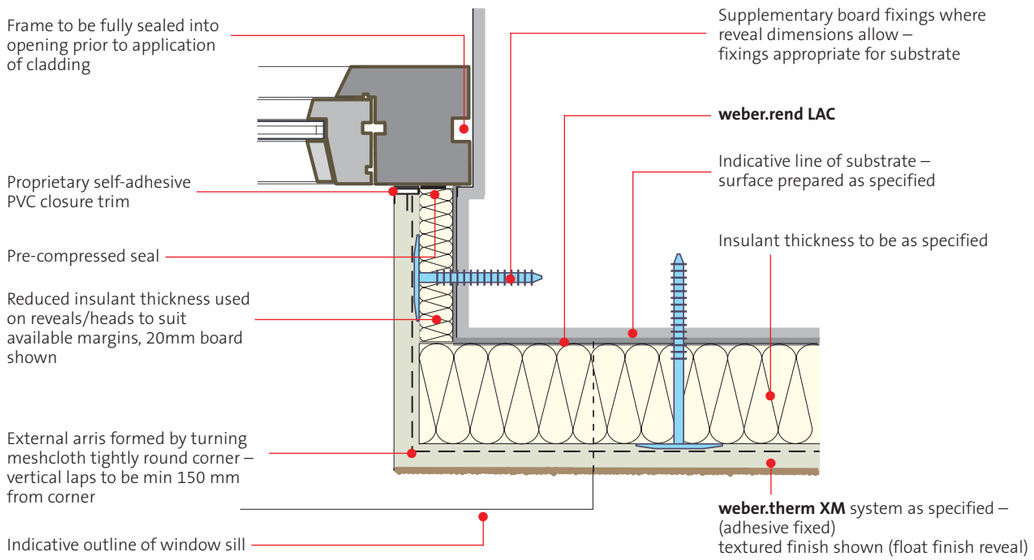
Detail section – oversill



Reveals

Standard windows, especially in refurbishment situations, rarely have sufficient thickness on the jambs to accept the full thickness of insulated systems and consideration must therefore be given to the treatment of the reveal. If the frame allows a thinner insulation board could be used on the return, or a render-only reveal specified.

Detail plan – thin board reveal



Construction issues *(continued)*

Due to design changes in the weber.therm FT system, please contact Weber for the latest information.

Robust detailing in new build

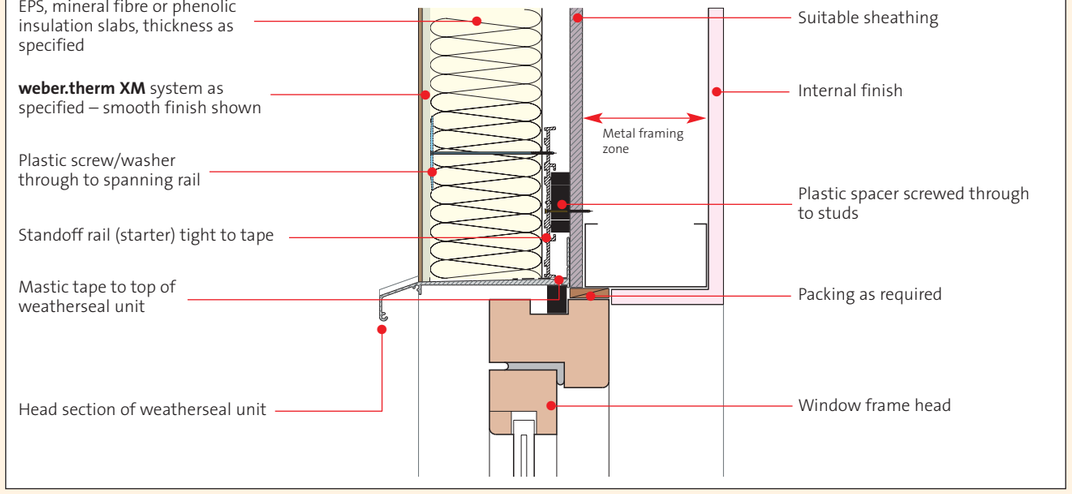
External Wall Insulation completely envelopes any construction, eliminating cold bridging and keeping vulnerable structural elements warm and dry. However, the industry has expressed concerns regarding the effectiveness of weather sealing details around openings in any single-skin or frame construction. **weber.therm FT** has been designed to address this issue and give long term assurance against water penetration by providing robust, multi-level weather protection.

weber.therm FT consists of two major high-specification, corrosion-resistant elements, the standoff rail and the unique weatherseal unit. Used together with **Weber's** external wall insulation system **weber.therm XM**, they provide uncompromisingly high defences against the worst that even the most exposed situations could ever offer.

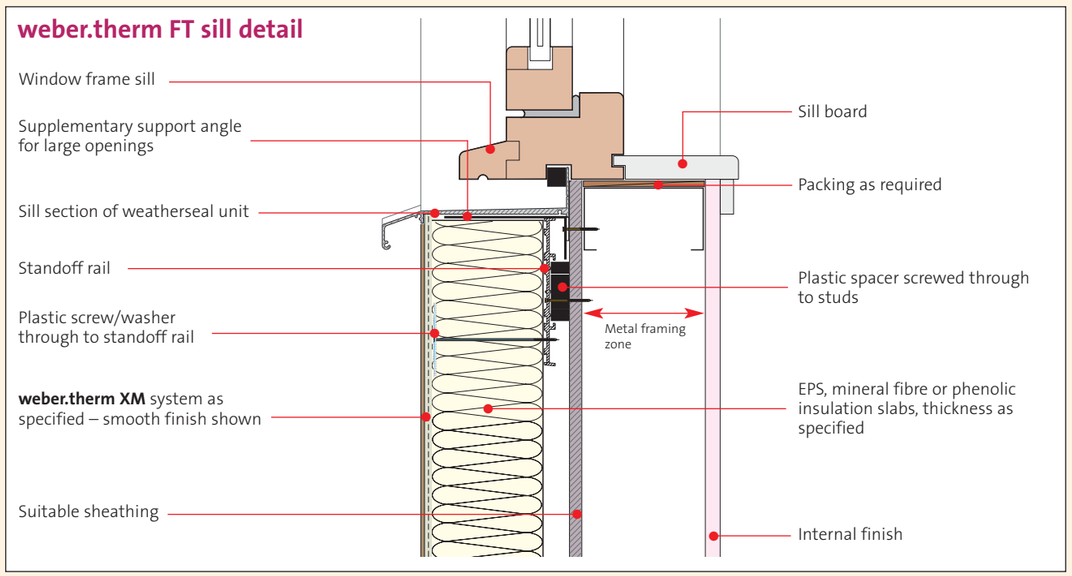
In the extremely unlikely event of moisture penetration through the system, the standoff rail provides a drained minimum 15 mm cavity between the insulation and the frame. Finishing the system, encapsulating the window and closing the cavity, the powder-coated weatherseal unit has been proved by testing, certified at UKAS, to provide the most rigorous and positive weather seal at both window and door openings alike.

Delivered ready assembled to site, the self-finished unit, which can be coloured to compliment or contrast with the window and wall finish, the weatherseal unit provides the sill, finishes the opening's reveals and head, closes any cavity, provides a rigorous weather seal and eliminates the need to return to misaligned narrow widths, all in a much reduced programme. The components have been accepted for insurance purposes by the NHBC.

weber.therm FT head detail



weber.therm FT sill detail



Construction issues *(continued)*

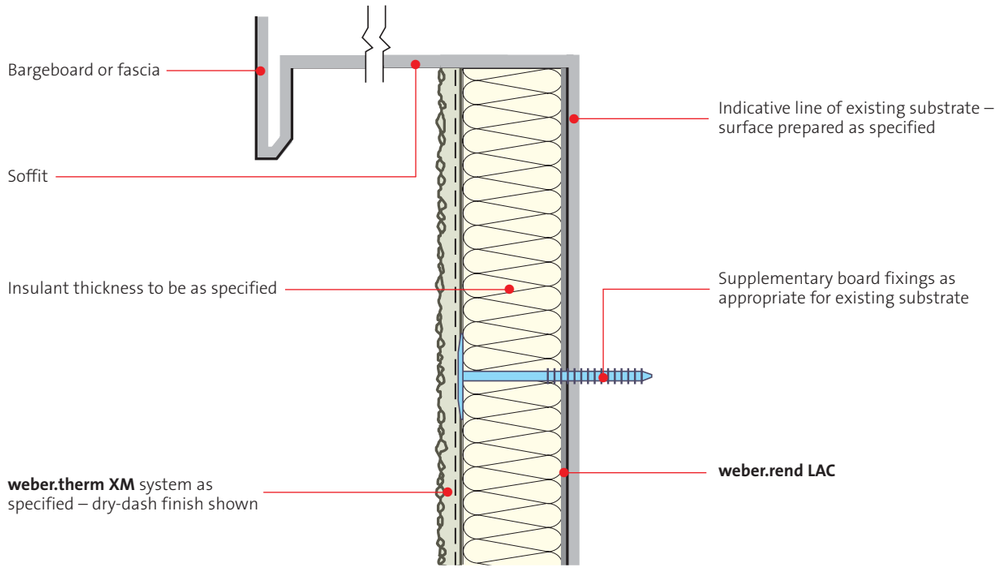
Eaves

Buildings detailed with projecting eaves and verges usually form natural protection to the vulnerable bond interfaces of the system. However, cap flashings will have to be detailed where close-coupled verge units or the like are featured.

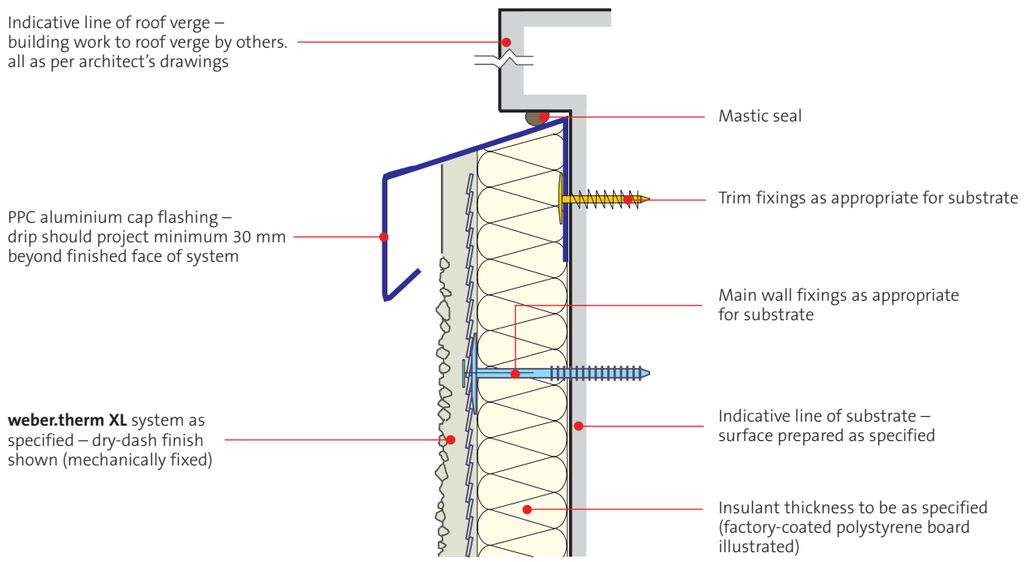
Steel frames

Frames generally do not require racking as this is usually built into the design of the frame, however, to promote good alignment or maintenance of a cavity, sheathing boards do need to be well fixed to a regular fixing pattern.

Detail section – projecting eaves/verge



Detail section – verge cap flashing



Performance issues

Acoustics

Insulated Render Systems are primarily designed, and used, to provide improved thermal insulation, however, dependant on the type of insulant incorporated within the system, they may contribute towards the acoustic requirements for the external walls.

The acoustic properties of expanded polystyrene and phenolic insulant are so insignificant that they are generally deemed non-contributory, and therefore ignored. Mineral fibre (both fibreslab and lamella), being denser materials, will offer a significant contribution.

Wind loadings/high rise buildings

Insulated Render Systems are either adhesively bonded or mechanically fixed to suitable sound substrates. Adhesive bonded systems normally incorporate supplementary (temporary) fixings to secure the insulant while the adhesive fully sets. Either fixing method has to be able to withstand both the shear load of the installed system and the dynamic loads of wind pressure and suction.

In the case of mechanical fixed systems the BRE have established that in shear and wind load, the resistance of the fixing relates to its pull-out value.

Wind load is the most critical structural consideration when a fixing is being selected. The wind load for a particular project is obtained from the relevant Code of Practice (BS 6399-2:1997) where wind speed is charted in relation to location. From this map the negative wind pressure (suction) is calculated and used to determine the pull-off resistance required. The elevation of the building, its relationship to other buildings, the topography and prevailing weather conditions are all taken in to account at this stage.

Generic pull-out performance figures are available for many of the standard fixings, however, these only provide a guide to the likely performance in average substrates. Pull-out resistance for mechanical fixings, should always be determined by carrying out proper tests over representative areas of the building to give as wide a reading as possible.

To withstand the increased wind loads associated with tall buildings and areas of high exposure, additional fixings may be needed to meet the calculated required pull-off resistance. In this case the standard fixing pattern would be amended. For adhesive bonded systems this could involve the use of higher performance fixings and / or an increased fixing rate.

The following are normally considered when selecting fixings for a project:
- long term structural performance
- fire performance

See information on 'Fire' in this section of the guide.

The final selection always depends on the results of the testing carried out on site.

Fire

There are various requirements / recommendations that relate to fire issues where external wall insulation systems are being used on buildings over 2 storeys in height.

Currently the main document for information/guidance is the BRE Report BR135 : *Fire Performance of External Thermal Insulation for Walls of Multi-Storey Buildings : Second Edition (2003).*

The design principles recommended in this report are:

All cladding systems shall be installed with suitable through-fixing methods to ensure that the system will not suffer from disproportionate collapse in the event of fire.

Adhesive based systems should be supplemented with mechanical fixings to provide increased stability.

Stainless steel fire fixings should be installed at a rate of one per m^2 of insulation. The fixings should account for the extra duty required under fire conditions.

The use of all-steel mechanical fixings to attach the base coats (and mesh) to the substrate should be considered.

Fire barriers should be installed at every floor level after the first floor i.e. the start of the second storey.

The fire barrier should be made of non-combustible material i.e. mineral fibre, be at least 100 mm high, continuous and unbroken for the full perimeter of the building and for the full thickness of the insulation.

The firebreak insulation and render finish/mesh should be secured back to the substrate with fire fixings.

Fire barriers should be considered for other vulnerable areas such as around windows and doors (similar to the ventilated cavity situation mentioned previously).

Currently, these are only recommendations as they have not been included within the national building regulations.

The current regulations/Buildings Authority should always be consulted as more onerous requirements may be implemented during review of the relevant parts.

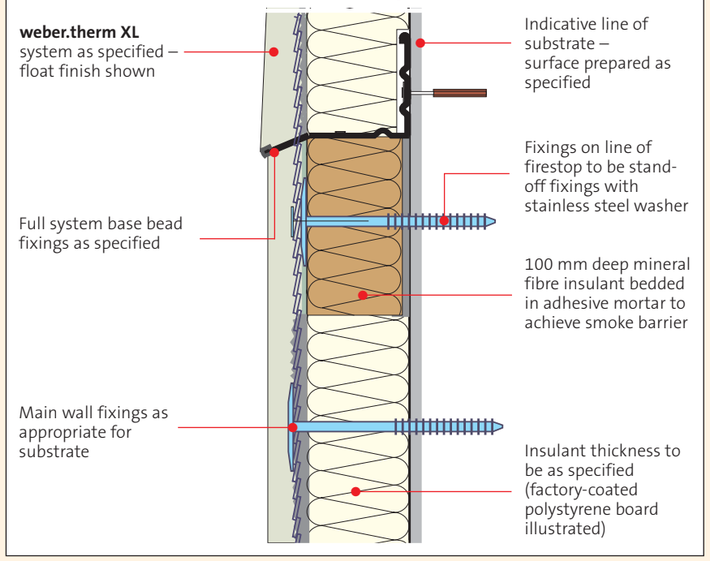
The latest update to Part D of the Scottish Building Regulations requires all component parts of the cladding system to be non-combustible where the system is being applied to walls on buildings over 18 m in height and to walls less than 1 m from the boundary.

In all other parts of the UK and Ireland the current requirement is for the system to have a 'Class 0' classification in which case there is no restriction on height or boundary conditions.

The regulations, for England and Wales, do however state, 'the use of combustible materials in the cladding system may still present a risk in tall buildings even though the requirements of the approved document are met'.

Even though these are not mandatory requirements, **Weber** recommends adopting the guidance given in the BRE Report. Specifiers should consult with the relevant authority at an early stage as all of these recommendations can have financial implications for the project.

Detail section – horizontal firestop



Site organisation and application

Preparation

It is important to carry out a thorough assessment of the background involved and get organised on the site itself prior to the application of any render materials onto a project. The main areas to consider are:

- **Background**
  Cleanliness
  Condition/alignment
  Bond (key/suction)
- **Site organisation**
  Access
  Storage
  Material rotation

Background

Cleanliness

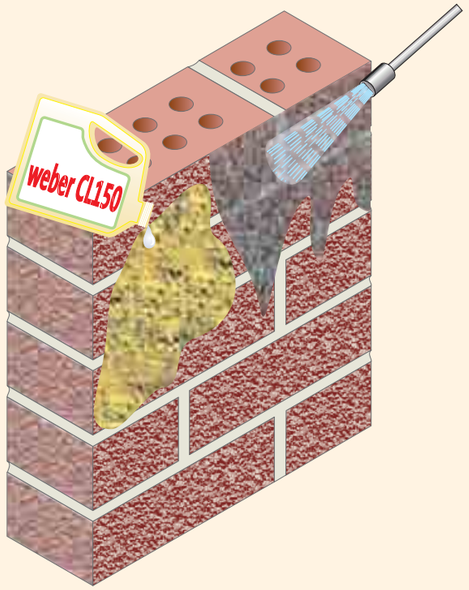
Anything that on inspection would appear to interfere with the adhesion of the applied render materials should be removed prior to application.

Crystallised salts that have formed on the substrate should be brushed from the surface whilst dry. Algae growth and fungal spores should be removed from the surface with the use of **weber CL150**.

When working with concrete ensure curing and release agents are removed using a suitable cleaning regime.

Any local protrusions of excess mortar that would interfere with the applied thickness should be removed.

The substrate should be brushed down to remove any atmospheric pollutants and dirt particles that are present on the surface.



Condition/alignment

The condition of the wall should be assessed with the physical process of application in mind.

A certain amount of correction of alignment can be carried out with a render, however there is a limit. The plane of the substrate should allow the render to align the elevation within the recommended thickness of the render while allowing for the minimum specified thickness to be maintained for weather protection.

In **Weber's** experience a maximum deviation in the substrate of 5 mm underneath a 2m straight edge placed anywhere on the surface can be corrected. The current guidance for masonry BS 8000-3 details an accuracy of 5 mm underneath a 5 metre straight edge placed on the surface.

The protection of the substrate to be rendered is very important and as such temporary guttering should be erected during construction to direct water away from the wall well before rendering is programmed. The reasons for this have been discussed in Section 7.

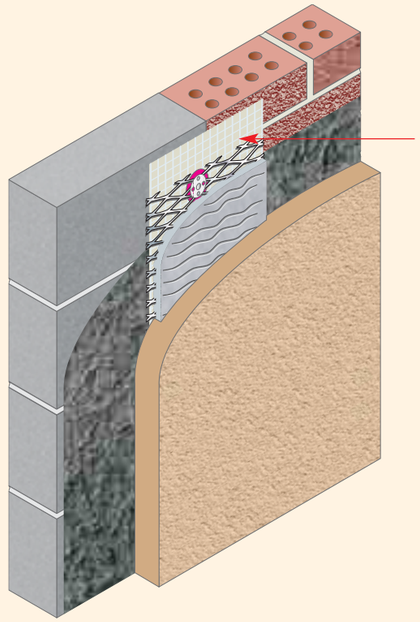
Ideally the wall should be constructed of the same single material throughout, so that thermal, moisture and strength characteristics are similar. Assessment should be made to identify areas of potential concern prior to application of render and a remedy agreed.

If the wall is made up of several different materials, consideration should be given to the possible differential thermal movement between adjacent materials and the different suction and mechanical key that they may offer.

In areas where the likelihood of movement between different materials is low, such as a horizontal concrete ring beam abutted with dense blockwork where the joints between the two substrates are under compression, incorporating meshcloth across the joint in the first pass of render will reduce the possibility of cracking at this junction.

In areas where the risk is greater, such as the abutment of two forms of masonry in a vertical plane, consideration should be given to the isolation of the junction. This can be achieved by creating a slip plane to spread the stresses by using an isolating membrane overlaid with expanded metal lathing mechanically fixed either side of the junction by 150 mm. The lath can then be encapsulated with **weber.rend PUC** left keyed to receive the subsequent render coats a minimum of 3 days after application.

Where movement is anticipated, for example at the abutment of two varying forms of construction, then a movement joint should be formed. See page 116 which deals with render accessories.



Isolating the vertical junction between dissimilar materials

weber.rend IF breathable membrane with expanded metal lath and **weber.rend PUC** left keyed to receive the subsequent render coat.

Bond

Suction
As discussed previously in *Substrates* (Section 7), the suction of a substrate has implications on the finish, performance and the workability of the product applied. It is therefore important that an assessment of the suction is made prior to the application of material.

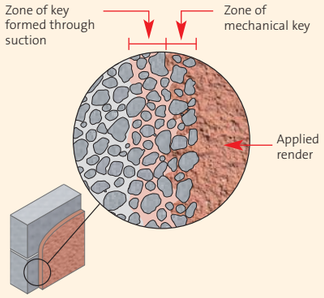
The substrate should be tested to identify its initial suction. This can only be done by the visual inspection of water applied to the surface. Ideally the substrate should slowly draw the water into the surface leaving a wet residue.

If the test reveals the suction to be high (i.e. water disappears at a rapid rate leaving an apparently dry surface) then the substrate should be dampened evenly with a light spray of clean water, re-tested and the process repeated until the correct suction is achieved. During this process, over wetting must be avoided to prevent impairing the bond of the render and possible increases in drying shrinkage in the construction due to saturation.

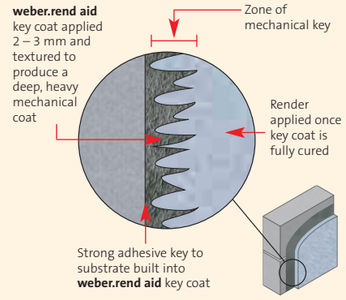
If the test reveals the suction to be poor (i.e. water readily runs from the surface without drawing in) then the substrate is either too damp to be rendered or is too dense and may need an application of **weber.rend aid** to offer additional key. If the substrate is too damp then it should be protected and allowed to dry until the test procedure reflects the required suction.

Key
If the substrate cannot provide sufficient support to the rendering, as in the case of smooth concrete, high-density concrete blockwork, engineering brick etc, then a **weber.rend aid** keycoat should be used. In this situation the **weber.rend aid** will also help to equalise any differential suction across the substrate.

Section through substrate with suitable key and suction



Section through substrate requiring mechanical key



Preparation *(continued)*

Site organisation

Access

Scaffolding should be tied independently of the elevation to avoid the necessity for render repairs after completion at points where the scaffold has been tied to the wall. It should be erected with the physical process of render application in mind.

Full access should be available between scaffold and the wall to enable a continuous wet edge of material to be maintained across the complete bay/elevation. Both standards and ledgers should be spaced sufficiently away from the wall to allow applicators to handle straight edges or pumping equipment without obstruction.

When dealing with insulated systems, however, the scaffolding needs to allow for the full thickness of insulation and render.

Note: With the above in mind, current HSE guidance regarding scaffold safety should always be followed. Scaffold should only be modified by certified scaffolding personnel.

If, because of working at height on multi storey construction, scaffold does have to be physically tied to the wall to which the system is to be applied, it must be accepted that the finish may show some difference across what will basically be a repair when the tie is removed.

Combined with the necessary clearance between scaffold and wall, the ability to move freely around the panel to be rendered will greatly assist speed of application. Difficulties with access may only be apparent in finished work when the scaffold has been removed.

Operatives and method of application

In theory, panels of any size can be successfully completed providing there are enough applicators available. It is important to have a suitable number of operatives in proportion to the panel size that will enable a flowing wet edge to be maintained in applied material across the entire panel.

The use of a render pump will increase speed of application and productivity in comparison to traditional methods of application. The machine will also give a more consistent output over that of a manual application. However, with renders that require manual finishing techniques, e.g. scraped textures and Ashlar, it is important to consider how the area can be finished within the open time of the product. Application areas should therefore be limited in relation to the resources available to finish them.

Consideration should be given to the rendered work so that any panel and those adjacent to it can be completed in a progressive sequence. This will help to avoid long delays between finishing dates, which in itself may contribute to differences in appearance between the panels. Any changes in application procedure, due to differences in climatic conditions for example, can result in shade variation between rendered bays. Whenever possible the panels should be finished on an external angle.

Material storage and rotation

Materials delivered to site should be stored off the ground and protected against the weather. Manufacturers use stretch wrap on pallets of material to provide stability during transportation. It should not be relied upon to protect materials against wet weather.

The material required for complete and adjoining panels should all be from the same batch number or be thoroughly dry mixed together before use.

Planning, setting out and application

Water regulation and quality

Any water used for mixing of renders should be clean and free from contaminants. (i.e. potable) The water supply must be freely accessible throughout the project. Note that when applying by pump some machines require connection to a dedicated, uninterrupted supply. Failure in that supply will stop application.

Bay size and sequence

When working with applied renders and finishes it is very important to maintain a wet edge during application. Alternatively, a physical joint will have to be formed in the coat, which will inevitably be evident in the finished work. Planning the bay size with the freedom of access and resources available in mind is the key to success. See page 132.

Mixing methods

Synthetic products are generally supplied ready mixed and only need stirring before use. Water may be added for some applications but this needs to be well regulated between pails and only as directed in the product data sheet.

The key methods of mixing for cement-based renders are as follows:

- **Render pump**
- **Drill and whisk**
- **Free fall mixer**

Whichever method is adopted it is important to ensure that the product is properly mixed. If the material has been allowed to stand for up to 15 minutes it is likely to stiffen at which point it can be remixed. It is important to note that no more water should be added at this point.

Avoid over-mixing, as this will change the designed properties of the material.

When using **Weber** renders product recommendations should be followed in regard to water addition, which should be gauged and kept consistent from mix to mix. This information can be found on the relevant product technical datasheets and packaging.

Application

Masking

Masking should be used to give protection to adjacent work and to give clean straight edges. It should be removed immediately after finishing. During this process consideration should be given to the protection of glass and aluminium surfaces. Splashes of cement products can lead to surface etching and synthetic materials are not easily removed.

Maintaining a continuous wet edge

In order to prevent the formation of day joints in both renders and finishes, the utmost care should be given to maintaining a wet flowing edge to prevent evident scarring in the finished panel. We suggest the work is planned as described in the section on Operatives and methods of application on page 133.

Render tolerances

Weber would suggest that it is reasonable to expect renders to look flat in diffused lighting. The worst light for showing misalignment is shallow-angle lighting or glancing sunlight. Even the best of rendering will show some unevenness as the sun casts its light directly along the line of the elevation.

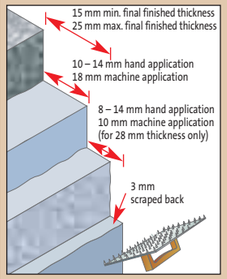
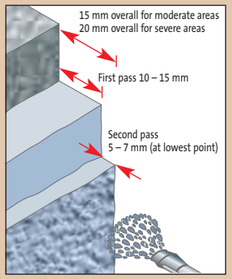
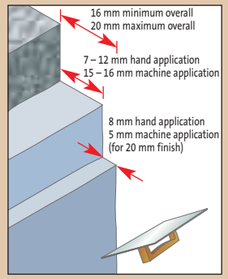
If unevenness is apparent for only short periods (20 minutes) as the angle of sunlight is at its most aggressive, this is probably the best that can be expected from a hand-finished material. If the misalignment is visible for a period in excess of $1\frac{1}{2}$ to 2 hours, the workmanship could then probably have been better. However, the renders inability to correct badly misaligned backgrounds must be taken into account.

The tolerances for rendering given in the old British Standard BS 8000 Part 10 do not appear in the revised edition. No guidelines are therefore given. The old clause suggests a tolerance of 3 mm under a 1.8 m rule placed anywhere on the surface when referring to floated renders. Strictly speaking this does not apply to scraped or textured finishes. However, **Weber** believes that these tolerances can be achieved with scraped renders and so some compromise will have to be agreed on site regarding acceptable tolerance.

Pass thickness

Monocouche renders are full thickness renders applied in either one or two passes designed to hydrate together as one monolithic coat. The thickness of the passes is determined by the method of finishing and upon the chosen means of application. As an example; for a 15 mm finished thickness, a single 18 mm pass can be applied with a machine in one application. By hand, this same thickness would be achieved by the application of two 9 mm passes (on average). The initial pass in this instance would normally be allowed to gel prior to the second pass. It is important to note that to ensure a finished monolithic render, application the second pass is generally applied within an hour of the initial pass depending on conditions.

To avoid exposing the interface between the two passes during the finishing process, with either application method the final pass for scraped finishes must not be less than 8 mm. Exposing the cement rich interface between the passes produces a 'halo' effect, which is only exaggerated by further scraping.

weber.pral M		weber.rend OCR
Scrape finish	**Spray finish**	**Smooth finish**
Method of application	**Method of application**	**Method of application**
Hand 1st pass: 10 – 14 mm 2nd pass: 8 – 14 mm **Machine** 1st pass: 18 mm 2nd pass: 10 mm (for 25 mm thickness only)	**Machine** 1st pass: 10 – 15 mm 2nd pass: 5 – 7 mm (at lowest point)	**Hand** 1st pass: 7 – 12 mm 2nd pass: 8 mm **Machine** 1st pass: 15 – 16 mm 2nd pass: 5 mm (for 20 mm finish)
Comment Maximum applied thickness 28 mm. Minimum thickness 18 mm. Scrape back to give minimum finished thickness 15 mm or 25 mm.	**Comment** Texture applied to ensure minimum thickness of 15 mm for moderate areas and 20 mm for severe areas.	**Comment** Float finish material and sponge to give even texture.
		

Ruling off/levelling of renders

To achieve a flat level finish, passes of material should be applied in even thicknesses and levelled with a straight edge of suitable length. Regardless of the method of application (machine or hand) it is recommended that **Weber** levelling tools be used as part of the process.

Specialist **Weber** serrated edges for levelling Monocouches tend to be easier to handle and help to remove air pockets trapped in the wet render, particularly from hand application. Please refer to our section on tools (page 140) for further guidance.

The applied material should be ruled level and flattened with a spatula to allow for scraping or floating. This should be done during application whilst the material is still workable. It is important to avoid over trowelling of cement renders, as this will bring an excessive amount of cement laitance to the surface. This can promote the formation of shrinkage cracking in smooth finished renders and create a harder surface to scrape when working with monocouche renders.

For a spray texture finish, the passes can be built up to achieve the required spray texture. It should be noted that regardless of the texture required the thickness of the render at its lowest point must be 15 mm or 20 mm dependent on the exposure condition.

Finishing

Scraped renders

Between 5 and 16 hours after application, depending on weather conditions, renders will be ready to scrape finish. In **Weber's** experience the render is ready to be scraped when 2-3mm of material can be easily removed without clogging the scraping tool.

Scraping the product early within the set will create a deeper texture and give the appearance of a darker colour shade. Scraping too late in the set will give the appearance of a much lighter colour shade. Within the 5 – 16 hours after application there is on average a 2 – 3 hour period within the set where the product is ideal for scraping. This point of material set should be kept consistent throughout the works, and especially adjacent panels, to avoid colour variation.

The surface should be scraped with a circular action keeping the scraper flat and under even pressure to avoid scoring the finished surface. Excessive pressure during scraping should not be required. Ensure the surface is thoroughly scraped, as any missed areas will dry to a much lighter shade and become evident in the finished work. This effect is referred to as 'misses'.

During the finishing of scrape renders, undulations (high points) created during application can be removed with the **Weber** I-section scraping tool as seen in the *Tools* section. This is particularly relevant for ashlar finishes, as the feature lines may highlight any undulations in the surface.

Following the scraping process the finished work should be brushed down with a soft bristled broom head to remove any free dust. This action helps the through-cure of the render and also highlights any 'misses' in the scraping, which can be remedied at this point.

Spray textured monocouche

The initial basecoat should be applied by machine at a thickness relevant to the exposure rating. Additionally, any variances in suction of the substrate should be unified particularly between the mortar joint and the block. Bear in mind advice given in suction control in section 7. The base coat should be ruled level and flat and then allowed to pick up for a period of between 1 and 2 hours before application of the second pass.

The second pass, applied by render pump gives the textured finish to the desired affect. Various textures can be achieved from a Tyrolean fine finish through to a heavy roughcast effect. The process of achieving these textures is by lowering the pressure of the render pump for heavier textures and speeding up for finer finishes. Additionally the nozzle size of the spray gun can be varied to assist in these textures. A consistent texture is normally produced by moving the spray gun with a circular action, maintaining a regular distance and orientation between the nozzle end and the render panel. During the application of this pass a flowing edge must be maintained and thought should be given regarding potential obstructions when applying texture (design of scaffolding). The less number of interruptions to this operation will allow for the best finish.

Regardless of texture chosen it is imperative that the combined final thickness of the render at its lowest point relates to the exposure rating. Due to extensive choice of different textures it is advisable to prepare an on site sample for client approval prior to commencement of works.

Float finished render

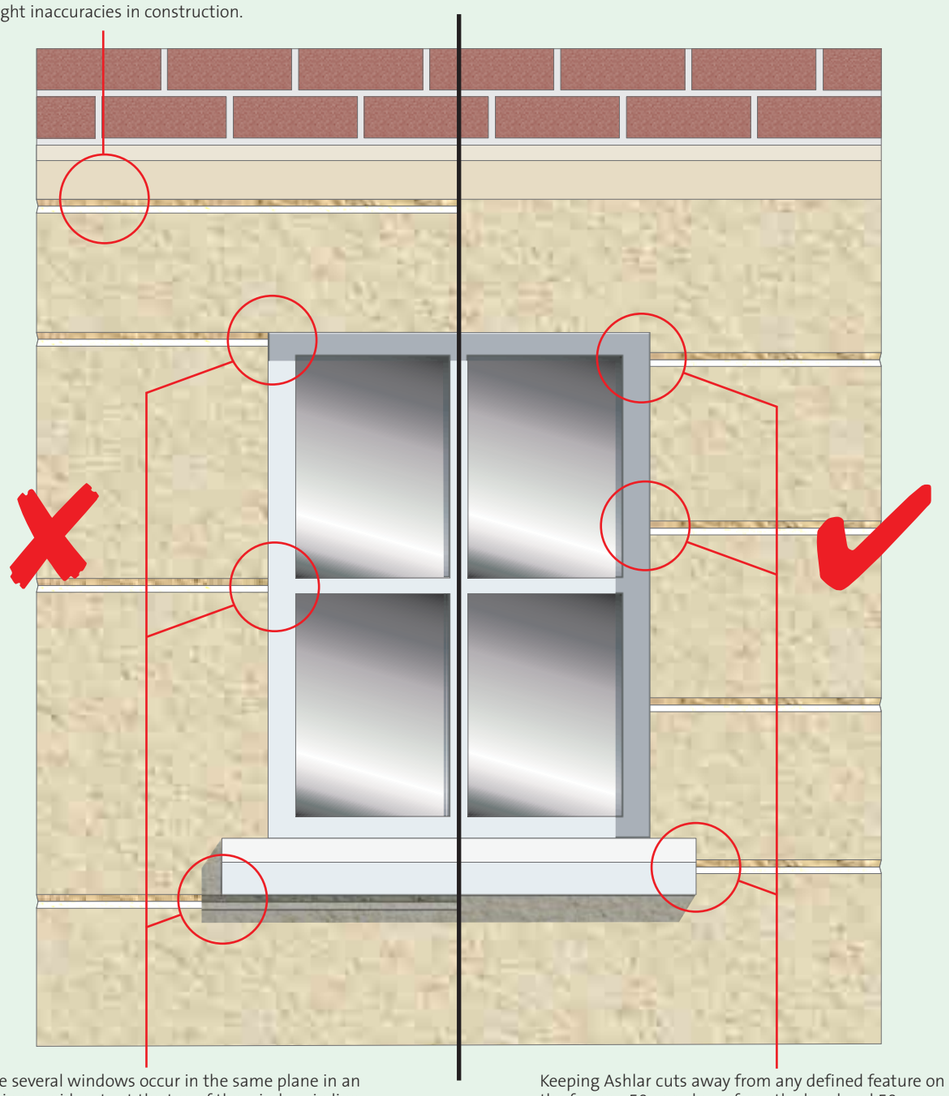
Directly after application, rule level and spatula flat, filling any imperfections as you work. Once the material has started to pick up, normally between 1 – 3 hours after application, the product can be rubbed up by using a wooden/plastic float in a circular motion to achieve a plain-faced finish in common with traditional renders. This finish is not generally applicable for through coloured renders designed to be scrape-finished.

Ashlar and embellishments

Successful results with Ashlar features and embellishments rely as much on design as they do on care and attention in execution.

Thicknesses of relative features especially those incorporating cut `Ashlar' features must be carefully specified to ensure that full cover of the substrate is maintained. See page 43 for ashlar profiles and thicknesses.

Ashlar



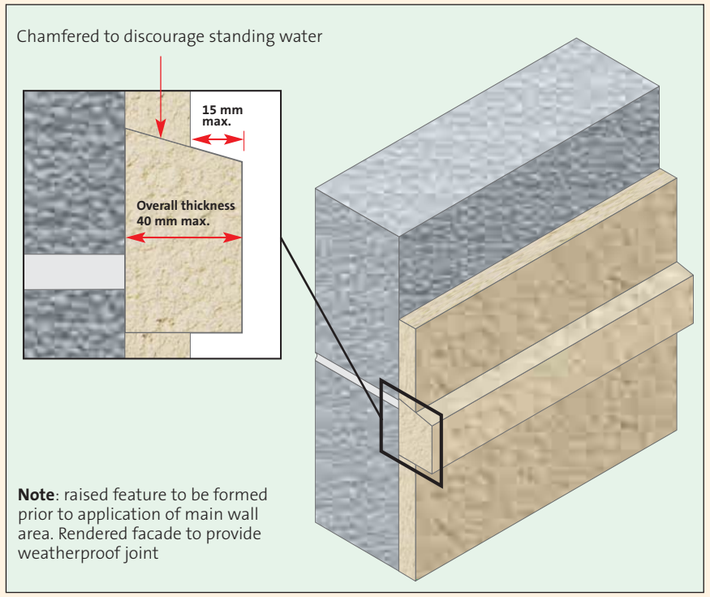
Where several windows occur in the same plane in an elevation, avoid; cuts at the top of the window, in line with any window transom or the bottom of the sill They will highlight any inaccuracies in alignment.

Keeping Ashlar cuts away from any defined feature on the frames, 50 mm down from the head and 50 mm up from the bottom of the sill will disguise inaccuracies in window fixing when several occur in the same plane, while maintaining the appearance of continuous line in design.

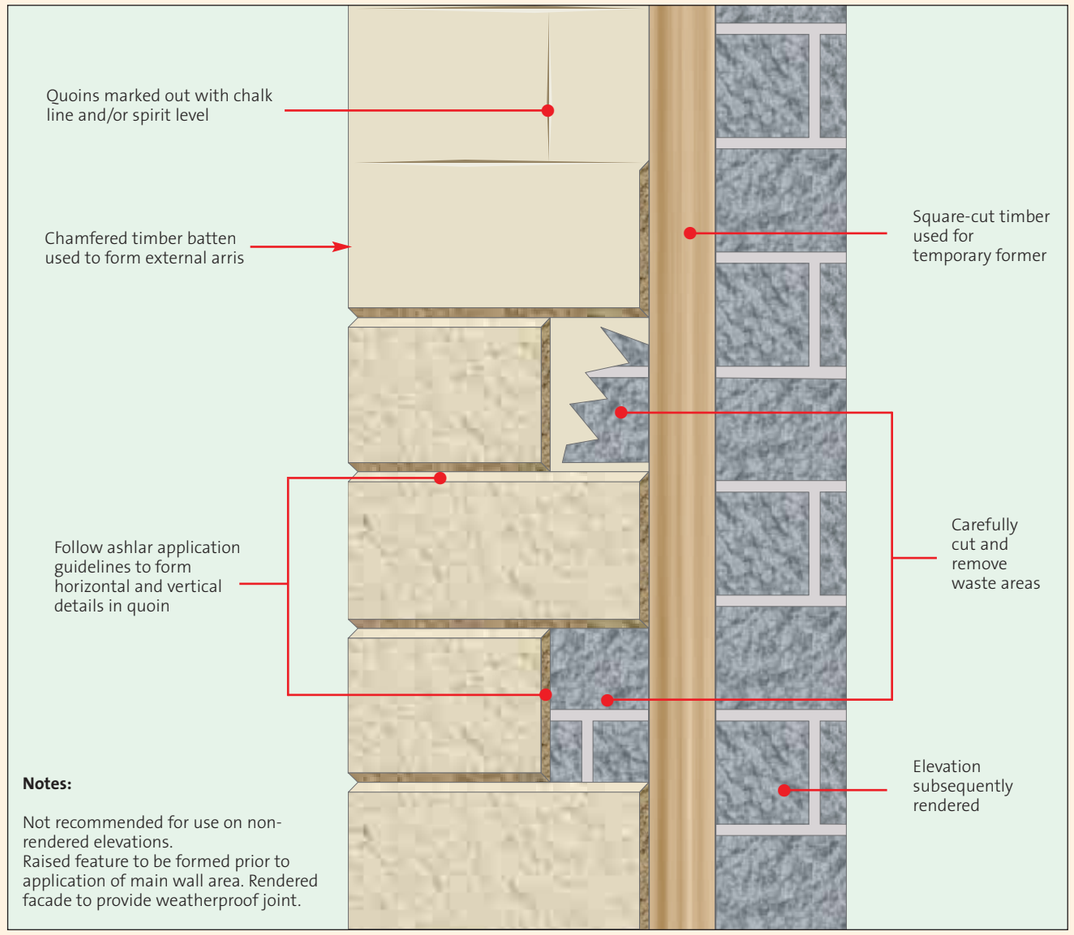
Notes:
1 Always set out from a datum line.
2 Do not use string courses or plinths as reference points.
3 Cuts may be returned into the reveal providing the frame allows for thickness of render to be applied.
4 If the frame is not thick enough, finish the reveals without ashlar detail at 15 mm finished thickness.

Raised bands, string courses, key stone and plinths

When forming architectural features the use of temporary timber grounds is recommended for all formwork. Standard Monocouche guidelines should be adhered to produce a durable feature. The features should be constructed monolithically and before rendering of main wall areas to prevent weather ingress into dry seams.



Note: raised feature to be formed prior to application of main wall area. Rendered facade to provide weatherproof joint



Notes:

Not recommended for use on non-rendered elevations.
Raised feature to be formed prior to application of main wall area. Rendered facade to provide weatherproof joint.

Working with the weather

The substrate should be protected as previously described in Section 7 prior to and during application and curing. Work should not be undertaken outside the temperature range of 5°C to 35°C.

Freshly applied materials should be protected from excessive temperature (either very low or very high), direct rain and rapid drying conditions. Common to all cementitious materials, inclement weather or long periods of dampness will encourage the phenomenon of efflorescence (commonly known as 'lime bloom').

Low temperature

Do not work with frosted materials, on frosted substrates or apply any formless wet material in temperatures below 5°C or if low temperature can be expected during the drying and curing period.

In cold weather, or if frost is forecast, stop work in time to allow the material to set sufficiently to prevent frost damage. The drying conditions will vary according to wind, temperature and humidity and several hours may be required.

In frosty weather, where minimum temperature conditions cannot be met, work should only proceed when suitable protection is provided and the temperature raised.

Inclement weather

Do not work during rainfall, if rainfall is anticipated during initial set or allow rain to strike newly applied material, particularly if strong colours in cementitious products are being used.

Do not render onto saturated backgrounds as this can impair bond strength and cause unsightly lime bloom to occur.

The absorption properties of the background is critical and if there is doubt as to the amount of water in the substrate, tests should be carried out on trial areas to determine the effect on render and finish coats. Backgrounds are more likely to give problems and contain an excessive amount of water where work has been stopped for a period due to inclement weather.

External insulation projects do not generally suffer the same problems of saturated backgrounds for rendering.

Uneven suction across backgrounds for either render or finishes may be reflected in patchiness when completed.

Hot weather

Hot weather provides rapid drying conditions that affects newly applied materials, causing synthetic materials to dry and cementitious materials to 'pick up' or stiffen much quicker than normal. Warm, dry conditions with stiff breezes can equally provide rapid drying conditions.

In hot weather, application of both renders and finishes should be carried out in the shade following the sun around the building.

During periods of sustained hot and dry weather, the substrate may need cooling with an even mist spray of clean water before application to avoid retained heat affecting freshly applied mortar. Note this should be done in a controlled manner, so as to avoid saturating the substrate as this can induce cracking. This advice is particularly relevant when rendering onto aerated autoclaved blocks.

Cementitious products need to retain water for sufficient time to enable the cement to hydrate fully in order to reach full strength. Rapid drying conditions may therefore leave render materials weak.

During hot, rapid drying weather newly finished cementitious render materials may need to be actively cured by spraying with a light spray of clean water two or three times a day for two or three days after application. This is particularly relevant when working internally with these products

In common with all cementitious mixes, renders will not achieve full strength for approximately 28 days. During this period the finished work is more vulnerable to damage. Once applied, the colour of render will soften over a period of months to reach its natural hue.

Protection

Vulnerable areas or finished surfaces already in place on the construction need to be protected from damage or spillage during application of materials, by the use of polythene sheet, thin boarding or by masking with paper and tape.

Cementitious materials especially, must be protected during their initial setting to prevent damage by rainfall. This can be done using tarpaulins, close mesh netting, polythene or other suitable material. Coloured mortars can be discoloured by pigment being washed out of the 'green' mortar. Damage caused by mortar materials staining brick or brick slip faces cannot be effectively removed.

Newly applied renders and finishes must be protected against damage from water discharges from overflows, unfinished rainwater outlets or other points by providing appropriate temporary arrangements to direct water discharge away from materials.

Artificial enclosures round scaffolding can be formed using tarpaulins, close mesh netting, polythene or other suitable material to overcome adverse weather conditions. Care must be taken to ensure that flapping sheets blowing in the wind do not damage the unset material.

If artificial heat sources are used to maintain minimum temperatures, care should be taken to ensure that steady temperatures are achieved and that hot/cold spots do not occur on the wall surface. The temperature range within the enclosure should be minimum 4°C, maximum 10°C.

Ensure that scaffold lifts are clean at all times. Heavy rain can splash surface dirt on to finished surfaces, permanently staining them.

Tools

Standard plastering tools are all that are needed for application of many renders and finishes, however stainless steel trowels are recommended especially for synthetic finishes where mild steel equipment can rust very quickly and deposits can be transferred to finished materials.

To apply formless materials there are some specialist tools that can be supplied by Refina that will aid the professional to produce consistent high quality work. Proprietary scraping tools are required to produce scraped finish renders and specialist Ashlar cutters to produce high quality Ashlar features.

Contact Refina on 01202 632270, or www.refina.co.uk

Bucket trowel

A substantial square nosed trowel, this is a must for the tradesman regularly applying ready-mixed synthetic finishes direct from the pail.
Blade length approx. 200 mm.

Plastic trowel

Not to be confused with the standard plasterer's thick section plastic float used as a modern equivalent of the wood float, this thin blade **plastic trowel** is often recommended for finishing synthetic finishes.
Length approx. 280 mm.

Finishing spatula

This **finishing spatula** is ideal for closing in through-coloured renders ready for scraping after ruling or levelling surfaces of Monocouche renders ready for application of spray texture coats.
Blade length approx. 560 mm.

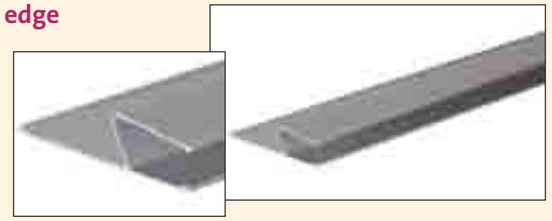
Long tooth scraper

Essential for the consistent and even finishing of Monocouche renders the **long tooth scraper** is the standard tool for use with all **Weber** through-coloured scrape finish renders when finishing the same day as application.
Length approx. 250 mm.
Tooth length approx. 15 mm.

Short tooth scraper

Used for the same purpose as the **long tooth scraper** this float has shorter, sharper teeth, which are more aggressive in removing surface laitance of coloured renders and is particularly useful to use when the render's set has progressed a little beyond the ideal.
Length approx. 250 mm.
Tooth length approx. 8 mm.

Plain straight edge



The use of a straight edge is essential for levelling any render. This h-section rule is a favourite of tradesmen applying materials by machine and particularly useful for levelling and feeding material from the high points back onto the wall in the same operation.
Length approx. 1200 mm.

Serrated feather edge

A new development in straight edges, this tool levels newly applied render as above while the serrated edge removes air pockets from Monocouche renders and easily identifies hollows and low spots without bringing undue amounts of cement rich laitance to the surface.
Length approx. 1200 mm.

I-section scraping edge

Use of the **I-section scraping edge** improves the flatness of scraped renders. It is a great advantage when incorporating ashlar features in Monocouche render as ashlar features can highlight any deviation in the wall along their line. Used to scrape the surface over an extended length, it ensures increased accuracy in flatness along the line of the ashlar cuts.
Size approx. 1200 x 75 mm.

Ashlar cutter tool 20 mm

This basic ashlar plough produces square section ashlar features, maximum recommended depth 5 mm, when run along the top of a straight rule placed along a previously described chalk line.

Ashlar tool

A more complex tool, the **ashlar tool** can be fitted with a variety of profiles and can be adjusted to cut features at a regular depth from the face of a box section straight rule placed along a previously described chalk line. Recommended depth of cut 2 – 10 mm. Blade extra.

Blades for Ashlar tool

Replacement or alternative blades are available in the following profiles.
25 mm – V
25 mm – square
40 mm – V
40 mm – square

Machine applications

Current skill shortages are unlikely to be eased in the foreseeable future and any application of technology that makes current skilled personnel more productive is a distinct advantage. Machine applications do just that.

Tradesmen applying external renders must to be free to apply their skills to completing external render, not labouring to carry or hoist mixed material to the place it is needed. Modern machinery not only mixes and conveys the wet material in just such a way but also even applies it to the wall so that trades people have the opportunity to use their levelling and finishing skills to the full.

Sprayed roughcast finishes are made possible only with the machine application approach where panels are applied and finished within hours of starting - truly the fast track method of modern rendering.

The UK and Irish market has been very traditional in approach and it has taken many years for a technology that is widely accepted on the continent to be adopted here. The pioneers though have now established the principles and more and more of **Weber's** recommended applicators have made machine application the very core of their businesses.

Several types of machine are on the market so how do you make your choice?

Render spray machines

Examples: Putzmeister P11, Mixjet, Turbosol, etc

Advantages

- *Self-contained diesel driven*
- *Designed for renders*
- *Can pump long distances (up to 60m dependent on height and material)*
- *Material can be used direct from the pallet*

Limitations

- *Large diesel machine that needs to be external to the building close to scaffold*
- *Laborious to clean*

Plastering machines

Examples: PFT G5, PFT Monojet, M-tec M3

Advantages

- *Dry powder technology*
- *Small size (will fit through a standard doorway)*
- *Easily dismantled for movement*
- *Continuous mixer*
- *Accurate water control (although this alters with pump wear)*
- *Easy to clean*

Limitations

- *Essentially designed for gypsum plasters*
- *Relatively short pumping distances (10 – 15m with cementitious materials although 50m may be achieved with large diameter delivery pipes. Distances dependent on height and material)*
- *Materials need to be moved close to machine (Although conveying systems can be used to transport powders from silos to machine)*
- *400 V, 3 phase, 50 Hz power supply required, either site-supplied or by generator.*

Closed double-mixing machines

Example: M-tec Duomix 2000

Advantages

- *Dry powder technology*
- *Separate mixing and pumping chambers*
- *Small size (will fit through a standard doorway)*
- *Easily dismantled for movement*
- *Continuous mixer*
- *Accurate water control (Does not change with pump wear)*
- *Easy to clean*
- *Pumping distances up to 60m with large diameter delivery pipes (Distances dependent on height and material)*

Limitations

- *Materials need to be moved close to machine (Although conveying systems can be used to transport powders from silos to machine)*
- *400 V, 3 phase, 50 Hz power supply required, either site-supplied or by generator.*

For full specifications refer to machine manufacturers' literature

Maintenance

Render systems should be inspected visually at reasonable intervals, although it is sufficient to survey from ground level in the first instance. Access to allow closer inspection is only required where areas of damage or defect are suspected.

Visual inspection should be carried out to identify:

- Areas of discolouration
- Areas of rendering where spalling has taken place and one or more of the render coats are delaminating
- Areas of mechanical damage caused accidentally or maliciously (especially in Insulated systems where render carrier and/or insulant is exposed)
- Cracking in the render surface
- Areas where mastic seals and other forms of protection are not performing

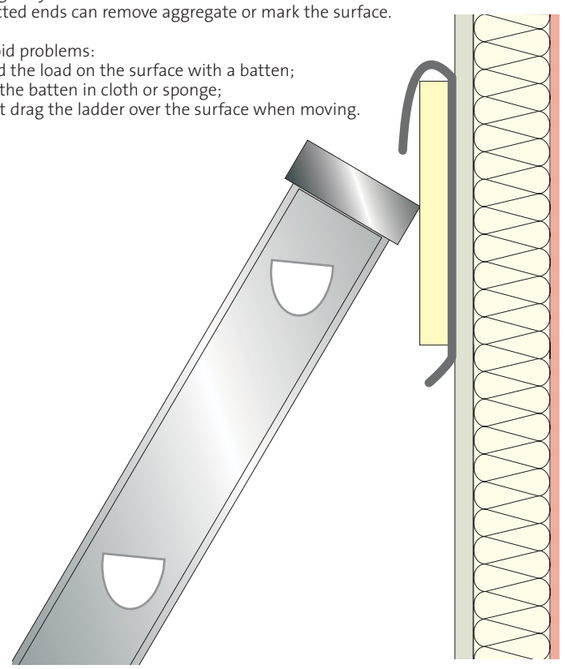
Access

Where access is provided by means of ladders, towers etc. care must be taken to ensure that the wall surfaces are not mechanically damaged as this can have a detrimental effect on the performance of the systems and their appearance. Careless use of ladders can leave marking on external finishes that is difficult to remove and, with excessive point impact, it is conceivable that insulated systems could be punctured.

It is wise therefore to spread the load on the surface of the render, wrap the spreader batten in sponge or cloth and avoid dragging the ladder across the surface when moving.

All rendered wall surfaces can be permanently and irreparably damaged by the careless use of ladders. Even ladders with protected ends can remove aggregate or mark the surface.

To avoid problems:
Spread the load on the surface with a batten;
Wrap the batten in cloth or sponge;
Do not drag the ladder over the surface when moving.



Repairs

Coloured renders and finishes are finished materials and it is unavoidable that repairs, no matter how carefully executed, are always likely to be visible on completion. Judgements therefore have to be made following any assessment, regarding the extent and location of any damage and the likely results.

Weber's Technical Services Department is available to give advice on aspects of the repair and maintenance of specific **Weber** renders, finishes and external wall insulation systems.

Monocouche renders

Cleaning

Renders in the Monocouche range may be cleaned periodically by the use of a pressure washer incorporating a mild detergent or road traffic film remover in the water. It must be borne in mind however, that high-pressure water jets are used in demolition. The spray pattern should therefore be adjusted to form a fan rather than a jet, too high a pressure on the wall surface avoided and extra care taken at angles and exposed edges.

The interval between treatments is purely dependent upon the amount of ground floor pedestrian 'traffic' and local atmospheric conditions. Organic growth should be treated with **weber CL150** and subsequently brushed off the surface in accordance with the data sheet.

Repairs

Monocouche renders are finished materials and repairs are always likely to be visible. For this reason we would recommend that full panels are removed and replaced. Where the elevation includes an Ashlar effect the feature cuts could be used as edges of the panel. Repairs will appear to be 'new' at first in comparison to the existing, but these should tone down and 'weather in' over a period of time.

Small knocks and abrasions will not be as noticeable as with traditional painted renders. If repair is deemed to be necessary, the material should be removed back to the substrate, a key provided by means of **weber.rend aid**, new material applied proud of surrounding surfaces and scraped back flush when the set allows.

Weber recommends that for best results repairs be undertaken by an applicator trained in monocouche repair techniques.

Reflected cracking from the substrate can be repaired once the cause of fissuring is determined by a suitably qualified person (i.e. structural engineer). **Weber** one coat renders are manufactured from carefully selected and graded aggregates to minimise drying-shrinkage. In addition to this the render is fully bonded to the substrate and thus restrained from movement, making the formation of cracks within the render alone unlikely.

The code of practice advises ...*Inconspicuous cracks that remain dry and sound are usually best left alone. Cutting and repairing, however carefully done, invariably results in some differences in appearance over the area of repair...* When repair is considered necessary, **Weber** can offer suitable repair techniques that compliment the render's durability.

Synthetic finishes

Cleaning

Normally, dirt deposits causing staining on the surface are accepted as part of the normal weathering process. If, however, surfaces require to be cleaned this should be carried out using generous amounts of water and a soft brush. Mild detergent can be used in solution worked gently into the surface before washing down. Should moss deposits develop and prove unsightly these can be removed using **weber CL150** solution (un-tinted) used in accordance with printed instructions and subsequently washed down.

Under no circumstances should aggressive treatments be used involving scrubbing down surfaces, acid cleaning or high pressure power washing.

Repairs

Minor areas of spalling can be repaired if care is taken to cut back the effected surface to sound areas. The exposed area must be thoroughly cleaned prior to any making good being carried out. The area should be treated with **weber CL150** solution (un-tinted), which is left for 48 hours then carefully brushed down to remove any deleterious material.

The appropriate primer should be applied 24 hours prior to applying the finish, which should be textured to match the original material.

Repairs are always likely to be visible so it is essential that care be taken if the patch is to be as unobtrusive as possible. Only small areas should be treated in this way and it is recommended that patch areas should be cut to a rectangular shape with straight square cut edges before the repair material is applied.

Insulated systems

Cleaning

Normally, dirt deposits causing staining on the surface are accepted as part of the normal weathering process. If, however, surfaces require to be cleaned this should be carried out using generous amounts of water and a soft brush. Mild detergent can be used in solution worked gently into the surface before washing down. Should moss deposits develop and prove unsightly these can be removed using **weber CL150** solution (un-tinted) used in accordance with printed instructions and subsequently washed down.

Under no circumstances should aggressive treatments be used involving scrubbing down surfaces, acid cleaning or high pressure power washing.

Repairs

Bearing in mind that repairs may be visible, minor damage to synthetic system finishes may be possible providing the underlying render is still sound. See *Synthetic finishes* above.

For through-coloured cementitious finishes, small knocks and abrasions will not be as noticeable as with traditional painted renders. If repair is deemed to be necessary, the material should be removed back to the undercoat, a key provided by means of **weber.rend aid**, new material applied proud of surrounding surfaces and scraped back flush when the set allows. Repairs are always likely to be visible but they should 'tone down' over a period of time through the natural weathering process.

Where render-protected external wall insulation systems have been seriously damaged and the render carrier and/or the insulation are visible **Weber's** technical team should be contacted for a method statement that will cover removal and reinstatement.

Mastic seals etc

It is important to examine carefully the condition of mastic seals and soft joints to verify their continuing effectiveness. These joints are limited in their lifespan and must be considered as renewable during the life of the system. Defective mastic should be cut out and removed, the affected surfaces cleaned down and re-primed and a new mastic seal created.

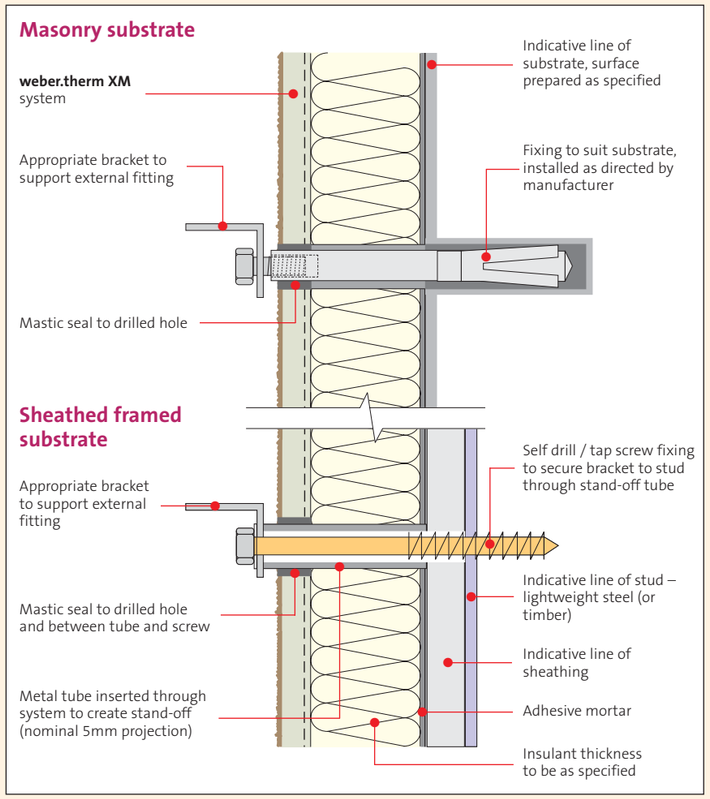
Metal trims, flashings etc. must be checked to establish their effectiveness in shedding water clear of the rendering. Particular attention should be paid to joints in these sections where they are butted or sleeved.

Ancillary fixtures and fittings

Generally, the main danger to avoid is compressing the system, as this could be detrimental to its performance and the security of the item being fixed. Fixtures must be anchored back to the substrate, not to the system. Heavy items and those that may be subject to movement in wind etc, should be fixed through the thickness of the system using appropriate spacers to avoid compressing the insulation.

Percussion drilling **must not** be employed and risk of snagging the mesh or lath carriers can be minimised by use of diamond tipped drill bit.

Mastic seals should be incorporated to prevent water entering the system around fixings.



CI/SfB (41) Pq4
Uniclass L5171 October 2010

weber.pral D

One-coat, through-coloured monocouche render

About this product

weber.pral D is a ready-mixed, cementitious, external render suitable for most types of brick or blockwork. Factory produced from carefully selected raw materials for consistency of product, it only requires the addition of water on site.

The through colour and one coat features allow fast application and short programme periods thereby reducing associated scaffolding and site costs, making ground works available for completion more quickly.

weber.pral D has been awarded an A+ Green Guide Rating as defined in the BRE Global 2008 Green Guide to Specification.

10

Technical data

weber.pral D is applied by traditional hand tools and is finished flat with a scraped finish that features a slight mica reflection.

weber.pral D has excellent weather resistance and durability, whilst allowing the structure to breathe.

Substrates must have a good mechanical key suitable for rendering. **weber.rend aid** should be used to provide an artificial key on substrates such as smooth concrete.

Uses

- Through-coloured external render
- For application to most suitably prepared brick and blockwork

weber.pral D is specifically formulated with the demands of the house builder in mind.

Constraints

Not available in GB.

Colours

weber.pral D is available is a range of 24 colours. Specifiers should consult the **weber.pral D** Colour Chart and, whenever possible, obtain samples prior to specification.

Preparation

Scaffolding must be independently tied to allow for an uninterrupted application. Any faults in the structure, particularly those which may lead to moisture penetration must be rectified.

To avoid dampness and discolouration rendering should be avoided below DPC and within 150 mm of ground level.

All surfaces must be sound, clean, suitably dry and free of any material which may impair adhesion.

Arrises and feature stops may be formed using clean straight timber battens. Alternatively, suitable beads may be used but, with a scraped finish, these will be evident and must be accepted as a feature. Please note that scraped renders may, during the scraping process, tend to spall away from the nose of some angle beads. Refer to **Weber's** Technical Department for advice on suitable profiles.

Mask as required. Edging tape must be removed before the material has dried.

Expansion joints should be included as required by the substrate and carried through all applied materials.

Do not apply to gypsum plaster or previously painted surfaces.

Mixing

weber.pral D should be mixed with clean water at a rate of approximately 5 – 6 litres per 25 kg bag using either a drill and whisk or tumble mixer. For best results, use as little water as possible and mix to give a workable consistency.

Note: weber.pral D may stiffen on standing. Re-mix product to regain a suitable workable consistency but do not add any more water.

To ensure colour consistency, the materials required for complete and adjoining panels should be of the same batch number or be thoroughly mixed together before use.

NB: weber.pral D may also be mixed and applied by using a suitable render spray machine. See page 142.

For further information, please contact Technical Services.

Application

To maintain colour consistency, panels should be completed in sequence around the building.

Scraped finish

weber.pral D should be applied to the suitable substrate in a two-pass application to a minimum thickness of 18 mm and to a maximum thickness of 28 mm (2 – 3 mm will be removed by the scraping process to give a finished thickness of minimum 15 mm maximum 25 mm). It should then be ruled level and allowed to harden for between 5 and 16 hours (sometimes a longer period may be necessary depending on weather and background conditions).

When **weber.pral D** is green (set but not fully hardened) it should be scraped in circular motions using a scraping tool. It is essential that this is done carefully and evenly ensuring all laitence is removed and that no part is missed. Thoroughly brush down the surface of the scraped finish using a soft bristle brush.

weber.pral D will set and gain hardness in a similar manner to conventional renders.

Good practice

Do not apply:

- If frost is forecast within 24 hours of use
- In damp/wet conditions
- In temperatures below 5°C or above 30°C
- On elevations in direct sunlight or where the substrate is hot

Protection from unfavourable weather conditions should always be provided during application and early age curing.

weber.pral D

One-coat, through-coloured monocouche render

Features and benefits

- One coat for fast application and short programme periods
- Through-coloured for low maintenance – decoration not required
- A+ Green Guide Rating
- Factory produced for consistency of proportioning
- Ready mixed – only water required to be added on site for ease of use
- NSAI approved certificate no. 03/0180

Curing

Curing with a fine spray of clean water may be necessary during rapid drying conditions.

In hot climates curing as above is essential for 3 – 5 days after application.

Storage and shelf life

When stored unopened in a dry place at temperatures above 5°C, shelf life is 12 months from date of manufacture.

Health and safety

Contains cement.

For full information on Health and Safety, please see inside back cover.

10

Packaging and coverage

weber.pral D is supplied in 25 kg paper sacks.

To achieve a finished thickness of 15 mm, coverage is approximately 25 kg per m².

Note: These estimates take no account of wastage and will vary according to the type of surface involved and method of application.

CI/SfB (41) Pq4
Uniclass L5171 October 2010

weber.pral M

One-coat, through-coloured monocouche render

About this product

weber.pral M is a one-coat, ready-mixed, cementitious, weather resistant, external decorative, through-coloured render, suitable for most types of brick or blockwork. Factory produced from carefully selected raw materials for consistency of product, it only requires the addition of water on site.

The through colour and one coat features allow fast application with shorter programme periods, thereby reducing associated scaffolding and site costs and permitting the completion of ground works at an earlier stage.

weber.pral M has been awarded an A+ Green Guide Rating as defined in the BRE Global 2008 Green Guide to Specification.

10

Technical data

weber.pral M has been designed for spray application and can be applied up to 28 mm thick in two passes. Manual application is also possible.

weber.pral M has excellent weather resistance and durability, whilst allowing the structure to breathe.

Substrates must have a good mechanical key suitable for rendering. **weber.rend aid** must be used to provide an artificial key on substrates such as smooth concrete.

Uses

- Through-coloured external render
- For application to most suitably prepared brick and blockwork
- **weber.pral M** offers a variety of ways to achieve distinct architectural features.

Colours

weber.pral M is available is a range of 24 colours. Specifiers should consult the **weber.pral M** Colour Chart and, whenever possible, obtain samples prior to specification.

Preparation

Scaffolding must be independently tied to allow for an uninterrupted application. Any faults in the structure, particularly those which may lead to moisture penetration must be rectified.

To avoid dampness and discolouration rendering should be avoided below DPC and within 150 mm of ground level.

All surfaces must be sound, clean, suitably dry and free of any material which may impair adhesion. The substrate should be suitable for rendering with a designation III mix (1:1:6).

Arrises and feature stops may be formed using clean straight timber battens.

Alternatively, suitable beads may be used but, with a scraped finish, these will be evident and must be accepted as a feature. Please note that scraped renders may, during the scraping process, tend to spall away from the nose of some angle beads. Refer to **Weber's** Technical Department for advice on suitable profiles.

Mask as required. Edging tape must be removed before the material has dried.

Expansion joints should be included as required by the substrate and carried through all applied materials.

Do not apply to gypsum plaster or previously painted surfaces.

Mixing

weber.pral M should be mixed with 5 – 5¼ litres of clean water using either a suitable render spray machine, drill and whisk or tumble mixer. To ensure colour consistency, the materials required for complete and adjoining panels should be of the same batch number or be thoroughly mixed together before use.

For best results, use as little water as possible and mix to give a workable consistency.
Note: weber.pral M may stiffen on standing. Re-mix product to regain a workable consistency but do not add any more water.

Application

To maintain colour consistency, panels should be completed in sequence around the building.

Spray roughcast

Depending on the required finished thickness, a first pass is spray applied to a minimum thickness of 10 mm and ruled level. A second texture pass is applied between 1 and 2 hours after the first to form a single monolithic coat with a minimum thickness of 15 mm. Total finished thickness should be between 15 and 25 mm.

Scraped finish

weber.pral M should be applied to the suitable substrate in a one or two-pass operation to a minimum thickness of 18 mm, or to a maximum thickness of 28 mm. (2 – 3 mm will be removed by the scraping process to give a finished thickness of minimum 15 mm, maximum 25 mm.) It should then be ruled level and allowed to harden for between 5 and 16 hours. (Sometimes a longer period may be necessary depending on weather and background conditions.)

When **weber.pral M** is green (set but not fully hardened) it should be scraped with a circular action using a scraping tool. It is essential that this is done carefully and evenly, ensuring all laitance is removed and that no part is missed. Thoroughly brush down the surface of the scraped finish using a soft bristle brush.

Ashlar features

Apply **weber.pral M** in two passes to an initial thickness of between 20 mm and 28 mm to allow for an Ashlar recess from 2 mm deep up to a maximum of 10 mm.

Ensure a minimum of 15 mm thickness is maintained at the base of the recess for sheltered to moderate exposure.

Rule level and spatula flat. When the material is still green, scrape the surface as detailed in the guidance notes for scraped finish.

Immediately after scraping, mark out and cut the Ashlar effect using **Weber** Ashlar tools to produce the desired profile. Thoroughly brush down the surface of the render using a soft bristle brush.

weber.pral M will set and gain hardness in a similar manner to conventional renders.

Protection from unfavourable weather conditions should always be provided during application and early age curing.

Good practice

Do not apply:
- If frost is forecast within 24 hours of use
- In damp/wet conditions
- In temperatures below 5°C or above 30°C
- On elevations in direct sunlight or where the substrate is hot

weber.pral M

One-coat, through-coloured monocouche render

Features and benefits

- One coat for fast application and short programme periods
- Through coloured for low maintenance – decoration not required
- A+ Green Guide Rating
- Factory produced for consistency of proportioning
- Ready mixed - only water required to be added on site for ease of use
- Formulated to be spray applied by render pump for faster application
- BBA approved certificate no. 05/4268

Curing

Curing with a fine spray of clean water may be necessary during rapid drying conditions.

In hot climates, curing as above is essential for 3 – 5 days after application.

Storage and shelf life

When stored unopened in a dry place at temperatures above 5°C, shelf life is 12 months from date of manufacture.

Health and safety

Contains cement.

For full information on Health and Safety, please see inside back cover.

Packaging and coverage

weber.pral M is supplied in 25 kg paper sacks.

To achieve a finished thickness of 15 mm, coverage is approximately 25 kg per m².

Note: These estimates take no account of wastage and will vary according to the type of surface involved and method of application.

CI/SfB (41)
Uniclass L51 May 2011

weber.therm XB

External wall insulation system featuring a real brick slip finish

About this product

weber.therm XB is a high performance external wall insulation system with an authentic brick finish.

Technical data

weber.therm XB external wall insulation systems

Insulation Board	Reinforcement	Fixing	1st Coat	2nd Coat	Finish
EPS	N/A	Mechanical	**weber.rend EXB**	N/A	Brick slip and **weber.rend BPM**
PHS	N/A	Mechanical			
PIR	N/A	Mechanical			
MFD	Meshcloth	Mechanical	**weber.rend LAC**	**weber.rend EXB**	Brick slip and **weber.rend BPM**
MFL	N/A	**weber.rend LAC**	**weber.rend EXB**	N/A	Brick slip and **weber.rend BPM**

Uses

- Extends the life of existing buildings by keeping the old structure warm and stable
- Facilitates the decoration and re-modelling of existing, tired facades
- Simplifies wall construction within the new build sector

Constraints

The quality of application of these materials depends on suitable operative skills and product familiarity.

Restrictions on weather conditions during application and curing must be respected.

Sound trade practices and printed instructions must be followed.

Good access and appropriate protection must be provided.

Product/system options

The following product options can be used in the **weber.therm XB** system. Details on their application can be found on the relevant page of the ***Weber Render Solutions*** handbook, or by requesting the appropriate Data Sheet.

Page	Product	Data Sheet
216	**weber CL150**	G.012
202	**weber.rend stipple**	7.203
210	**weber.rend TUC**	7.501
206	**weber.rend PUC**	7.503

Page	Product	Data Sheet
188	**weber.rend LAC**	7.202
182	**weber.rend EXB**	7.204
183	**weber.rend BPM**	7.205

Materials

Beads, trims and flashings

Full system beads are available in polyester powder coated galvanised mild steel or grade 304 austenitic stainless steel in 3 m and 2.5 m lengths.

Trims and flashings such as overcills and copings, are available in PPC aluminium in 2.5 m lengths or made to order.

Insulation

Rigid insulation boards are supplied from the following range:

EPS Expanded polystyrene – slab

Grade	SD/FRA. CFC/HCFC-free
Density	15 kg/m³
Size	1220 x 610 mm
Thickness	30 – 100 mm

MFD Mineral fibre – slab

Grade	CFC/HCFC-free
Density	160/100 kg/m³
Size	1200 x 600 mm
Thickness	30 – 100 mm

MFL Mineral fibre – lamella

Grade	CFC/HCFC-free
Density	95 kg/m³
Size	1000 x 200 mm
Thickness	40 – 100 mm

PHS Phenolic foam – slab

Grade	CFC/HCFC-free
Density	40 kg/m³
Size	1200 x 600 mm
Thickness	30 – 100 mm

PIR Polyisocyanurate – slab

Grade	BRE Green Guide Rating A
Density	32 kg/m³
Size	1200 x 600 mm
Thickness	30 – 100 mm

Mechanical fixings

A wide range of fixings is available to accommodate all insulant thicknesses and substrate types. Fixings are specified on a project by project basis and pull-out values are established to ensure the **weber.therm XB** system is securely fixed back to the substrate.

weber.rend LAC

A factory batched mortar for bonding rigid insulation slabs to existing masonry substrates.

weber.rend EXB adhesive mortar

weber.rend EXB is a high polymer-modified, cement based adhesive mortar for bonding Mineral Fibre – lamella insulation to plywood substrates and also for bonding brick slips to rigid insulation slabs.

Brick slips

Brick slips are in accordance with BS3921 covering shape and size.
Nominal brick slip size 65 x 215 x 15 mm.

Brick slips are available in a wide range of colours and textures. **Weber** render solutions.

weber.rend BPM pointing mortar

weber.rend BPM is a factory batched coloured, polymer-modified, cement based mortar for pointing brick slips as used in the **weber.therm XB** EWI system.

Preparation

Existing rendered substrates

Hammer test and remove all areas of loose, 'bossed' render.

Treat surfaces with **weber CL150**, a biocidal wash, to remove any traces of organic growth.

Make good surface using **weber.rend stipple** and **weber.rend TUC** or **weber.rend PUC**.

New build masonry or frame structure

Ensure all surfaces are clean, in-plane and of adequate thickness to provide appropriate support and stiffness without deflection or edge protrusions.

Application

Fix base and other full system beads as specified.
weber.therm MFD insulant:
Temporarily fix boards using 1 or 2 fixings per board. Mix and apply **weber.rend LAC** to a thickness of 3 mm and immediately lay in the **Weber** standard mesh. Fix the boards through the meshcloth coat with a further 5 fixings per m² and cover the head of the the fixings with a patch of meshcloth.

All other insulation types:
Fix the insulation as described in the System Specification Sheet or relevant project documentation.

Mix and apply **weber.rend EXB** as directed in the data sheet. Bed the **Weber** brick slips into the freshly applied **weber.rend EXB** using the spacers to support the brick and provide the correct gap for pointing.

Point up the joints carefully with **weber.rend BPM**.

Good practice

Do not apply mineral renders:

- If frost is forecast within 24 hours of use
- In damp/wet conditions
- In temperatures below 5°C or above 30°C
- On elevations in direct sunlight or where the substrate is hot

weber.therm XB

External wall insulation system featuring a real brick slip finish

Features and benefits

- Provides efficient thermal insulation for refurbishment and new build projects
- Eliminates interstitial condensation by creating a 'warm wall' construction
- British Standard brick dimensions, designated frost resistant
- Hard durable surface reduces problems arising from impact damage and graffiti
- Provides designers with greater scope for creating and harmonising their ideas within architecturally sensitive projects
- Suitable for, and effective on most buildings – including lightweight steel frame structures and in-fill panels
- Supported by comprehensive technical and architectural services

Technical support and advice

During the planning stages of a project, advice should be sought from **Weber** technical staff.

Advice based on technical expertise together with unrivalled practical experience is freely available and covers:

Design: assistance with the selection of the appropriate system, including working details and U-value calculations.

Pre-Contract Documentation: specifications, typical details, method statements.

Contract Documentation: site packages, available through the specialist contractor. These include approved details, specification and site procedures.

weber.therm XL

Thick coat external wall insulation system incorporating expanded metal lath

About this product

weber.therm XL is a high performance external wall insulation system incorporating expanded metal lath and traditional or polymer modified render.

weber.therm XL systems have BBA approval covering various types of insulation and many render finishes.

Technical data

weber.therm XL external wall insulation systems

Insulation Board	Reinforcement	Fixing	1st Coat	2nd Coat	Finish
EPS Expanded polystyrene	Metal lath – Ferritic stainless	Mechanical	**weber.rend TUC** or **weber.rend PUC** 10 – 12 mm	**weber.rend TTC** 6 – 8 mm	Dry-dash Scraped texture Primer and Synthetic finish
XPS Extruded polystyrene	Metal lath – Ferritic stainless	Mechanical	**weber.rend TUC** or **weber.rend PUC** 10 – 12 mm	**weber.rend TTC** 6 – 8 mm	Dry-dash Primer **weber.plast P**
MFS Mineral fibre	Metal lath – Ferritic stainless	Mechanical	**weber.rend MFU** 10 – 12 mm	**weber.rend TTC** 6 – 8 mm	Dry-dash Scraped texture Primer and Synthetic finish
PHS Phenolic foam	Metal lath – Ferritic stainless	Mechanical	Undercoat – **weber.rend POC** 15 mm min.	N/A	Primer **weber.plast TF** or **weber.plast DF**

Uses

- Extends the life of existing buildings by keeping the old structure warm and stable
- Facilitates the decoration and re-modelling of existing, tired facades
- Simplifies wall construction within the new build sector

Constraints

The quality of application of these materials depends on suitable operative skills and product familiarity.

Restrictions on weather conditions during application and curing must be respected.

Sound trade practices and printed instructions must be followed.

Good access and appropriate protection must be provided.

Product/system options

The following product options can be used in the **weber.therm XL** system. Details on their application can be found on the relevant page of the ***Weber Render Solutions*** handbook, or by requesting the appropriate Data Sheet.

Page	Product	Data Sheet	Page	Product	Data Sheet
216	**weber CL150**	G.012	180	**weber.rend TTS**	7.507
202	**weber.rend stipple**	7.203	220	**weber PR310**	G.014
210	**weber.rend TUC**	7.501	178	**weber.plast TF/DF**	7.403
206	**weber.rend PUC**	7.503	172	**weber.sil TF**	7.410
190	**weber.rend MFU**	7.509	174	**weber.plast P**	7.402
208	**weber.rend TTC**	7.502	176	**weber.sil P**	7.420

Materials

Beads, trims and flashings

Full system and render only beads are available in polyester powder coated galvanised mild steel or grade 304 austenitic stainless steel in 3 m and 2.5 m lengths.

Trims and flashings such as overcills and copings, are available in PPC aluminium in 2.5 m lengths or made to order.

Insulation

Rigid insulation boards are supplied from the following range:

Coated EPS Expanded polystyrene – slab

Grade	SD/FRA. CFC/HCFC-free
Density	15 kg/m³
Size	1220 x 610 mm
Thickness	30 – 140 mm

Coated XPS Extruded polystyrene – slab

Grade	UHD Type A. HCFC-free
Density	30 kg/m³
Size	1220 x 600 mm
Thickness	30 – 100 mm

MFD Mineral fibre – slab

Grade	CFC/HCFC-free
Density	160/100 kg/m³
Size	1200 x 600 mm
Thickness	30 – 140 mm

PHS Phenolic foam – slab

Grade	CFC/HCFC-free
Density	40 kg/m³
Size	1200 x 600 mm
Thickness	30 – 140 mm

Metal lath

Expanded metal lath is available in the following:

Ferritic stainless steel

Grade	430S
Weight	0.8 kg/m²
Size	2440 x 1220 mm
Mesh opening	50 x 20 mm

Fixings

A wide range is available to accommodate all insulant thicknesses and substrate types. Fixings are specified on a project by project basis and pull-out values are established to ensure the EWI system is securely fixed back to the substrate.

Undercoat

Traditional and polymer-modified undercoats are factory batched cement based mortars.

Top coats

Coloured top coats are available for use as a background for dry-dash, a scraped textured finish, or a smooth float finish for synthetic textured coatings.

Preparation

Existing rendered substrates

Hammer test and remove all areas of loose, 'bossed' render.

Treat surface with **weber CL150**, a biocidal wash, to remove any traces of organic growth.

Make good surface using **weber.rend stipple** and **weber.rend TUC** or **weber.rend PUC**.

New build masonry or frame structure

Ensure all surfaces are clean, in-plane and of adequate thickness to provide appropriate support and stiffness without deflection or edge protrusions.

Application

Fix base and other full system beads as specified.

Fix the insulation, render only beads (if specified) and lath as described in the System Specification Sheet or relevant project documentation.

Mix and apply the appropriate undercoat to the specified thickness.

Mix and apply the top coat as directed to achieve the desired finish.

Where an additional synthetic finish is required, apply the relevant primer prior to the application of the selected textured coating.

Good practice

Do not apply mineral renders:

- If frost is forecast within 24 hours of use
- In damp/wet conditions
- In temperatures below 5°C or above 30°C
- On elevations in direct sunlight or where the substrate is hot

weber.therm XL

Thick coat external wall insulation system incorporating expanded metal lath

Features and benefits

- Provides efficient thermal insulation for refurbishment and new build projects
- Comprehensive range of colours and textures enable the creation of striking visual effects
- Has a high performance water shedding range of finishes to protect the building fabric
- Particularly suited to high rise applications and for areas where high impact resistance is required
- Eliminates interstitial condensation by creating a 'warm wall' construction
- High strength mechanical fixings allow application to existing 'suspect' or friable surfaces
- Supported by comprehensive technical and architectural services
- BBA approved certificate no. 91/2600
- NSAI approved certificate no. 07/0295

Technical support and advice

During the planning stages of a project, advice should be sought from **Weber** technical staff.

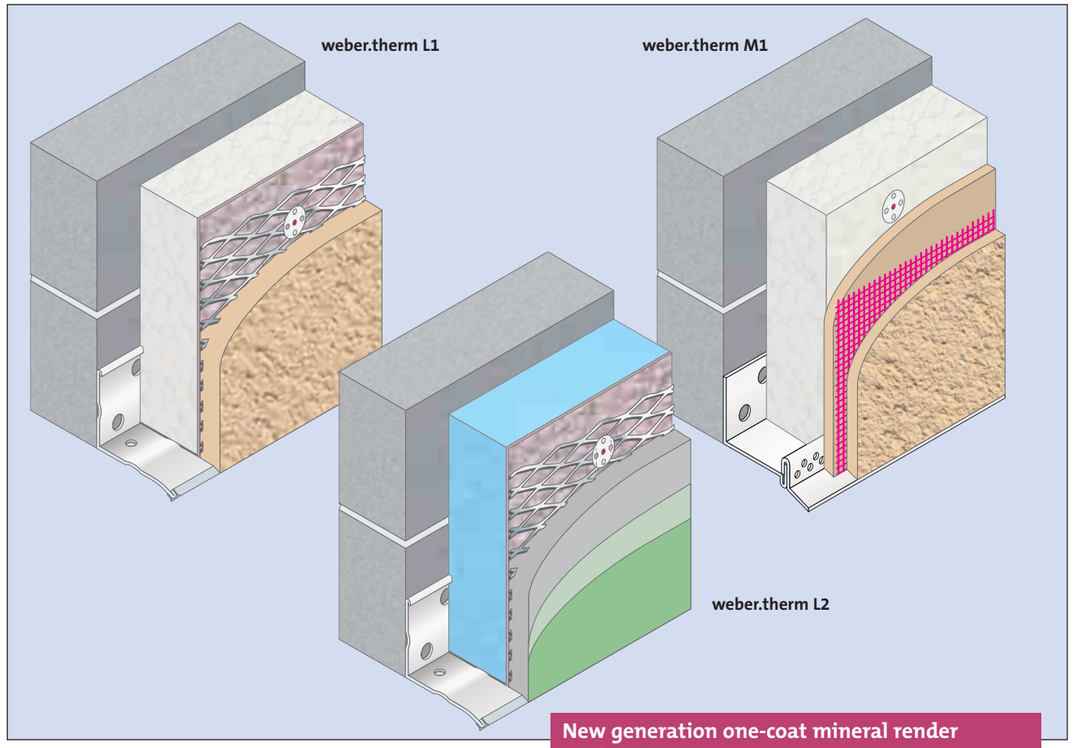
Advice based on technical expertise together with unrivalled practical experience is freely available and covers:

Design: assistance with the selection of the appropriate system, including working details and U-value calculations.

Pre-Contract Documentation: specifications, typical details, method statements.

Contract Documentation: site packages, available through the specialist contractor. These include approved details, specification and site procedures.

weber.therm XP



New generation one-coat mineral render application

About this product

weber.therm XP is the new generation of external wall insulation systems from **Weber**, using specially designed mineral one-coat renders.

weber.therm XP systems have BBA approval, certificate number 09/4670.

Technical data

weber.therm XP – external wall insulation systems

Insulation Board	Reinforcement	Fixing	1st Coat	2nd Coat	Finish
Coated EPS	Ferritic stainless lath	Mechanical	**weber.therm L1**	N/A	Dry-dash/ scraped texture/ light ashlars/ spray roughcast
Coated XPS	Ferritic stainless lath	Mechanical	**weber.therm L2**	N/A	Plain with **weber.sil P**
Plain EPS Plain MFS Plain PHS	Meshcloth	Mechanical	**weber.therm M1**	N/A	Dry-dash/ scraped texture/ light ashlars/ spray roughcast

Uses

- Extends the life of existing buildings by keeping the old structure warm and stable
- Facilitates the decoration and remodelling of existing, tired facades
- Simplifies wall construction within the new build sector

Constraints

The quality of application of these materials depends on suitable operative skills and product familiarity.

Restrictions on weather conditions during application and curing must be respected.

Sound trade practices and printed instructions must be followed.

Good access and appropriate protection must be provided.

Colours

weber.therm M1 and **L1** are available in 12 standard and 24 standard special colours. See colour chart on page 23.
weber.sil P, for use with **weber.therm L2**, is available in a wide range of NCS colours. Colour cards available from **Weber**.

Product/system options

The following product options can be used in the **weber.therm XP** system. Details on their application can be found on the relevant page of of the ***Weber Render Solutions*** handbook, or by requesting the appropriate Data Sheet.

Page	Product	Data Sheet	Page	Product	Data Sheet
216	**weber CL150**	G.012	196	**weber.therm L1**	7.700
202	**weber.rend stipple**	7.203	198	**weber.therm L2**	7.710
210	**weber.rend TUC**	7.501	194	**weber.therm M1**	7.750
206	**weber.rend PUC**	7.503	176	**weber.sil.P**	7.420

Materials

Beads, trims and flashings

Full system and render only beads are available in polyester powder coated galvanised mild steel or grade 304 austenitic stainless steel in 3 m and 2.5 m lengths.
Trims and flashings such as overcills and copings, are available in PPC aluminium in 2.5 m lengths or made to order.

Insulation

Rigid insulation boards are available in:

Coated EPS Expanded polystyrene – slab (for lath option only)

Grade	CFC/HCFC-free SD/FRA
Density	15 kg/m³
Size	1220 x 610 mm
Thickness	30 – 140 mm

Coated XPS Extruded polystyrene – slab (for lath option only)

Grade	HCFC-free UHD Type A
Density	30 kg/m³
Size	1220 x 610 mm
Thickness	30 – 100 mm

Plain EPS Expanded polystyrene – slab

Grade	CFC/HCFC-free SD/FRA
Density	15 kg/m³
Size	1220 x 610 mm
Thickness	30 – 200 mm

Plain MFD Mineral fibre – slab

Grade	CFC/HCFC-free
Density	160/100 kg/m³
Size	1200 x 600 mm
Thickness	30 –200 mm

Plain PHS Phenolic – slab

Grade	CFC/HCFC-free
Density	40 kg/m³
Size	1200 x 600 mm
Thickness	30 – 140 mm

Metal lath

Expanded metal lath is available in:

Ferritic stainless steel

Grade	430S
Weight	0.8 kg /m²
Size	2440 x 1220 mm
Mesh opening	50 x 20 mm

Meshcloth

Balanced, open weave, alkaline resistant glass fibre meshcloth is available in:

Standard duty

Weight	160 g/m²
Mesh dimension	3.5 mm x 3.5 mm
Size	1 m x 50 m roll

Fixings

A wide range is available to accommodate all insulant thicknesses and substrate types. Fixings are specified on a project by project basis and pull-out values are established to ensure the **weber.therm XP** system is securely fixed back to the substrate.

Render

weber.therm L1 is a factory-batched, through-coloured render for expanded metal lath and can be scrape textured, dry-dashed or spray roughcast finished.
weber.therm M1 is a factory-batched, through coloured render for meshcloth and can be scrape textured, dry-dashed or spray roughcast finished.
weber.therm L2 is a factory-batched, lightweight render for expanded metal lath with a plain finish.
weber.sil P is a high-performance mineral paint.

Preparation

Existing rendered substrates

Hammer test and remove all areas of loose, 'bossed' hollow render.

Treat surfaces with **weber CL150**, a biocidal wash, to remove any traces of organic growth.

Make good surface using **weber.rend stipple** and **weber.rend TUC** or **weber.rend PUC**.

New-build masonry or frame structure

Ensure all surfaces are clean, in plane and of adequate thickness to provide appropriate support and stiffness without deflection or edge protrusions.

Application

Lath option

Fix base and other full system beads as specified.

Fit the insulation, render-only beads (where specified) and lath as described in the System Specification Sheet or relevant project documentation.

Apply **weber.therm L1** or **weber.therm L2** render as directed on pages 202 – 205.

Mesh option

Fix base and other full system beads as specified.

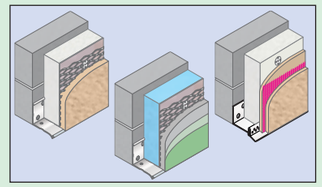
Fit the insulation and render-only beads (where specified) as described in the System Specification Sheet or relevant project documentation.

Apply **weber.therm M1** render laying-in meshcloth after first pass (refer to pages 200 – 201 for full information on the use of this product).

Note:
weber.therm L1 and **M1** can be scrape textured, dry-dashed or spray roughcast finished.
weber.therm L2 is float-finished and sponged prior to the application of **weber.sil P**.
Dilute and apply a first coat of **weber.sil P** using a wool roller. Apply a second undiluted coat after the first coat is dry (refer to relevant data sheet for further information).

weber.therm XP

New generation one-coat mineral render application



Features and benefits

- Increasing energy efficiency leading to economic benefits
- One coat application, significantly reducing the 'programme of works' and all associated costs
- Through-colour, thick mineral render for low maintenance and durability
- Provides efficient thermal insulation for refurbishment and new build projects
- Particularly suited to high rise applications and for areas where high impact resistance is required
- Eliminates interstitial condensation by creating a 'warm wall' construction
- High strength mechanical fixings allow application to existing 'suspect' or friable surfaces
- Quality assured raw materials
- Supported by comprehensive technical and architectural services
- BBA approved certificate no. 09/4670

Good practice

Do not apply mineral renders:
- If frost is forecast within 24 hours of use
- In damp/wet conditions
- In temperatures below 5°C or above 30°C
- On elevations in direct sunlight or where the substrate is hot

Technical support and advice

During the planning stages of a project, advice should be sought from **Weber** technical staff.

Advice based on technical expertise together with unrivalled practical experience is freely available and covers:

Design: assistance with the selection of the appropriate system, including working details and U-value calculations.

Pre-Contract Documentation: specifications, typical details, method statements.

Contract Documentation: site packages, available through the specialist contractor. These include approved details, specification and site procedures.

weber.therm XM

Lightweight external wall insulation system incorporating thin-coat polymer render and meshcloth reinforcement

About this product

weber.therm XM is a high performance external wall insulation system protected by meshcloth reinforced polymer renders.

weber.therm XM systems when applied to a masonry substrate have BBA approval covering various types of insulation and many render finishes.

Technical data

weber.therm XM external wall insulation systems

Insulation Board	Reinforcement	Fixing	1st Coat	2nd Coat	Finish
EPS Expanded polystyrene	Meshcloth	**weber.rend LAC**	**weber.rend LAC** 5 – 6mm	**weber.rend PTC** **weber.rend PTS** or N/A (6 – 8mm)	Dry-dash Scrape textured Primer and Synthetic finish
MFS Mineral fibre – slab	Meshcloth	Mechanical	**weber.rend LAC** 5 – 6mm	**weber.rend PTC** **weber.rend PTS** or N/A (6 – 8mm)	Dry-dash Scrape textured Primer and Synthetic finish
MFL Mineral fibre – lamella	Meshcloth	**weber.rend LAC**	**weber.rend LAC** 5 – 6mm	N/A	Primer and Synthetic finish
PHS Phenolic foam	Meshcloth	Mechanical or **weber.rend LAC**	**weber.rend LAC** 5 – 6mm	**weber.rend PTC** **weber.rend PTS** or N/A (6 – 8mm)	Dry-dash Scrape textured Primer and Synthetic finish
PIR Polyisocyanurate – slab	Meshcloth	Mechanical or **weber.rend LAC**	**weber.rend LAC** 5 – 6mm	**weber.rend PTC** **weber.rend PTS** or N/A (6 – 8mm)	Dry-dash Scrape textured Primer and Synthetic finish

Uses

- Extends the life of existing buildings by keeping the old structure warm and stable
- Facilitates the decoration and re-modelling of existing, tired facades
- Simplifies wall construction within the new build sector

Constraints

The quality of application of these materials depends on suitable operative skills and product familiarity.

Restrictions on weather conditions during application and curing must be respected.

Sound trade practices and printed instructions must be followed.

Good access and appropriate protection must be provided.

energy saving recommended

Certification mark

Product/system options

The following product options can be used in the **weber.therm XM** system. Details on their application can be found on the relevant page of the ***Weber Render Solutions*** handbook, or by requesting the appropriate Data Sheet.

Page	Product	Data Sheet
216	**weber CL150**	G.012
202	**weber.rend stipple**	7.203
210	**weber.rend TUC**	7.501
188	**weber.rend LAC**	7.202
204	**weber.rend PTC**	7.504
200	**weber.rend PTS**	7.508
220	**weber PR310**	G.014
178	**weber.plast TF/DF**	7.403
172	**weber.sil TF**	7.410
174	**weber.plast P**	7.402
176	**weber.sil P**	7.420

Materials

Beads, trims and flashings

Full system beads are available in polyester powder coated galvanised mild steel, grade 304 austenitic stainless steel or aluminium in 3 m and 2.5 m lengths.

Render only beads are available in coated galvanised, stainless, coated aluminium or rigid plastic in 3 m and 2.5 m lengths.

Trims and flashings such as overcills and copings, are available in PPC aluminium in 2.5 m lengths or made to order.

Insulation

Rigid insulation boards are supplied from the following range:

EPS Expanded polystyrene – slab

Grade	SD/FRA. CFC/HCFC-free
Density	15 kg/m³
Size	1220 x 610 mm
Thickness	30 – 200 mm

MFD Mineral fibre – slab

Grade	CFC/HCFC-free
Density	160/100 kg/m³
Size	1200 x 600 mm
Thickness	30 – 200 mm

MFL Mineral fibre – lamella

Grade	CFC/HCFC-free
Density	95 kg/m³
Size	1000 x 200 mm
Thickness	30 – 200 mm

PHS Phenolic foam – slab

Grade	CFC/HCFC-free
Density	40 kg/m³
Size	1200 x 600 mm
Thickness	30 – 200 mm

PIR Polyisocyanurate – slab

Grade	BRE Green Guide Rating A
Density	32 kg/m³
Size	1200 x 600 mm
Thickness	30 – 200 mm

Meshcloth

Balanced, open weave, alkaline resistant glass fibre meshcloth is available in the following grades:

Standard duty

Weight	160 g/m²
Mesh dimension	3.5 x 3.5 mm
Size	1m x 50m roll

Heavy duty

Weight	480g/m²
Mesh dimension	5.5 x 5.5 mm
Size	1m x 25m roll

Fixings

When required, a wide range of fixings are available to accommodate all insulant thicknesses and substrate types. Fixings are specified on a project by project basis and pull-out values are established to ensure the EWI systems are securely fixed back to the substrate.

Undercoat

weber.rend LAC is a factory batched mortar for bonding/bedding and scrimming within the meshcloth systems.

Top coats

Where specified, coloured polymer top coats are available for use as a background for dry-dash, a scraped textured finish, or a smooth float finish for synthetic textured coatings.

Preparation

Existing rendered substrates

Hammer test and remove all areas of loose, 'bossed' render.

Treat surfaces with **weber CL150**, a biocidal wash, to remove any traces of organic growth.

Make good surface using **weber.rend stipple** and **weber.rend TUC** or **weber.rend PUC**.

New build masonry or frame structure

Ensure all surfaces are clean, in-plane and of adequate thickness to provide appropriate support and stiffness without deflection or edge protrusions.

Application

Fix base and other full system beads as specified.

Fix the insulation and render only beads (if specified) as described in the System Specification Sheet or relevant project documentation.

Mix and apply **weber.rend LAC**, lay-in meshcloth and apply a further layer of mortar as directed.

Mix and apply the **weber.rend PTC** as directed to achieve the desired finish.

Where a synthetic finish is required, apply the relevant primer to the top coat or meshcloth coat, prior to the application of the selected textured coating.

weber.therm XM

Lightweight external wall insulation system incorporating thin-coat polymer render and meshcloth reinforcement

Features and benefits

- Provides efficient thermal insulation for refurbishment and new build projects
- Comprehensive range of colours and textures enable the creation of striking visual effects
- Has a high performance water shedding range of finishes to protect the building fabric
- Low K-value insulants allow thinner insulation to be used, or higher standards to be achieved
- Eliminates interstitial condensation by creating a 'warm wall' construction
- Suitable for, and effective on most buildings – including lightweight steel frame structures and in-fill panels
- Supported by comprehensive technical and architectural services
- BBA approved certificate no. 91/2691
- NSAI approved certificate nos. 06/0260 and 09/0338

Good practice

Do not apply mineral renders:

- If frost is forecast within 24 hours of use
- In damp/wet conditions
- In temperatures below 5°C or above 30°C
- On elevations in direct sunlight or where the substrate is hot

Technical support and advice

During the planning stages of a project, advice should be sought from **Weber** technical staff.
Advice based on technical expertise together with unrivalled practical experience is freely available and covers:
Design: assistance with the selection of the appropriate system, including working details and U-value calculations.
Pre-Contract Documentation: specifications, typical details, method statements.
Contract Documentation: site packages, available through the specialist contractor. These include approved details, specification and site procedures.

CI/SfB (41)
Uniclass L51 September 2004

weber.therm FT

A series of components to provide robust detailing when using External Wall Insulation with single skin or frame construction

About this product

weber.therm FT is a range of components for use with External Wall Insulation on single skin or frame construction. It consists of the weatherseal unit for positive detailing around openings and the standoff rail to provide the weather defence cavity recommended by the NHBC when using External Wall Insulation with metal frame construction.

Technical data

Weatherseal unit: a powder coated aluminium assembly which closely surrounds window or door frame, incorporating cill, head, reveals and closure units with multi-level hydrophobic expanding foam seals and wedge gaskets.

Standoff rail: substantial horizontal aluminium rail fixed independently of the sheathing board and spanning the studs in the frame. Insulation boards are fixed to the standoff rails along their horizontal edges.

Project-specific technical and design support is available on request from **Weber's** technical staff.

Uses

- For use with External Wall Insulation on both single skin and frame construction
- Weatherseal unit for robust detailing around window and door openings
- Standoff rail provides the weather defence cavity recommended by the NHBC when using External Wall Insulation with metal frame construction

Due to design changes in the weber.therm FT system, please contact Weber for the latest information.

Preparation

Weatherseal units are bespoke outer frames for windows and doors. The agreed window schedule should be made available in good time, to enable the manufacture of the weatherseal units, normally 6 – 8 weeks.

The face of the window frame should be fixed 30 – 40 mm proud of the outer face of the facade. When secured in this position, there should be a corresponding groove or rebate in the bottom edge of the window frame to locate the water bar on the weatherseal unit.

The gap between the frame and structural opening should be sealed as normal, prior the application of the weatherseal units.

Application

Weatherseal units should be fitted prior to the fixing of the standoff rails.

Weatherseal units

Fit expanding foam strip supplied in accordance with the installation instructions and offer unit to widow. Engaging the sill upstand in the rebate in the underside of the window, rest the unit on the top of the projecting window.

Using the spacers provided ensure there is a 3 mm gap between widow and head of weatherseal unit. Fix sides of unit to substrate. Remove spacers and fit wedge gasket.

Compressing the foam strip, slide closure trims to within 3 mm of window frame and tighten fixing screws. Fit wedge gaskets and snap in cover plates.

Base closure trim

Fix the base closure trim on the top edge of the DPC or as directed. Ensure trim is level.

Standoff rails

Note: Rails are fixed through the sheathing board into the lightweight steel studs with the spacer located in the recess at the back of the rail. Mark off the steel stud centres on the standoff rail and drill 8 mm clearance holes along the screw groove on the rail. Do not attempt to fix to the sheathing board only.

Maximum spanning distance 600 mm.

Starter rail

Using the specified fixings and 30 mm plastic spacers, fix the starter rail with the lower edge touching the base closure trim. Leave a 10 – 15 mm gap between the rail joints for drainage.

Main wall rail

Sit insulation boards into the base bead, one at either end of the standoff rail, and rest the main wall standoff rail on top. Secure the rail with the fixings and spacers supplied. Insulation is always fixed with its long axis horizontal. Continue fixing rails, always ensuring that the vertical centres of the rails correspond to the height of the insulation.

Butt-join rails using aluminium joint straps. Alignment is maintained at internal and external corners by bending the joint straps.

Where required, fix trimmers (starter rail) above and below openings to support the insulation.

Horizontal firebreaks should be fitted where specified, using the self-adhesive intumescent tape fitted to the reverse face of the rail. Care must be taken to ensure that the tape is aligned within the fire-break zone.

Insulation can be fitted after 2 or more rails have been secured. The insulation is fixed to the rails along the top and bottom edges of the boards. Fixing kits are supplied based on the insulation thickness. Please refer to the relevant data sheet for system installation and fixing pattern.

Storage and shelf life

Weatherseal units are finished units and should be stored where they will not be subject to accidental damage.

Standoff rails should be stored where they will remain straight to allow for true alignment when fixed.

Health and safety

Care should be taken when handling rails cut to length on site - edges may be sharp.

Due to design changes in the weber.therm FT system, please contact Weber for the latest information.

weber.therm FT

A series of components to provide robust detailing when using External Wall Insulation with single skin or frame construction

Features and benefits

- Multilevel defence provides positive, robust detailing
- Components can be used together or independently
- Weatherseal unit fabricated offsite from window schedule and delivered ready assembled with fixing kit
- UKAS tested and certified to the standards expected of double glazed units
- Corrosion resistant components
- Powder-coated weatherseal unit can be coloured to complement or contrast with window/wall area colour
- Fire breaks easily incorporated
- Jointing tongue for rails ensures horizontal alignment, including corners, minimises cutting and reduces waste.

Packaging

Weatherseal units: bespoke units manufactured for each window/door.

Units are delivered to site ready assembled complete with instructions, fixing kit and gaskets.

Standoff rails: supplied in 2.5 metre lengths.

Base closure trim: supplied in 2.5 metre lengths.

Intumescent strip for fire breaks: supplied in 50 metre rolls.

Fixings (rail to frame): boxes of 100. Drive bit included.

Spacers: boxes of 100.

Fixing kit (insulation to rail): includes 100 washers and screws and one drive bit. Note: Kits are specific to the insulation thickness.

Joint straps: supplied 50 per pack or as required.

Individual items from kits may be purchased separately in packs of 100. Drive bits available individually when part of a larger order.

weber.rend IF

Multi-coat render system for difficult substrates

About this product

weber.rend IF is a multi-coat render system incorporating breather membrane, expanded metal lath and polymer modified render.

Technical data

Multi coat render systems

First layer	Reinforcement	Fixing	1st Coat	2nd Coat	Finish
Breather membrane	Metal lath – Ferritic stainless	Multipin	**weber.rend PUC**	**weber.rend TTC** or **weber.rend PTC**	Dry-dash or primer, then choose from **weber.plast TF** **weber.plast DF** **weber.sil TF**
				or **weber.rend TTS**	**weber.plast P** Scraped texture

Uses

- Provides a suitable background for rendering when existing masonry substrates are unfit for a direct render application

Constraints

Rendering onto metal lath is more prone to cracking than direct application on to a masonry background. It is therefore strongly recommended that the **Weber** fixing requirements be strictly adhered to, and that cognisance is taken of the BRE Information Note No. 5 and also the BS 5262: 27.3 relative to panel sizes when rendering on to metal lath.

Product/system options

The following product options can be used in the **weber.rend IF** system. Details on their application can be found on the relevant page of the ***Weber Render Solutions*** handbook, or by requesting the appropriate Data Sheet.

Page	Product	Data Sheet	Page	Product	Data Sheet
216	**weber CL150**	G.012	180	**weber.rend TTS**	7.507
202	**weber.rend stipple**	7.203	220	**weber PR310**	7.400
206	**weber.rend PUC**	7.503	178	**weber.plast TF/DF**	7.403
210	**weber.rend TUC**	7.501	172	**weber.sil TF**	7.410
208	**weber.rend TTC**	7.502	174	**weber.plast P**	7.402
204	**weber.rend PTC**	7.504			

Materials

Beads, trims and flashings

Render only beads are available in coated galvanised, stainless, coated aluminium or rigid plastic in 3 m and 2.5 m lengths.

Trims and flashings such as oversills and copings, are available in PPC aluminium in 2.5 m lengths or made to order.

Breather membrane

The reinforced composite breather barrier membrane is supplied in 1.5 m x 50 m rolls.

Metal lath

Expanded metal lath is available in the following:

Ferritic stainless steel	
Grade	430S
Weight	0.8 kg/m²
Size	2440 x 1220
Mesh opening	50 x 20 mm

Fixings

Multipin fixings are supplied in boxes of 250 and will be suitable for most masonry substrates. Fixings are specified on a project by project basis and, where necessary, pull-out values are established to ensure the **weber.rend IF** system is securely fixed back to the substrate.

Undercoat

weber.rend PUC is a factory batched cement based mortar.

Top coats

Coloured top coats are available for use as a background for dry-dash, a scraped textured finish, or a smooth float finish for synthetic textured coatings.

Preparation

Existing rendered substrates

Hammer test and remove all areas of loose, 'bossed' render.

Treat surfaces with **weber CL150**, a biocidal wash, to remove any traces of organic growth.

Make good surface using **weber.rend stipple** and **weber.rend PUC** or **weber.rend TUC**

Application

Fix the breather membrane either horizontally or vertically with the multipin sleeves at the centres specified. The membrane must be fitted with the brown paper side to the masonry background. There must be an overlap of 150 mm at all joints. Always refer to the System Specification Sheet or relevant project documentation for any project specific information.

Fix render drip bead to base and other render beads as specified.

Fix the specified lath using the appropriate multipin nails and washers.

Mix and apply the **weber.rend PUC** to the specified thickness. Mix and apply the top coat as directed to achieve the desired finish.

Where **weber.rend TF/DF** or **weber.sil TF** is required, apply **weber PR310** prior to the application of the selected textured coating.

Good practice

Do not apply mineral renders:

- If frost is forecast within 24 hours of use
- In damp/wet conditions
- In temperatures below 5°C or above 30°C
- On elevations in direct sunlight or where the substrate is hot

weber.rend IF

Multi-coat render system for difficult substrates

Features and benefits

- Allows previously unsuitable masonry substrates to be rendered
- Suitable for a wide range of cementitious and synthetic finishes
- Factory batched materials for consistency
- Large range of colours available in all finishes
- Supported by comprehensive technical and architectural services.

Technical support and advice

During the planning stages of a project, advice should be sought from **Weber** technical staff.

Advice based on technical expertise together with unrivalled practical experience is freely available and covers:

Design: assistance with the selection of the appropriate system, including working details and U-value calculations.

Pre-Contract Documentation: specifications, typical details, method statements.

Contract Documentation: site packages, available through the specialist contractor. These include approved details, specification and site procedures.

Health and safety

For full information on Health and Safety, please see inside back cover.

CI/SfB (41)
Uniclass L5171 June 2011

weber.rend MT

A high-performance, multi-coat render system, incorporating glass-fibre meshcloth

About this product

weber.rend MT is a high-performance, multi-coat render system, incorporating glass-fibre meshcloth, a resin-rich adhesive coat with a choice of textured finishes in a wide range of colours.

Technical data

Multi-coat render systems – weber.rend MT on panel background

First Layer	Reinforcement	Fixing	1st Coat	2nd Coat	Finish
N/A	Meshcloth	N/A	**weber.rend LAC**	N/A	Primer with **weber.sil TF** or **weber.plast TF** or **weber.plast DF** or **weber.plast P** or **weber.tene SG**

Multi-coat render systems - weber.rend MT on masonry background

First Layer (levelling coat)	Reinforcement	Fixing	1st Coat	2nd Coat	Finish
weber.rend POC	Meshcloth	N/A	**weber.rend LAC**	N/A	Primer with **weber.sil TF** or **weber.plast TF** or **weber.plast DF** or **weber.plast P** or **weber.tene SG**

Uses

- Designed for application on to render substrate boards with a choice of textured finishes in a wide range of colours
- For use on sound masonry substrates where the background is uneven and where a high level of crack resistance is required

Constraints

The quality of application of these materials depends on suitable operative skills and product familiarity.

Restrictions on weather conditions during application and curing must be respected.

Sound trade practices and printed instructions must be followed.

Good access and appropriate protection must be provided.

Product/system options

The following product options can be used in the **weber.rend MT** system. Details on their application can be found on the relevant page of the ***Weber Render Solutions*** handbook, or by requesting the appropriate Data Sheet.

Page	Product	Data Sheet
216	**weber CL150**	G.012
202	**weber.rend stipple**	7.203
192	**weber.rend POC**	7.511
188	**weber.rend LAC**	7.202

Page	Product	Data Sheet
220	**weber PR310**	7.400
178	**weber.plast TF/DF**	7.403
172	**weber.sil TF**	7.410
174	**weber.plast P**	7.402
168	**weber.tene SG**	7.600

Materials

Beads, trims and flashings

Render only beads are available in coated galvanised, stainless, coated aluminium or rigid plastic in 3 m and 2.5 m lengths.

Trims and flashings such as oversills and copings, are available in PPC aluminium in 2.5 m lengths or made to order.

Levelling coat

(on masonry where required)

weber.rend POC is a polymer-modified, low density, cement based render, that can be applied up to 15 mm thick in one or two passes.

Mesh cloth

Balanced, open weave, alkaline resistant glass fibre mesh cloth is available as:

Standard duty	
Weight	160 g/m²
Mesh dimension	3.5 x 3.5 mm
Size	1 m x 50 m roll

Adhesive coat

weber.rend LAC is a factory batched mortar for scrimming.

Primer

weber PR310 is a pigmented liquid paint and is an effective method of preparing substrates by reducing suction and providing a colour wash prior to the application of the chosen textured finish.

Synthetic textured coatings

A range of textured coatings is available in a wide range of NCS colours.

weber.rend MT

A high-performance, multi-coat render system, incorporating glass-fibre meshcloth

Features and benefits

- Large areas can be rendered onto render substrate boards without the need for expressed joints
- Allows previously uneven masonry substrates to be rendered
- Suitable for a range of finishes in a wide selection of colours
- Factory batched materials for consistency
- Supported by comprehensive technical and architectural services
- Established track record in varying climatic conditions

Preparation

Calcium silicate panels

Ensure panels are securely fixed to frame, providing a rigid in-plane surface without deflection or edge protrusions.

Existing masonry substrates

Treat surfaces with **weber CL150**, a biocidal wash, to remove any traces of organic growth.

Where there is inadequate key, apply **weber.rend stipple** as directed on the data sheet.

Mix and apply **weber.rend POC** to produce a level, in-plane background. Lightly brush scratch and allow to dry. Refer to the Product Data Sheet for further information.

Application

Mix and apply the **weber.rend LAC** coat approximately 3 mm thick. Lay in the meshcloth and apply a further 2 – 3 mm of **weber.rend LAC**. Sponge finish to achieve a flat finish. Allow to dry.

Prime the surface with the appropriate primer. Allow to dry.

Apply the selected textured finish.

In order to achieve high-quality results, always refer to the individual Product Data Sheets before starting any works.

Good practice

Do not apply:

- If frost is forecast within 24 hours of use
- In damp/wet conditions
- In temperatures below 5°C or above 30°C
- On elevations in direct sunlight or where the substrate is hot

Technical support and advice

During the planning stages of a project, advice should be sought from **Weber** technical staff.

Advice based on technical expertise together with unrivalled practical experience is freely available and covers:

Design: assistance with the selection of the appropriate system, including working details and U-value calculations.

Pre-Contract Documentation: specifications, typical details, method statements.

Contract Documentation: site packages, available through the specialist contractor. These include approved details, specification and site procedures.

Health and safety

For full information on Health and Safety, please see inside back cover.

CI/SfB (41) Pq4
Uniclass L5171 April 2006

weber.rend OCR

Pre-blended single coat application renders

About this product

weber.rend OCR is a range of proprietary renders based on Portland cement, lime and sand. They are supplied as pre-blended dry powders, which require only the addition of clean water to provide a comprehensive range of renders which comply with the mix designations and specifications of BS 5262 and BS 5492. A lime-free version for tiling, which conforms to the requirements of BS 5385 is also available.

Technical data

It is important that the correct grade of render is chosen to suit the substrate and application. BS 5262, *Code of practice for external renderings*, BS 5492 *Code of practice for internal plastering* and BS 5385 *Code of practice for tiling*, all detail relevant render mortar classifications and applications. one coat renders have been formulated to comply exactly with these mix designations and specifications.

weber.rend OCR1
BS 5262 and BS 5492 mix designation I (1:1/4:3)
Strong render for dense strong backgrounds and severe exposure conditions.

weber.rend OCR2
BS 5262 and BS 5492 mix designation II (1:1/2:4)
Moderate/strong render for moderate/strong backgrounds and moderate exposure conditions.

weber.rend OCR3
BS 5262 and BS 5492 mix designation III (1:1:6)
Moderate strength render for moderate strength backgrounds and moderate exposure conditions. **weber.rend OCR3** is appropriate for many general applications.

weber.rend OCRT (Tile backing)
BS 5385 specified moderate/strong lime-free render for tiling onto moderate/strong backgrounds.

Reference to the relevant standard prior to selecting and using the appropriate grade of render is highly recommended. BS 5262, *Code of practice for external renderings*, BS 5492 *Code of practice for internal plastering*, BS 5385 *Wall and floor tiling* and BS 8000-10 *Workmanship on building sites. Code of practice for plastering and rendering*, should be followed at all times.

Uses

- Provides an excellent background for all **Weber** finishes, masonry paints and many other types of surface coatings
- Can be applied to most suitably prepared substrates, including:
  brickwork
  blockwork
  concrete

Constraints

Do not apply to gypsum plaster or previously painted surfaces.

Preparation

All surfaces must be sound, clean, dry and free of any material which may impair adhesion.

Scaffolding must be independently tied to allow for uninterrupted application. Any faults in the structure, particularly those which may lead to moisture penetration must be rectified.

Poorly keyed surfaces, for example smooth concrete, or substrates of uneven or high suction should be prepared with **weber.rend aid**.

Mask around the areas where material is to be applied. Masking tape must be removed before the material has dried out.

Expansion joints should be included as required by the substrate and carried through all applied materials.

Suitable specification clauses, including specifications for difficult or mixed substrates are available from our Technical Services Department.
Note: In many cases rendering applied to expanded metal lathing is more prone to cracking than when applied to dense masonry. To reduce this risk, lathing must be fixed strictly in accordance with the manufacturer's recommendations and relevant codes of practice.

Consult our Technical Services Department for further advice.

Mixing

weber.rend OCR should be mixed with clean water at a rate of approximately 4 – 5 litres per 25 kg bag using a tumble mixer or suitable drill with whisk attachment. For best results, use as little water as possible and mix to give a workable consistency.

Note: weber.rend OCR may stiffen on standing. Re-mix product to regain workable consistency but do not add any more water.

Application

To avoid dampness and discolouration of finishes rendering should be avoided below DPC or within 150 mm of ground level.

weber.rend OCR should be applied with a hawk and trowel in a one coat operation, then ruled level. On low suction backgrounds a first pass may be necessary prior to building up the full thickness in the second pass.

Render thicknesses are as for traditional materials.

- External render approx. 16 mm for sheltered to moderate exposure or 20 mm for severe exposure.
- Internal render approx. 8 to 19 mm.
- Tiling approx. 8 to 20 mm.

Thickness should not exceed 25 mm.

Finish as required. For plain face finishes rub up in the normal way as the render begins to pick up. Other appropriate fishes may be achieved by suitable means.

Cure for 2 – 3 days before over coating.

During rapid drying conditions such as hot climates, curing with a fine spray of clean water may be necessary.

Protection

Protect from unfavourable weather conditions during application and early curing.

Good practice

Do not apply:
- If frost is forecast within 24 hours of use
- In damp/wet conditions
- In temperatures below 5°C or above 30°C
- On elevations in direct sunlight or where the substrate is hot

Cleaning

All equipment must be washed with clean water immediately after use. Waste material should not be emptied into drainage systems.

Storage and shelf life

When stored unopened in a dry place at temperatures above 5°C, shelf life is 12 months from date of manufacture.

Health and safety

Contains cement.

For full information on Health and Safety, please see inside back cover.

Packaging

weber.rend OCR is supplied in 25 kg bags.

Coverage

For each mm of thickness you will require approximately 1.8 kg per m^2.

When applied at 16mm thick, coverage is approximately 35 m^2 per tonne.

Note: These estimates take no account of wastage and may vary according to the type of surface involved. An allowance must be made for uneven and misaligned substrates when ordering materials.

weber.rend OCR

Pre-blended single coat application renders

Features and benefits

- Formulated to comply with British Standard mix designations (see technical data)
- Resists the penetration of external water and has excellent weather resistance and durability, whilst allowing the structure to breathe
- Factory controlled production to give a consistently high quality product
- Give the same final appearance as traditional cement and sand renders but in significantly less time
- Non-combustible (Class 0 fire rating when applied to non-combustible substrates)

CI/SfB (41) Pr4
Uniclass L517 June 2011

flexirend highbuild

Multi-textured resin based finish

About this product

flexirend highbuild is a decorative and protective resin based surface coating for application to exterior and interior surfaces. It is a high quality, weather resistant finish, which may be textured to a variety of designs. It is available in a range of colours and provides a superior quality appearance to cement rendering, concrete and many other backing materials.

Technical data

flexirend highbuild has been assessed by the British Board of Agrément.

The certificate states that, under normal conditions, the product will perform satisfactorily for more than fifteen years.

Copies of the certificate are available on request.

flexirend highbuild is a polymer emulsion base containing graded aggregates and fillers along with light fast pigments.

Effective biocides are included to inhibit organic growth.

Suitable specification clauses for dealing successfully with most types of substrates are available from our Technical Services Department.

Uses

- May be applied to most old or new surfaces provided that they are suitably smooth and flat
- Suitable substrates:
  Externally
  weber.rend OCR;
  traditional cement rendering;
  fair-faced concrete;
  sound existing exterior grade paint;
  exterior grade composition and cement boards.
  Internally
  gypsum finishing plasters;
  dry lining and insulating boards.

This list is not exhaustive and other smooth, flat surfaces may be considered. In addition, brickwork and blockwork may be coated where the joints will be accepted as a feature.

Colours

flexirend highbuild is available in a range of 10 colours. Specifiers should consult the Colour Chart on page 31 and, whenever possible, obtain samples prior to specification.

Preparation

All surfaces must be sound, clean, dry and free from any material which may impair adhesion.

Scaffolding must be independently tied to allow uninterrupted application. Any faults in the structure, particularly those which may lead to moisture penetration must be rectified.

To avoid dampness and discolouration, external finishes should be avoided below DPC or within 150 mm of ground level. Building board substrates should have the joints reinforced and caulked with a suitable caulking system prior to priming.

Slightly friable or high suction surfaces or those that offer a mixed suction should be treated with a suitable stabilising primer 24 hours before application of the finish.

Small cracks may be filled with **flexirend highbuild** prior to the application of the full coat.

All substrates must be of good alignment and blemish free. Faults in the background may be evident in the finished work.

Mask around the areas where material is to be applied. Masking tape must be removed before the material has dried.

Expansion joints should be included as required by the substrate and carried through all applied materials.

Mixing

flexirend highbuild is supplied ready-mixed.

Stir thoroughly before applying. For spray applications up to 5% of clean water may be incorporated during mixing.

To ensure colour uniformity, the materials required for complete and adjoining panels should be of the same batch number or be thoroughly mixed together before use.

Application

flexirend highbuild is usually applied by hawk and trowel or spray. However, decorators may wish to apply the material using a long pile roller or caulking knife. Whatever method is chosen, an even coat must be applied and a flowing edge must be maintained.

Hawk and trowel

Apply a tight coat of **flexirend highbuild** to a thickness of approximately 1 – 2 mm. Immediately after application, finish the material with the appropriate tool to achieve the desired texture, e.g. texturing roller, sponge or spatula, etc.

Roller

Apply **flexirend highbuild** at the rate of approximately 2.5 kg/m², using a long pile roller. The head must be kept fully loaded to allow for an even application without spreading the finish too thinly. Immediately after application, finish the material with the appropriate tool to achieve the desired texture.

Spray

When spraying, **flexirend highbuild** is applied in a single operation, with an open hopper type power spray to a thickness of approximately 1 – 2 mm. Alternatively, a flat, tight coat may be applied with a hawk and trowel followed by a light spray texture. Other machinery may be used for spraying. Contact our Technical Services Department for further details.

Curing/drying

flexirend highbuild will normally be surface dry within several hours and through dry within 24 – 72 hours. Good ventilation is required during this period. Damp conditions will hinder and extend drying times.

Protection

Protect from unfavourable weather conditions during application and curing.

Good practice

Do not apply:

- If frost is forecast within 24 hours of use
- In damp/wet conditions
- In temperatures below 5°C or above 30°C
- On elevations in direct sunlight or where the substrate is hot

Cleaning

All equipment must be washed with clean water (preferably hot) immediately after use. Do not empty waste material into drainage systems.

flexirend highbuild

Multi-textured resin based finish

Features and benefits

- Factory controlled to give a consistently high quality product
- Highly durable
- Remains slightly flexible after curing and will accommodate a degree of building movement
- Resists the penetration of external water but allows the substrate to breathe
- Excellent weather resistance
- Includes a biocide to inhibit organic growth

Storage and shelf life

When stored airtight in a dry place at temperatures above 5°C and protected from frost, shelf life is 12 months from date of manufacture.

Do not over-stack.

Health and safety

Essentially non hazardous.

For full information on Health and Safety, please see inside back cover.

Packaging

flexirend highbuild is supplied in 15 kg pails.

Coverage

For each mm of thickness, you will require approximately 1.7 kg/m².

When to a thickness of 1 – 2 mm, coverage is approximately 6.0 m² per 15 kg pail.

Note: These estimates take no account of wastage and may vary according to the type of surface involved.

CI/SfB (41) Pr4
Uniclass L517 November 2010

weber.tene SG

An external finish comprising natural aggregates bound in a clear resin binder

About this product

weber.tene SG is a polymer-based decorative coating with a fine aggregate finish.

Technical data

1 As a decorative textured finish for application onto either a single coat or a 2-coat float finished render
2 As a decorative textured finish for external wall insulation systems - weber.therm XL and weber.therm XM.

Insulation Board	Reinforcement	Fixing	1st Coat	2nd Coat	Finish
weber.therm XL Expanded polystyrene Mineral fibre – slab Mineral fibre – lamella	Metal lath – Ferritic stainless	Mechanical	**weber.rend TUC** **weber.rend PUC** or **weber.rend MFU**	**weber.rend TTC**	**weber PR330** **weber.tene SG**
weber.therm XM Expanded polystyrene Mineral fibre – slab Mineral fibre – lamalla Phenolic foam	Meshcloth	Mechanical or **weber.rend LAC**	**weber.rend LAC**	N/A or **weber.rend PTC**	**weber PR330** **weber.tene SG**

3 As a decorative textured finish for multi-coat render systems – weber.rend stipple or weber.rend IF, lath and render

First Layer	Reinforcement	Fixing	1 st Coat	2nd Coat	Finish
weber.rend stipple	N/A	N/A	**weber.rend PUC**	**weber.rend TTC** or **weber.rend PTC**	**weber PR330** **weber.tene SG**
weber.rend IF membrane	Metal lath – Ferritic stainless	Mechanical	**weber.rend PUC**	**weber.rend TTC** or **weber.rend PTC**	**weber PR330** **weber.tene SG**

Uses

- As a decorative coating for external and internal rendered walls
- As a finish on **Weber** External Wall Insulation Systems

Constraints

Do not apply:
- On horizontal or sloping surfaces exposed to wet conditions
- Below DPC level
- On hot, damp or frozen/thawing surfaces
- During very humid weather conditions or if rain is forecast
- During extreme hot weather or when exposed to strong winds

The quality of application of this material depends on suitable operative skills and product familiarity.

Restrictions on weather conditions during application and curing must be respected.

Sound trade practices and printed instructions must be followed.

Good access and appropriate protection must be provided.

Preparation

Rendered substrates must be flat, clean, sound, dry and free of dust or other contamination.

On porous/friable surfaces apply one coat of **weber SL410**. Allow to dry (between 4 – 6 hours) then prime with two coats of **weber PR330**. Allow to dry – 24 hours.

Application

Plan and set out work bays approximately 20 m² with adhesive tape in order to disguise any potential day joints.

Apply **weber.tene SG** using a stainless steel trowel.

After a few minutes, smooth the surface to an even level using a stainless steel float.

The finished thickness is governed by the aggregate size i.e. approximately 3 mm.

When applying **weber.tene SG** on external angles, always start work from the edge.

Remove adhesive tape before the coating hardens.

Allow to dry out; the white polymer will be noticeable on the surface but will disappear as the coating dries out.

Apply in temperature (ambient and surface) between 5°C and 30°C.

Spillages stain and are difficult to remove so:
- protect vulnerable areas thoroughly
- wear protective clothing

Clean tools after use with water.

Good practice

Do not apply:
- If frost is forecast within 24 hours of use
- In damp/wet conditions
- In temperatures below 5°C or above 30°C
- On elevations in direct sunlight or where the substrate is hot

Colours

weber.tene SG is available in a range of 12 colours. Specifiers should consult the Colour Chart on page 26 and, whenever possible, obtain samples prior to specification.

Storage and shelf life

When stored airtight in a dry place at temperatures above 5°C and protected from frost, shelf life is 12 months from date of manufacture.

Do not over-stack.

Health and safety

weber PR330 and **weber.tene SG**
Essentially non-hazardous.

weber SL410
Contains low boiling point treated naptha (white spirit).

For full information on Health and Safety, please see inside back cover.

Packaging

weber.tene SG is packaged in 25 kg plastic containers with batch code and description on the side.

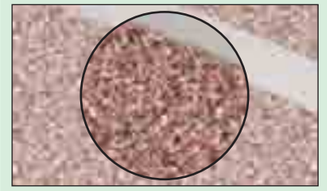
Coverage

Use	Nominal thickness	Coverage
weber.tene SG	3 mm	5.5 – 6.5 kg/m²

Note: This estimate takes no account of wastage.

weber.tene SG

An external finish comprising natural aggregates bound in a clear resin binder



Features and benefits

- Natural marble aggregates provide long lasting, durable finish
- Factory batched for consistency
- Available in a range of colours
- Practical benefits of ease of application, speed, economy and long shelf-life
- Technical support from a Quality Assured company
- Established track record in varying climatic conditions

CI/SfB (41) Pr4
Uniclass L517 June 2011

santane EFL and TL

A range of weatherproof elastomeric coatings and systems for the protection of external facades

About this product

The **santane** range of coatings are elastomeric, polymer-based materials for the decoration of new and existing facades. The products form the basis of six refurbishment systems for the decoration and repair of existing facades.

Technical data

The 6 santane systems

System	Crack bridging	Primer	Base coat	Finish coat	
1	< 0.2 mm	**weber SL410** **weber PR335**	N/A	1 x **EFL** (400 g/m²) or 1 x **TL** (1500g/m²)	
2	< 0.5 mm	**weber SL410** **weber PR335**	1 x **EFL** (250 g/m²)	1 x **EFL** (250 g/m²) or 1 x **TL** (1500 g/m²)	
3	< 1 mm	**weber SL410** **weber PR335**	1 x **EFL** (400 g/rn²)	1 x **EFL** (400 g/m²) or 1 x **TL** (1500 g/m²)	**For cracks in smooth/flat substrates**
4	< 2 mm	**weber SL410** **weber PR335**	1 x **EFL** (400 g/m²) + **mesh NT** 1 x **EFL** (400 g/m²)	1 x **EFL** (400 g/m²) or 1 x **TL** (1500 g/m²)	
5	< 1 mm	**weber SL410** **weber PR335** + 1 – 2 mm **renovex P**	1 x **EFL** (400 g/m²)	1 x **EFL** (400 g/m²) or 1 x **TL** (1500 g/m²)	**For mosaics and small to medium cracks**
6	< 2 mm	**weber SL410** **weber PR335** + 1 – 2 mm **renovex P**	1 x **EFL** (400 g/m²) + **mesh NT** 1 x **EFL** (400 g/m²)	1 x **EFL** (400 g/m²) or 1 x **TL** (1500 g/m²)	

Uses

- A decorative coating for external walls
- As part of a system to refurbish facades with existing coatings or mosaics (glass or ceramic)
- Suitable for application onto:
  - Concrete
  - Rendered brickwork
  - Rendered blockwork
  - Mosaics
  - Existing polymer-based coatings
  - Existing painted surfaces

Constraints

Do not apply:

- During very humid weather conditions or if rain is forecast
- During extreme hot weather or when exposed to strong winds
- On damp or frozen/thawing surfaces
- On horizontal surfaces exposed to wet conditions
- On friable coatings or coatings that have lost adhesion

EU VOC regulations 2008

EU limit for santane EFL (cat A/c):
75 g/l (2007)/40 g/l (2010).
santane EFL contains <25 g/l VOC.

Preparation

Surfaces must be sound, flat, clean and dry. Existing coatings should be removed if deemed to be unstable and with poor bond. Existing coatings should also be removed if they are epoxy/ polyurethane or if the coating is greater than 300 µm when applying **santane** systems 2, 3, 4, 5 and 6.

Porous or friable substrates should be treated with a one coat application of **weber SL410**. This should be allowed to dry prior to the application of **weber PR335**.

Widen out cracks less than 1 mm to 5 mm by 5 mm deep with a disk cutter or sharp tool. There is no need to widen cracks greater than 1 mm. Cracks greater than 2 mm should be treated as movement joints.

Existing construction movement joints should be completely removed and a new joint formed. Details are available from **weber's** Technical Department on request.

Prime the whole surface with **weber PR335**. Fill cracks with a suitable sealant.

If **santane** systems 5 or 6 are adopted, the substrate may need levelling to provide a flat surface for the final coating. This is likely to be the case for the refurbishment of mosaic tiles or brickwork for example. In order to level the surface apply **renovex P** in accordance with the relevant instructions.

Allow 2 – 3 days for the levelled surface to dry before priming for the final coatings.

Apply one coat of **weber PR335** using a wool or foam roller and allow to dry for 24 hours prior to the application of the **santane** finish.

Application

Incorporating mesh

Where the system specifies the incorporation of a mesh, apply one coat of **santane EFL** at the rate of 400 g/m² and immediately incorporate the mesh using a roller or stainless steel trowel. Mesh must cover at least 50 mm beyond the edges of all cracks and be completely encapsulated by the coating.

A second application of **santane EFL** should be carried out when the initial coat is dry. The finish coat of either **santane EFL** or **TL** is applied when all intermediate coats are dry.

santane EFL

When the primer is dry, apply **santane EFL** in a crisscross manner. with a wool roller, and regulate the thickness of each coat.

Provide finish by passing a wool or foam roller gently over the final coat in a vertical manner, according to the finish required. The preceding coats (primer and intermediate coats) must be dry before applying the finish coat (usually 24 hours at 20°C and 65% RH).

The thickness of the dry film varies between 0.2 mm and 0.7 mm dependent on the system adopted.

Apply **santane EFL** at temperatures between 5°C and 35°C. Do not apply at a relative humidity over 80%.

santane TL

For system 1, apply **santane TL** to the primed substrate using a stainless steel trowel.

For systems 2, 3, 4, 5 and 6 apply **santane TL** to the primed surface over one or two applications of **santane EFL**.

The finish is achieved by using a plastic float rubbed in a circular action over the applied material.

The thickness of the dry film varies between 1.8 mm and 2.0 mm dependent on the system adopted.

Apply **santane TL** at temperatures between 5°C and 35°C. Do not apply at a relative humidity over 80%.

Colours

santane EFL and TL are available in a range of 20 colours. Specifiers should consult the Colour Chart on page 27 and, whenever possible, obtain samples prior to specification.

Storage and shelf life

When stored airtight in a dry place at temperatures above 5°C and protected from frost, shelf life is 12 months from date of manufacture.

Do not over-stack.

santane EFL/TL

A range of weatherproof elastomeric coatings and systems for the protection of external facades

Features and benefits

- Resistant to cracking: up to 2 mm (**EFL**)
- Supplied in a range of colours
- Supplied in smooth (**EFL**) and textured (**TL**) finishes
- Provides a durable weatherproof protection to the substrate
- Can be used to bridge movement joints using ancillary products
- Has anti-carbonation properties for the protection of reinforced concrete

Health and safety

santane EFL/TL and **weber PR335**
Essentially non-hazardous.

weber SL410
Contains low boiling point treated naptha (white spirit).

For full information on Health and Safety, please see inside back cover.

Packaging

weber PR335 is supplied ready for use in 20 kg plastic pails.

santane EFL and **TL** are supplied ready for use in 20 kg plastic pails.

Coverage

For roller application of **santane EFL** allow 250 – 400 g/m² per coat for flat surfaces dependent on the system.

For **santane TL** allow 1500 g/m² for flat surfaces.

Note: These estimates take no account of wastage and will vary according to the type of surface involved.

CI/SfB (41) Pr4
Uniclass L517 October 2010

weber.sil TF

Silicone-based, through-coloured, decorative finish

About this product

weber.sil TF is a silicone-based, through-coloured, decorative finish, for use as a decorative, highly weather resistant, vapour permeable surface.

Technical data

1 As a high performance decorative textured finish for application onto either a single coat or a 2-coat float finished render

2 As a decorative textured finish for external wall systems – weber.therm XM and weber.therm XL

Insulation Board	Reinforcement	Fixing	1st Coat	2nd Coat	Finish
weber.therm XM				*Optional*	
MFS	Meshcloth	Mechanical	**weber.rend LAC**	**weber.rend PTC**	**weber PR310** and **weber.sil TF**
EPS		**weber.rend LAC**			
PHS		Mechanical or **weber.rend LAC**			
weber.therm XL					
MFS	Ferritic stainless lath	Mechanical	**weber.rend MFU**	**weber.rend TTC**	**weber PR310** and **weber.sil TF**
PHS			**weber.rend PUC**		
Coated EPS			**weber.rend PUC** or **weber.rend TUC**		

3 As a decorative textured finish for multi-coat render systems – weber.rend stipple or weber.rend IF, lath and render

First layer	Reinforcement option	Fixing	1st Coat	2nd Coat	Finish
weber.rend LAC	N/A	N/A	**weber.rend PUC**	**weber.rend TTC** or **weber.rend PTC**	**weber PR310** and **weber.sil TF**
weber.rend IF Membrane	Ferritic stainless lath	Mechanical	**weber.rend PUC**	**weber.rend TTC** or **weber.rend PTC**	**weber PR310** and **weber.sil TF**

Uses

- High performance decorative textured finish for application onto a prepared surface
- Decorative textured finish for external wall systems such as **weber.therm XM** and **XL**

weber.sil TF has an even textured finish.

When used in strict accordance with manufacturer's instructions and within an appropriate system, **Weber** coatings will have a minimum life of 10 years.

Constraints

The quality of application of this material depends on suitable operative skills and product familiarity.

Restrictions on weather conditions during application and curing must be respected.

Sound trade practices and printed instructions must be followed.

Good access and appropriate protection must be provided.

Application

weber.sil TF is a wet premixed material. It is applied to prepared surfaces on to a tinted primer.

Prime the prepared surface using tinted **weber PR310** applied by brush or spray. Ensure complete coverage of wall to be treated to prevent 'grinning through' of the background. **weber PR310** is of low viscosity and easily applied. Check batch numbers and colours of material required to complete working area. Stir well in buckets and if required, make minor adjustments to workability with a small splash of water, thoroughly mixed in.

Apply **weber.sil TF** with a steel float and hawk to work area. Use a thin plastic float to finish **weber.sil TF**. Evenness of cover and texture are of paramount importance.

Agree an acceptable finished appearance on a sample area with architect or supervising officer before proceeding with large-scale application. Maintain a steady flow of application and keep a wet edge on all incomplete edges.

weber.sil TF is a synthetic material, therefore weather conditions for applying and drying are critical. Dry weather may not be enough if the humidity is high and the drying potential of the atmosphere is low. A dry atmosphere which can be foreseen for about 36 hours is preferred to effect initial curing and prevent wash-off. Otherwise proper weather protection for the work may be necessary.

Synthetic mixes can stain and are difficult to remove so protect vulnerable areas thoroughly and wear protective clothing, particularly gloves.

Good practice

Do not apply:

- If frost is forecast within 24 hours of use
- In damp/wet conditions
- In temperatures below 5°C or above 30°C
- On elevations in direct sunlight or where the substrate is hot

Colours

weber.sil TF is available in a wide range of colours. Specifiers should consult the NCS Colour Chart on the **Weber** website **www.netweber.co.uk**.

Final colour selection must be made against an actual sample. **Weber** will not accept responsibility for colours chosen from any source other than an actual sample.

Colour samples are freely and readily available from **Weber**.

Storage and shelf life

Wet pre-mixed materials must be stored frost-free and protected from direct sunlight and extreme heat.

To prevent ingress of air, buckets should be stacked no more than 2 high, and where a central support is used, to a maximum height of 4.

When stored under these conditions, the shelf life of the product is 12 months from the date of manufacture.

Health and safety

Essentially non hazardous.

For full information on Health and Safety, please see inside back cover.

weber.sil TF

Silicone-based, through-coloured, decorative finish

Features and benefits

- Highly water repellent, providing optimum facade protection
- Highly vapour permeable
- Available in a wide range of colours
- Weather resistant and UV stable
- Low susceptibility to soiling
- Technical support from a Quality Assured company
- Forms part of a number of approved insulation systems

Packaging

weber.sil TF is packaged in 20 kg sealed polythene buckets with batch code, description and colour on the side.

Coverage

	Coverage
weber PR310	0.25 litres/m²
weber.sil TF	2.7 kg/m²

Note: These estimates take no account of wastage and will vary according to the type of surface involved.

An allowance must be made for uneven and mis-aligned substrates when ordering materials.

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CI/SfB (41) Vv8
Uniclass L517 December 2010

weber.plast P

Silicone-enhanced acrylic paint

About this product

weber.plast P is an acrylic based, silicone-enhanced, breathable and protective coating, for masonry and rendered surfaces.

Technical data

External wall insulation systems – weber.therm XM and weber.therm XL

Insulation Board	Reinforcement	Fixing	1st Coat	2nd Coat	Finish
weber.therm XM				*Optional*	
MFS	Meshcloth	Mechanical	**weber.rend LAC**	**weber.rend PTC**	**weber.plast P**
EPS		**weber.rend LAC**			
PHS		Mechanical or **weber.rend LAC**			
weber.therm XL					
MFS	Ferritic stainless lath	Mechanical	**weber.rend MFU**	**weber.rend TTC**	**weber.plast P**
PHS			**weber.rend PUC**		
Coated EPS			**weber.rend PUC** or **weber.rend TUC**		

Multi-coat render systems – stipple coat, lath and render

Preparation option	Reinforcement option	Fixing	1st Coat	2nd Coat	Finish
weber.rend aid	Ferritic stainless lath	Mechanical	**weber.rend TUC** or **weber.rend PUC**	**weber.rend TTC** or **weber.rend PTC**	**weber.plast P**

Uses

weber.plast P is suitable for:

- Protecting and decorating new and existing masonry backgrounds
- Use as a finish on External Wall Insulation Systems

Constraints

weber.plast P should not be used on water-retaining structures or in situations where 'ponding' of water may occur.

The quality of application of this material depends on suitable operative skills and product familiarity.

Restrictions on weather conditions during application and curing must be respected.

Sound trade practices and printed instructions must be followed.

Good access and appropriate protection must be provided.

Always follow the instructions on the packaging.

Preparation

On new, clean, dry, sound substrates priming is not generally required. However, if the substrate is old and porous or very dense it should be primed with **weber PR310**.

New surfaces should be clean, sound and dry. Existing walls, with traces of lichen, moss or fungal growth, should be treated with **weber CL150** fungicidal wash, in accordance with the manufacturer's instructions.

Brush down to remove all traces of loose or flaking material.

Application

New render and EWI systems

First coat
Apply **weber.plast P** silicone enhanced paint diluted with water by approximately 15 – 20% by brush or roller.

Second coat
Apply a second, undiluted coat when the first coat is dry, normally between 6 and 24 hours.

Existing/old render

Prepare as above, then:

Primer coat
Apply **weber PR310** as directed with a brush or roller.

First coat
Apply **weber.plast P** silicone enhanced paint diluted with water by approximately 15 – 20% by brush or roller.

Second coat
Apply **weber.plast P** silicone enhanced paint diluted with water by approximately 5 – 10% by brush or roller.

Good practice

Do not apply:

- If frost is forecast within 24 hours of use
- In damp/wet conditions
- In temperatures below 5°C or above 30°C
- On elevations in direct sunlight or where the substrate is hot

Colours

weber.plast P is available in a wide range of colours. Specifiers should consult the NCS Colour Chart on the **Weber** website **www.netweber.co.uk**.

Final colour selection must be made against an actual sample. **Weber** will not accept responsibility for colours chosen from any source other than an actual sample.

Colour samples are freely and readily available from **Weber**.

Storage and shelf life

Wet pre-mixed materials must be stored frost-free and protected from direct sunlight and extreme heat.

To prevent ingress of air, buckets should be stacked no more than 2 high, and where a central support is used, to a maximum height of 4.

When stored under these conditions, the shelf life of the product is 12 months from the date of manufacture.

Health and safety

Essentially non hazardous.

For full information on Health and Safety, please see inside back cover.

weber.plast P

Silicone-enhanced acrylic paint

Features and benefits

- Highly weather resistant
- Good filling properties
- Breathable – allows water vapour diffusion
- High build, resilient coating with excellent opacity
- Available in a full range of colours with good colour retention in a matt finish
- Durable life expectancy in excess of 10 years
- Manufactured under BSI Quality Assurance Scheme ISO 9002 (1994)
- Forms part of a number of approved insulation systems

Packaging

weber.plast P silicone enhanced acrylic paint is supplied in 10 litre plastic buckets with batch code, description and colour on the side.

Coverage

Depending on the type of surface and the porosity:

Use	Nominal thickness	Coverage
weber.plast P	N/A	0.27 litre/m²

CI/SfB (41) Vv6
Uniclass L517 December 2010

weber.sil P

About this product

weber.sil P is a solvent-free, water-based silcone resin emulsion paint (SREP) for masonry substrates.

Technical data

External Wall Insulation systems – weber.therm XP, weber.therm XM and weber.therm XL

Insulation Board	Reinforcement	Fixing	1st Coat	2nd Coat	Finish
weber.therm XP					
XPS	Ferritic stainless lath	Mechanical	**weber.therm L2**	**N/A**	**weber.sil P**
weber.therm XM				*Optional*	
MFS	**weber mesh** standard	Mechanical	**weber.rend LAC**	**weber.rend PTC**	**weber.sil P**
EPS		Mechanical or **weber.rend LAC**	**weber.rend LAC**	**weber.rend PTC**	**weber.sil P**
PHS					
PIR					
weber.therm XL					
MFS	Ferritic stainless lath	Mechanical	**weber.rend MFU**	**weber.rend TTC** or **weber.rend PTC**	**weber.sil P**
PHS			**weber.rend PUC**		
Coated EPS			**weber.rend TUC** or **weber.rend PUC**		

Render-only systems

Preparation option	Reinforcement option	Fixing	1st Coat	2nd Coat	Finish
weber.rend stipple	Ferritic stainless lath	Mechanical	**weber.rend TUC** or **weber.rend PUC**	**weber.rend TTC** or **weber.rend PTC**	**weber.sil P**
weber.rend aid	N/A	N/A	**weber.rend OCR**	N/A	**weber.sil P**

Uses

- A high quality mineral paint for new build masonry substrates
- A low-maintenance finish on to external wall insulation
- Rejuvenates existing rendered substrates

Colours

weber.sil P is available in a wide range of colours. Specifiers should consult the NCS Colour Chart on the **Weber** website **www.netweber.co.uk**.

Final colour selection must be made against an actual sample. **Weber** will not accept responsibility for colours chosen from any source other than an actual sample.

Colour samples are freely and readily available from **Weber**.

Preparation

Existing rendered substrates
Hammer test and remove all areas of loose, 'bossed' render.

Treat surfaces with **weber CL150**, a biocidal wash. Refer to data sheet for full instructions

Wire brush, or wash down surface with a high pressure jet (40 – 80 bar) to remove all traces of growth.

Make good surfaces using **weber.rend stipple** and **weber.rend TUC** or **weber.rend PUC**.

New rendered substrates
Ensure new render is fully cured, clean, dry and free from dust.

Application

Note:
To ensure colour consistency, paint required for complete and adjoining panels should be of the same batch number or be thoroughly mixed together before use.

When the surface is dry, apply a first coat of **weber.sil P**, diluted 10 – 15% with clean water, using a wool roller.

Apply a second, undiluted coat when the first coat is dry, normally between 6 and 24 hours.

Stable surfaces with particularly high suction should be primed with **weber PR310**.

To ensure product acceptability, colour samples must be requested. These are freely and readily available from **Weber**.

Spillages stain and are difficult to remove so:
- protect vulnerable areas thoroughly
- wear protective clothing
- clean tools with water.

Good practice
Do not apply:
- If frost is forecast within 24 hours of use
- In damp/wet conditions
- In temperatures below 5°C or above 30°C
- On elevations in direct sunlight or where the substrate is hot.

Where it has been agreed that painting will be carried out as part of a remedial action to harmonise colour on a rendered facade, complete and all adjoining panels must be over coated. The painting of any panels should be carried out at the same time under the same weather conditions.

Exact colour matching of mineral render and paint is not guaranteed. Colour appearance will vary naturally between paint and render as the products are fundamentally different in composition and hence finished appearance.

Storage and shelf life

Wet pre-mixed materials must be stored frost-free and protected from direct sunlight and extreme heat.

To prevent ingress of air, buckets should be stacked no more than 2 high, and where a central support is used, to a maximum height of 4.

When stored under these conditions, the shelf life of the product is 12 months from the date of manufacture.

Relevant data sheets

The following products are used with **weber.sil P**. Details on their application can be found on the relevant page of this handbook, or by requesting the appropriate Data Sheet.

Page	Product	Data Sheet
216	**weber CL150**	G.012
202	**weber.rend stipple**	7.203
210	**weber.rend TUC**	7.501
206	**weber.rend PUC**	7.503
220	**weber PR310**	G.014

Health and safety

Essentially non hazardous.

For full information on Health and Safety, please see inside back cover.

weber.sil P

A high performance mineral paint

Features and benefits

- Unique combinatiion of high water repellency, high vapour permeability and low VOC
- Resistant to blistering and peeling
- Highly hydrophobic – water beading effect (see image insert) helps maintain a clean surface
- Chemically bonds to masonry substrates due to nanoscale molecular structure
- Resistant to algae and fungi growth
- Vapour permeability and UV resistance independently tested
- UV stable and resistant to acid rain ensures exceptional long-term durability and performance
- Forms part of a number of approved insulation systems NSAI

Packaging

weber.sil P is packaged in 10 litre plastic buckets with batch code and description on the side.

Coverage

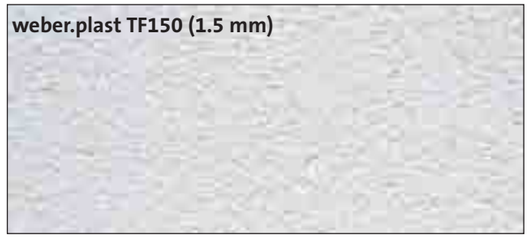
Depending on the type of surface and the porosity:

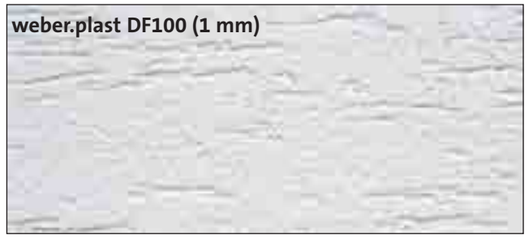
Use	Nominal thickness	Coverage
2 coats	N/A	0.25 – 0.5 litre/m²

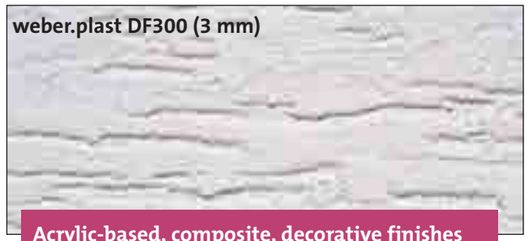
Note: This estimate takes no account of wastage and will vary according to the type of substrate. Allowance must be made for extra material required on high suction substrates.

CI/SfB (41) Pr4
Uniclass L517 December 2010

weber.plast TF and DF







Acrylic-based, composite, decorative finishes

About this product

weber.plast TF and **weber.plast DF** are acrylic based, composite, decorative finishes, pre-mixed and ready to apply in wet form.

Technical data

1 As a decorative textured finish for application onto either a single coat or a 2-coat float finished render

2 As a decorative textured finish for external wall systems – weber.therm XM and XL

Insulation Board	Reinforcement	Fixing	1st Coat	2nd Coat	Finish
weber.therm XM				*Optional*	
MFS	Meshcloth	Mechanical	**weber.rend LAC**	**weber.rend PTC**	**weber PR310** and **weber.plast TF** or **weber.plast DF**
EPS		**weber.rend LAC**			
PHS		Mechanical or **weber.rend LAC**			
weber.therm XL					
MFS	Ferritic stainless lath	Mechanical	**weber.rend MFU**	**weber.rend TTC** or **weber.rend PTC**	**weber PR310** and **weber.plast TF** or **weber.plast DF**
PHS			**weber.rend PUC**		
Coated EPS			**weber.rend PUC** or **weber.rend TUC**		

3 As a decorative textured finish for multi-coat render systems – weber.rend stipple or weber.rend IF, lath and render

First layer	Reinforcement option	Fixing	1st Coat	2nd Coat	Finish
Membrane or **weber.rend stipple** or	Ferritic stainless lath	Mechanical	**weber.rend PUC** **weber.rend PUC**	**weber.rend TTC** or **weber.rend PTC**	**weber PR 310** and **weber.plast TF** or **weber.plast DF**
Keyed surface	N/A	N/A	**weber.rend PUC** or **weber.rend TUC**		

Uses

- Decorative, textured finish to a prepared surface.
- Excellent performance gives a reliable solution for harsh or exposed coditions
- Thin coat application is suitable for decoration of lightweight backgrounds

  weber.plast TF has an even textured finish (1.5 mm and 3 mm aggregate content)

  weber.plast DF has a drag texture finish – horizontal, vertical or swirled effect (1 mm and 3 mm aggregate content)
- When used in strict accordance with manufacturer's instructions and within an appropriate system, **Weber** finishes will have a minimum life of 10 years

Constraints

The quality of application of this material depends on suitable operative skills and product familiarity.

Restrictions on weather conditions during application and curing must be respected.

Sound trade practices and printed instructions must be followed.

Good access and appropriate protection must be provided.

Application

weber.plast TF and **weber.plast DF** are wet pre-mixed materials contained in 15kg sealed polythene buckets. They are applied to prepared surfaces on to a tinted primer.

Prime the prepared surface using **weber PR310** applied by brush or spray. Ensure complete coverage of wall to be treated to prevent 'grinning through' of the background. Primer is of low viscosity and easily applied. Check batch numbers and colours of material required to complete working area. Stir well in buckets and make minor adjustments to workability with a little water, thoroughly mixed in.

Apply **weber.plast TF** or **weber.plast DF** with a steel float and hawk to work area. Use a thin plastic float to finish **weber.plast TF** and a wooden or plastic float to create drag or swirl effects with **weber.plast DF**.

Evenness of cover and texture are of paramount importance. Agree acceptable finished appearance on a sample area with architect or supervising officer before proceeding with large-scale application. Maintain a steady flow of application and keep a wet edge on all incomplete areas.

weber.plast TF and **weber.plast DF** are synthetic materials, therefore weather conditions for applying and drying are critical. Dry weather may not be enough if the humidity is high and the drying potential of the atmosphere is low. A dry atmosphere which can be foreseen for about 36 hours is preferred to effect initial curing and prevent wash-off. Otherwise proper weather protection for the work may be necessary.

Synthetic mixes can stain and are difficult to remove so protect vulnerable areas thoroughly and wear protective clothing, particularly gloves.

Good practice

Do not apply:
- If frost is forecast within 24 hours of use
- In damp/wet conditions
- In temperatures below 5°C or above 30°C
- On elevations in direct sunlight or where the substrate is hot

Colours

weber.plast TF and **weber.plast DF** are available in a wide range of colours. Specifiers should consult the NCS Colour Chart on the **Weber** website **www.netweber.co.uk**.

Final colour selection must be made against an actual sample. **Weber** will not accept responsibility for colours chosen from any source other than an actual sample.

Colour samples are freely and readily available from **Weber**.

Storage and shelf life

Wet pre-mixed materials must be stored frost-free and protected from direct sunlight and extreme heat.

To prevent ingress of air, buckets should be stacked no more than 2 high, and where a central support is used, to a maximum height of 4.

When stored under these conditions, the shelf life of the product is 12 months from the date of manufacture.

weber.plast TF
weber.plast DF

Acrylic-based, composite, decorative finishes

Features and benefits

- Factory batched and ready to use
- Excellent all-round weather performance
- Durable and resilient
- Technical support from a Quality Assured company
- Established track record in varying climatic conditions
- Forms part of a number of approved insulation systems

NSAI BBA

Health and safety

Essentially non hazardous.

For full information on Health and Safety, please see inside back cover.

Packaging

weber.plast TF and **weber.plast DF** are packaged in 15kg sealed polythene buckets with batch code, description and colour (where appropriate) on the side.

Coverage

	Coverage
weber PR310	0.25 litres/m²
weber.plast TF150 (*1.5 mm*)	2.8 kg/m²
weber.plast TF300 (*3 mm*)	6 kg/m²
weber.plast DF100 (*1 mm*)	1.5 kg/m²
weber.plast DF300 (*3 mm*)	3.8 kg/m²

weber.rend TTS

A factory batched, through-coloured mortar for use as a render top coat

About this product

weber.rend TTS is a factory batched, through-coloured top coat mortar most suited to scrape texturing.

Technical data

External wall insulation systems – weber.therm XL

Insulation Board	Reinforcement option	Fixing	1st Coat	2nd Coat	Finish
MFS	Ferritic stainless lath	Mechanical	**weber.rend MFU**	**weber.rend TTS**	Scrape texture
PHS			**weber.rend PUC**		
Coated EPS			**weber.rend PUC** or **weber.rend TUC**		

Multi-coat render systems

Preparation	Reinforcement option	Fixing option	1st Coat	2nd Coat	Finish
Membrane or **weber.rend stipple**	Ferritic stainless lath	Mechanical	**weber.rend PUC**	**weber.rend TTS**	Scrape texture
Keyed surface	N/A	N/A	**weber.rend PUC** or **weber.rend TUC**	**weber.rend TTS**	Scrape texture

Uses

- Cost-effective through-coloured decorative top coat to achieve a wide range of design options.
- Can be used in **Weber** render protected, external wall insulation systems and in multi-coat render systems (see table below).

When used in strict accordance with manufacturer's instructions and within an appropriate system, **Weber** renders will have a minimum life of 10 years.

Constraints

The quality of application of this material depends on suitable operative skills and product familiarity.

Restrictions on weather conditions during application and curing must be respected.

Sound trade practices and printed instructions must be followed.

Good access and appropriate protection must be provided.

Mixing

Mix **weber.rend TTS** by adding clean water only to achieve workability. This mortar can be made up in any batch size desired with little wastage because it is pre-mixed dry.

Add no other material unless directed. Wet down scratched undercoat surface with water spray, as required, to control suction.

To ensure colour consistency, the materials required for complete and adjoining panels should be of the same batch number or be thoroughly mixed together before use.

Application

Apply **weber.rend TTS** 6 – 8 mm thick to prepared undercoat in accordance with BS 5262 and finish smooth using float and sponge.

or

Apply **weber.rend TTS** 8 – 10 mm thick to prepared undercoat. Float finish to produce a smooth even surface plane. Use a 'derby' if necessary to produce even thickness and flatness. When mortar has taken up sufficiently after several hours drying (usually the following day) and when larger stones spring easily from the surface, texture the surface using a scratching pad to produce an even appearance. The pad is used lightly in a circular motion. Remove all surface 'glut' and scratch the entire surface, taking care not to miss areas.

When completed, **weber.rend TTS** should have a minimum thickness of 6mm. Take care not to damage the surface, especially at corners and with scaffolding or ladders.

Carefully brush down the surface of the scraped finish using a soft bristle brush.

Arrises can be dealt with:

a) Using a mitred rule, which is slow and needs skill, but is very effective.
b) Using rigid PVC corner beads.

Good practice

Do not apply:

- If frost is forecast within 24 hours of use
- In damp/wet conditions
- In temperatures below 5°C or above 30°C
- On elevations in direct sunlight or where the substrate is hot

Colours

weber.rend TTS is available in a range of 10 colours. Specifiers should consult the Colour Chart on page 24 and, whenever possible, obtain samples prior to specification.

Storage and shelf life

When stored unopened in a dry place at temperatures above 5°C, shelf life is 12 months from date of manufacture.

Health and safety

Contains cement.

For full information on Health and Safety, please see inside back cover.

Packaging

weber.rend TTS is packaged in plastic-lined 25kg bags with batch code, description and colour (where appropriate) on the side.

Coverage

Finish type	Nominal thickness	Coverage
Floated	6 mm	10 kg/m²
Scraped	6 mm (finished)	16 kg/m²

Note: These estimates take no account of wastage and will vary according to the type of surface involved.

weber.rend TTS

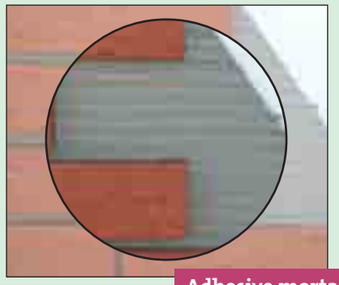
A factory batched, through-coloured mortar for use as a render top coat

Features and benefits

- Exceptional and consistent quality
- Durable textured finish requiring no painting
- Available in a range of 10 pastel colours
- Established track record in varying climatic conditions
- Forms part of a number of approved insulation systems

NSAI BBA

weber.rend EXB



Features and benefits

- Polymer modified for high bond strength
- Quality controlled and factory blended to give a consistently high quality product
- Practical benefits of smooth application, speed, economy and long shelf life

Adhesive mortar for mineral fibre lamella insulation or brick slips

About this product

weber.rend EXB is a high polymer-modified, dry powder, cement based adhesive mortar.

Technical data

External wall insulation systems – weber.therm XB and weber.therm XM

Insulation Board	Reinforcement	Fixing	1st Coat	2nd Coat	Finish
weber.therm XB					
EPS	N/A	Mechanical	**weber.rend EXB**	N/A	Brick slip and **weber.rend BPM**
PIR	N/A				
MFD	Meshcloth	Mechanical	**weber.rend LAC**	**weber.rend EXB**	
MFL	N/A	**weber.rend LAC**	**weber.rend EXB**	N/A	
weber.therm XM					
MFL	Meshcloth	**weber.rend EXB**	**weber.rend LAC**	**weber.rend PTC, weber.rend PTS**	Dry-dash, scraped texture or primer and synthetic finish

Storage and shelf life

When stored unopened in a dry place at temperatures above 5°C, shelf life is 12 months from date of manufacture.

Health and safety

Contains cement.
For full information on Health and Safety, please see inside back cover.

Packaging

weber.rend EXB is packaged in 3-ply 20 kg bags with batch code and description on the side.

Coverage

Use	Nominal thickness	Coverage
Bonding insulation	3 mm	6 kg/m²
Brick slips	4 mm	8 kg/m²

Note: This estimate takes no account of wastage.

Uses

- As an adhesive to bond mineral fibre – lamella insulation to plywood substrates
- To bond brick slips as part of **weber.therm XB** External Wall Insulation System

Preparation

All surfaces must be sound, clean, dry and free from any material which may impair adhesion.

Where **weber.rend EXB** is used as an adhesive on to a plywood substrate, the sheathing must be of adequate thickness, securely fixed, in-plane, without deflection or edge protrusions.

Scaffolding must be independently tied to allow uninterrupted application. Any faults in the structure, particularly those which may lead to moisture penetration, must be rectified.

Mixing and application

Mix **weber.rend EXB** by adding clean water only. Mix in a rubber/plastic bucket using a paddle mixer to a thick creamy consistency.

Bonding insulation to plywood

Apply **weber.rend EXB** approximately 6 mm thick to the **weber.therm MFL** insulation. Fully comb prior to fitting the plywood substrate then insert **Weber** fixings at the rate of 2 per board or part board every fourth course.

Bonding brick slips

Apply a coat of **weber.rend EXB**, nominal thickness 4 mm (in two passes) to an area approximately 0.75 m² and comb horizontally using a 6 mm notched trowel. Press the brick slips into the freshly applied mortar.

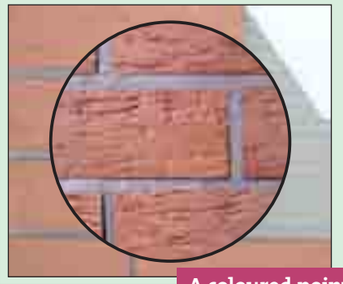
Alternatively, apply a tight coat of **weber.rend EXB**, a small area at a time, and butter the back of the brick slips.

Use 8 or 10 mm spacers to create the required joint and support the brick slips while the mortar sets.

Good practice

Do not apply:
- If frost is forecast within 24 hours of use
- In damp/wet conditions
- In temperatures below 5°C or above 30°C
- On elevations in direct sunlight or where the substrate is hot

weber.rend BPM



Features and benefits

- Polymer modified for improved water shedding
- Pre-bagged mix reducing wastage with small manageable batches
- No colour tinting required on site
- Quality controlled and factory blended to give a consistently high quality product
- Practical benefits of smooth application, speed, economy and long shelf life

A coloured pointing mortar for use with the weber.therm XB External Wall Insulation System

About this product

weber.rend BPM is a coloured, polymer-modified, dry powder, cement based mortar.

Technical data

External wall insulation systems – weber.therm XB

Insulation Board	Reinforcement	Fixing	1st Coat	2nd Coat	Finish
EPS	N/A	Mechanical	**weber.rend EXB**	N/A	Brick slip and **weber.rend BPM**
PHS	N/A	Mechanical			
PIR	N/A	Mechanical			
MFD	Meshcloth	Mechanical	**weber.rend LAC**	**weber.rend EXB**	Brick slip and **weber.rend BPM**
MFL	N/A	**weber.rend LAC**	**weber.rend EXB**	N/A	Brick slip and **weber.rend BPM**

Uses

- As a coloured mortar for pointing the brick slips in a **weber.therm XB** EWI system

Preparation

All surfaces must be sound, clean, dry and free from any material which may impair adhesion.

Scaffolding must be independently tied to allow uninterrupted application. Any faults in the structure, particularly those which may lead to moisture penetration, must be rectified.

Mixing and application

Mix **weber.rend BPM** to a workable consistency by adding clean water only.

Apply the pointing mortar carefully to the joints on the **weber.therm XB** system using a special refillable cartridge gun with interchangeable nozzles.

To ensure colour consistency the material required for complete and adjoining panels should be of the same batch number.

Good practice

Do not apply:
- If frost is forecast within 24 hours of use
- In damp/wet conditions
- In temperatures below 5°C or above 30°C
- On elevations in direct sunlight or where the substrate is hot

Colours

weber.rend BPM pointing mortar is available in a range of 6 colours. Specifiers should consult the Colour Charts on page 30 and, whenever possible, obtain samples prior to specification.

Storage and shelf life

When stored unopened in a dry place at temperatures above 5°C, shelf life is 12 months from date of manufacture.

Health and safety

Contains cement.

For full information on Health and Safety, please see inside back cover.

Packaging

weber.rend BPM is packaged in 3-ply 25 kg bags with batch code and description on the side.

Coverage

Use	Nominal thickness	Coverage
Pointing	5 – 10 mm	3 kg/m²

Note: This estimate takes no account of wastage.

weber.rend fibrelite

A factory batched, polymer-modified lightweight mortar for dry-dash

About this product

weber.rend fibrelite is a factory batched, polymer-modified lightweight mortar designed for overcoating existing renders.

Technical data

Preparation	Reinforcement Option	Fixing	1st Coat	2nd Coat	Finish
weber CL150 **weber PR340**	N/A	N/A	**weber.rend fibrelite**	N/A	Dry-dash

Uses

- As a one coat render which can be applied to sound substrates to give a new decorative and water shedding finish. It is intended for overcoating existing renders and to receive a dash finish

weber.rend fibrelite should not be applied directly to painted surfaces.

When used in strict accordance with manufacturer's instructions and within an appropriate system, **Weber** renders will have a minimum life of 10 years.

Preparation

Drench the surface with **weber CL150**, if required, to treat organic growth in accordance with product instructions.

Thoroughly brush down existing dashed surfaces to remove loose aggregate and dead organic growth.

Wet down scratched undercoat surface with water spray, as required to control suction.

Where the substrate has excessive suction that cannot be controlled by wetting down, **weber PR340** should be used in accordance with the relevant data sheet.

Mixing

Mix **weber.rend fibrelite** by adding clean water only to achieve workability.
This mortar can be made up in any batch size desired with little wastage because it is pre-mixed dry. Add no other materials unless directed.

Application

Apply to the wall 6 – 10 mm thick according to substrate and finish with selected dry-dash.

To ensure colour consistency, the materials required for complete and adjoining panels should be of the same batch number or be thoroughly mixed together before use.

Good practice
Do not apply:
- If frost is forecast within 24 hours of use
- In damp/wet conditions
- In temperatures below 5°C or above 30°C
- On elevations in direct sunlight or where the substrate is hot

Colours

weber.rend fibrelite is available in a range of 11 colours. Specifiers should consult the Colour Chart on page 28 and, whenever possible, obtain samples prior to specification.

Storage and shelf life

When stored unopened in a dry place at temperatures above 5°C, shelf life is 12 months from date of manufacture.

Health and safety

Contains cement.

For full information on Health and Safety, please see inside back cover.

weber.rend fibrelite

A factory batched, polymer-modified lightweight mortar for dry-dash

Features and benefits

- Polymer modified for improved bond strength
- Good water shedding characteristics
- Reduced density and shear load
- Fibre reinforced for crack control
- Factory batched for consistency
- Practical benefits of smooth application, speed, economy and long shelf-life
- Established track record in varying climatic conditions

Packaging

weber.rend fibrelite is packaged in 3-ply 20 kg bags with batch code, description and colour on the side. Pallet quantity is 64 bags.

Coverage

Use	Nominal thickness	Coverage
Overcoat	8 mm	8 kg/m²

Note: this estimate takes no account of wastage and will vary according to the type of substrate.

weber.rend RB

Polymer-modified mortars, used together to create a brick-effect finish

About this product

weber.rend RB is the combination of 2 polymer-modified mortars, used together to create a brick-effect finish, on the **weber.therm XM** external wall insulation system.

Technical data

External wall insulation system – weber.therm XM

Insulation board	Reinforcement	Fixing	1st Coat	2nd Coat	Finish
MFS	Meshcloth	Mechanical	**weber.rend LAC**	**weber.rend RBB**	**weber.rend RBF**
EPS		**weber.rend LAC**			
PHS PIR		Mechanical or **weber.rend LAC**			

Uses

- To produce a brick-effect finish on the **weber.therm XM** external wall insulation system

Constraints

Cutting out will take place after the face layer has formed a skin, and experience and climatic conditions will dictate the moment at which to commence.

Proceed methodically rather than rushing and making mistakes which will be visible and time consuming to rectify.

Do not cut too early as this will produce torn edges in the joints.

Take particular care at corners.

Keep cutting tools clean.

Ensure the surface is hard enough before removing the scrapings. If too early, there is a risk of damage to the surface.

Preparation

All surfaces must be clean, dry and free from anything that may interfere with the bond of the **weber.rend RBB** render.

Ensure that the **weber.rend LAC** has been lightly comb-scratched prior to the application of the **weber.rend RBB**.

Application

Base coat

Mix **weber.rend RBB** polymer modified mortar, by adding clean, potable water only, to achieve a workable consistency. Allow to stand 5 – 10 minutes and remix (do not add water).

Apply to the **weber.rend LAC** on the **weber.therm XM** EWI system, 7 – 8mm thick and rule to achieve a flat, in-plane surface. Take care not to over-trowel.

Face coat

Mix **weber.rend RBF** polymer modified mortar, by adding clean, potable water only, to achieve a workable consistency. Allow to stand 5 – 10 minutes and remix. (Do not add water)

When the **weber.rend RBB** has 'taken up', apply 2 – 3mm of **weber.rend RBF** render and immediately lightly texture the surface with a soft bristle brush.

Leave to take up, then set out the surface with the chosen brick pattern, taking care not to damage the face coat. Mark out the horizontal lines first.

Cut out the horizontal joints using a spirit level and the **weber.rend RB** cutter. Do not cut too deep.

Mark and cut out the vertical lines, again taking care not to cut too deep or damage the face coat.

After all joints have been formed, and when the surface is partially cured, (hard but not fully set), remove all traces of cut-out material by brushing with a soft bristled brush.

Good practice

Do not apply:

- If frost is forecast within 24 hours of use
- In damp/wet conditions
- In temperatures below 5°C or above 30°C
- On elevations in direct sunlight or where the substrate is hot

Colours

weber.rend RBB (base or 'mortar joint' render) is available in 9 colours.
weber.rend RBF (face or 'brick' render) is available in 7 colours. Specifiers should consult the Colour Chart in the specifiers' handbook ***Weber Render Solutions*** and, whenever possible, obtain samples prior to specification.

Storage and shelf life

When stored unopened in a dry place at temperatures above 5°C, shelf life is 12 months from date of manufacture.

weber.rend RB

Polymer-modified mortars, used together to create a brick-effect finish

Features and benefits

- Provides a cost-effective alternative to bricks
- Available in a choice of base and face colours
- Factory batched materials for consistency
- Supported by comprehensive technical and architectural services
- Established track record in varying climatic conditions

Health and safety

Contains cement.

For full information on Health and Safety, please see inside back cover.

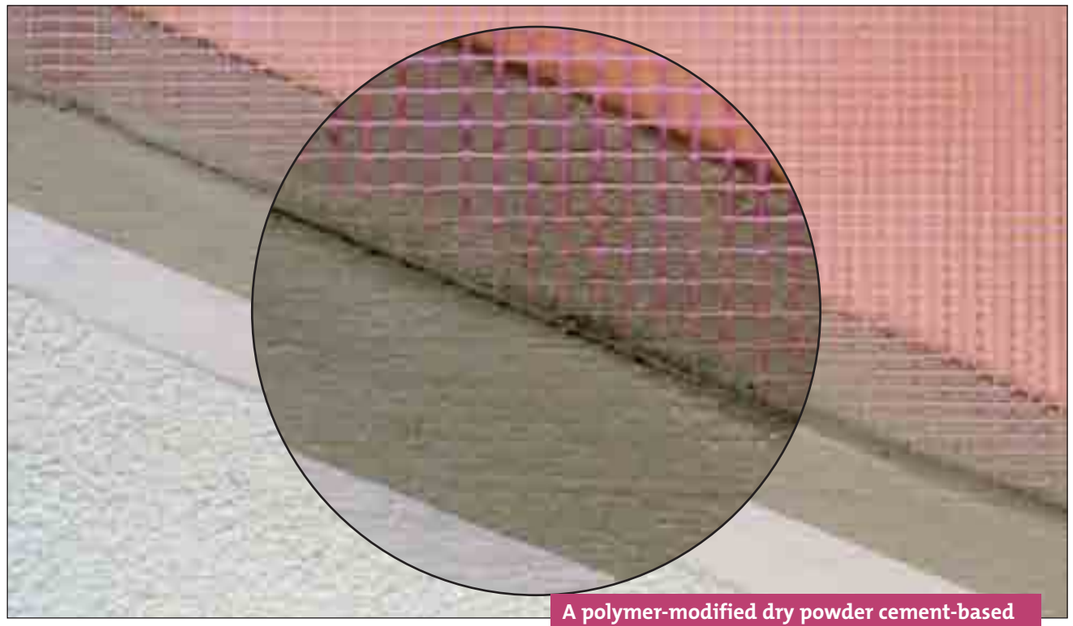
Packaging

weber.rend RBB is available in 3 ply, 20 kg bags with batch code and description on the side.
weber.rend RBF is available in 3 ply, 25 kg bags with batch code and description on the side.

Coverage

Use	Nominal thickness	Coverage
Base	7 mm	8.5 kg/m²
Face	3 mm	5.5 kg/m²

weber.rend LAC



A polymer-modified dry powder cement-based render mortar

About this product

weber.rend LAC is a low density, polymer-modified dry powder cement-based mortar. This product forms part of a number of approved insulation systems.

Technical data

External wall insulation systems – weber.therm XM

Insulation Board	Reinforcement	Fixing	1st Coat	2nd Coat	Finish
MFD	Meshcloth	Mechanical	**weber.rend LAC**	**weber.rend PTC** or **weber.rend PTS** or optional **weber.rend PTC**	Dry-dash Scrape texture
EPS		**weber.rend LAC**			Synthetic finish with associated primer
PHS PIR		Mechanical or **weber.rend LAC**			

Multi-coat render systems - weber.rend MT on panel background

First Layer	Reinforcement	Fixing	1st Coat	2nd Coat	Finish
N/A	Meshcloth	N/A	**weber.rend LAC**	N/A	**weber.plast TF** or **weber.plast DF** or **weber.sil TF** or **weber.plast P** or **weber.sil P** or **weber.tene SG** refer to individual data sheets for associated primers

Multi-coat render systems - weber.rend MT on masonry background

First Layer	Reinforcement	Fixing	1st Coat	2nd Coat	Finish
weber.rend POC (levelling coat)	Meshcloth	N/A	**weber.rend LAC**	N/A	**weber.plast TF** or **weber.plast DF** or **weber.sil TF** or **weber.plast P** or **weber.sil P** or **weber.tene SG** refer to individual data sheets for associated primers

Uses

- Bedding coat for meshcloth systems,
- Bonding coat for plastic or mineral fibre lamella insulation systems

When used in strict accordance with manufacturer's instructions and within an appropriate system, **Weber** renders will have a minimum life of 10 years.

Constraints

The quality of application of this material depends on suitable operative skills and product familiarity.

Restrictions on weather conditions during application and curing must be respected.

Sound trade practices and printed instructions must be followed.

Good access and appropriate protection must be provided.

Mixing and application

Mix **weber.rend LAC** by adding clean water only to achieve a thick creamy consistency.

Bonding

The adhesive is applied to the back of the insulation boards in 4 vertical strips 100 mm wide, 25 – 30 mm thick.

Adhesive coat

Coat the insulation boards with the adhesive to a thickness of about 2 – 3 mm and lay in the meshcloth. Once the initial coat has started to 'take-up', apply a second layer of adhesive mortar to produce a sandwich approximately 6 mm thick totally encapsulating the meshcloth.
Mineral finish: lightly comb scratch to achieve a good mechanical key.
Synthetic finish: sponge finish to achieve a flat surface

Spillages stain and are difficult to remove so:

- protect vulnerable areas thoroughly
- mix mortar in plastic containers using a paddle mixer to facilitate cleaning
- don't mix too much material at one time
- wear protective clothing.

Good practice

Do not apply:

- If frost is forecast within 24 hours of use
- In damp/wet conditions
- In temperatures below 5°C or above 30°C
- On elevations in direct sunlight or where the substrate is hot

Storage and shelf life

When stored unopened in a dry place at temperatures above 5°C, shelf life is 12 months from date of manufacture.

Health and safety

Contains cement.

For full information on Health and Safety, please see inside back cover.

weber.rend LAC

A polymer-modified dry powder cement-based render mortar

Features and benefits

- Low mass for reduced shear load
- Polymer modified for high bond strength
- Factory batched for consistency
- Practical benefits of smooth application, speed, economy and long shelf-life
- Technical support from a Quality Assured company
- Established track record in varying climatic conditions
- Forms part of a number of approved insulation systems

NSAI BBA

Packaging

weber.rend LAC is packaged 3-ply 20 kg bags with batch code and description on the side.

Coverage

Use	Nominal thickness	Coverage
Fixing insulant	N/A	3 kg/m²
Meshcloth coat	6mm	6.5 kg/m²

weber.rend MFU

A polymer-modified dry powder cement-based mortar for use as a render undercoat on mineral fibre insulation

About this product

weber.rend MFU is a polymer-modified dry powder cement-based mortar.

This product forms part of a number of approved insulation systems.

Technical data

External wall insulation systems – weber.therm XL

Insulation Board	Reinforcement option	Fixing	1st Coat	2nd Coat	Finish
MFS	Ferritic stainless lath	Mechanical	**weber.rend MFU**	**weber.rend TTC** or **weber.rend PTC**	Dry-dash, or **weber PR310** and synthetic finish
				weber.rend TTS or **weber.rend PTS**	Scrape texture

Uses

- As the undercoat in render protected external wall insulation systems, specifically **weber.therm XL** system incorporating Fibreslab insulation board.
- **weber.rend MFU** should be scratched horizontally to provide a key for subsequent coats.

When used in strict accordance with manufacturer's instructions and within an appropriate system, **Weber** renders will have a minimum life of 10 years.

Constraints

The quality of application of this material depends on suitable operative skills and product familiarity.

Restrictions on weather conditions during application and curing must be respected.

Sound trade practices and printed instructions must be followed.

Good access and appropriate protection must be provided.

Mixing

Mix **weber.rend MFU** mortar by adding clean water only to achieve workability. This mortar can be made up in any batch size desired with little wastage because it is pre-mixed dry. Add no other materials unless directed.

Application

Apply to prepared surface 10 – 12 mm thick in accordance with BS 5262 and thoroughly scratch horizontally to produce key.

Allow to dry and shrink completely before subsequent applications. This will depend on weather conditions, but normally requires a minimum of 36 hours.

Good practice

Do not apply:

- If frost is forecast within 24 hours of use
- In damp/wet conditions
- In temperatures below 5°C or above 30°C
- On elevations in direct sunlight or where the substrate is hot

Storage and shelf life

When stored unopened in a dry place at temperatures above 5°C, shelf life is 12 months from date of manufacture.

Health and safety

Contains cement.

For full information on Health and Safety, please see inside back cover.

weber.rend MFU

A polymer-modified dry powder cement-based mortar for use as a render undercoat on mineral fibre insulation

Features and benefits

- Exceptional and consistent quality
- Factory batched for consistency
- Practical benefits of smooth application, speed, economy and long shelf-life
- Established track record in varying climatic conditions
- Forms part of a number of approved insulation systems

Packaging

weber.rend MFU is packaged in 3-ply, 25 kg bags with batch code and description on the side.

Coverage

Undercoat Type	Nominal thickness	Coverage
1st Coat	10 mm	18 kg/m²

weber.rend POC

A polymer-modified low density cement-based render mortar designed for one-coat application

About this product

weber.rend POC is a polymer-modified low density cement based mortar designed for a one coat application.

Technical data

Multi-coat render systems – weber.rend MT

Levelling coat	Reinforcement option	Fixing	1st Coat	2nd Coat	Finish
weber.rend POC	Standard meshcloth	N/A	**weber.rend LAC**	N/A	Primer and **weber.plast TF, weber.plast TF, weber.sil TF, weber.plast P** or **weber.tene SG**

Uses

- As a lightweight levelling coat on a mesh reinforced render system

Constraints

The quality of application of this material depends on suitable operative skills and product familiarity.

Restrictions on weather conditions during application and curing must be respected.

Sound trade practices and printed instructions must be followed.

Good access and appropriate protection must be provided.

Preparation

All surfaces must be sound, clean, dry and free of any material which may impair adhesion.

Scaffolding must be independently tied to allow for an uninterrupted application. Any faults in the structure, particularly those which may lead to moisture penetration must be rectified.

Poorly keyed surfaces, for example smooth concrete, or substrates of high or uneven suction should be prepared with **weber.rend aid** stipple coat.

Mask as required. Edging tape must be removed before the material has dried.

Expansion joints should be included as required by the substrate and carried through all applied materials.

Mixing

Mix **weber.rend POC** polymer modified mortar by adding clean water only to achieve workability. This mortar can be made up in any batch size desired with little wastage because it is pre-mixed dry.

Add no other materials unless directed.

Application

weber.rend MT

Apply to **Weber** multi-coat render system a levelling coat of 10mm (nominal) thickness.

Rule off to a flat, in-plane surface and after partial take-up, lightly brush-scratch for key.

Allow to dry and shrink completely before subsequent applications. This will depend on weather conditions, but normally requires a minimum of 36 hours. Refer to **weber.rend MT** data sheet.

Good practice

Do not apply:

- If frost is forecast within 24 hours of use
- In damp/wet conditions
- In temperatures below 5°C or above 30°C
- On elevations in direct sunlight or where the substrate is hot

Storage and shelf life

When stored unopened in a dry place at temperatures above 5°C, shelf life is 12 months from date of manufacture.

Health and safety

Contains cement.

For full information on Health and Safety, please see inside back cover.

Packaging

weber.rend POC is packed in 3 ply 20 kg bags with batch code and description on the side.

Coverage

Nominal thickness	Coverage
10 mm	12 kg/m²

weber.rend POC

A polymer-modified low density cement-based render mortar designed for one-coat application

Features and benefits

- Levels/removes surface irregularities as part of a multi-coat render system
- Exceptional and consistent quality
- Improved water resistance
- Practical benefits of smooth application, speed, economy and shelf life
- Technical support from a quality assured company
- Established track record in varying climatic conditions

weber.therm M1

A new-generation one-coat, through-coloured mineral render for use with weber.therm XP external wall insulation system

About this product

weber.therm M1 is a new-generation factory-batched, polymer-modified, through-coloured, lightweight mineral render for a one coat application on to external wall insulation with meshcloth incorporating a scrape or dry-dash finish.

Technical data

weber.therm XP – external wall insulation system

Insulation Board	Reinforcement	Fixing	1st Coat	2nd Coat	Finish
Plain EPS Plain MFS Plain PHS	Meshcloth	Mechanical	**weber.therm M1**	N/A	Dry-dash, scraped texture, light ashlar marking or spray roughcast

Uses

- A new generation one-coat lightweight render, specifically designed and manufactured for a one coat application on to external wall insulation with meshcloth

Constraints

The quality of application of this material depends on suitable operative skills and product familiarity.

Restrictions on weather conditions during application and curing must be respected.

Sound trade practices and printed instructions must be followed.

Good access and appropriate protection must be provided.

Colours

12 standard and 24 standard special colours.

Preparation

Ensure insulation is securely fixed, in plane, with no edge protrusions.

Mixing and application

weber.therm M1 has been designed for spray application onto External Wall Insulation. Refer to ***Weber Render Solutions*** handbook for examples of suitable pumps.

Mix 20kg of **weber.therm M1** with 4.25 – 5.0 litres potable water. If the material has been allowed to stand for 5 – 10 minutes, it may be necessary to remix (do not add water) immediately prior to application.

Scrape texture finish

Apply a first pass approximately 6 – 7 mm thick. Lay in the meshcloth and when the render begins to take up, apply a further 8 – 9 mm forming a minimum 15 mm monolithic render coat. Rule level and allow to set.

When **weber.therm M1** is 'green' (set but not fully hardened) it should be scraped in circular motions using a scraping tool. It is essential that this is done carefully and evenly, ensuring all laitance is removed and that no part is missed. The finished render thickness should be 12 mm (minimum).

Thoroughly brush down the surface of the scraped finish using a soft bristle brush.

Set time/scrape time

Estimating the setting and scraping time of a render is not an exact science. There are many factors that affect the setting time of a render including temperature, prevailing winds, water addition, thickness of coat and type of substrate i.e. high or low suction. The experience, skill and product knowledge of the applicator will play an important part in determining when to apply the render, to ensure the scraping time fits in with his working practice.

weber.therm M1 is generally a 'next day' scrape render. As with all mineral renders, in low temperatures setting times will be longer than in warmer periods. In hot weather or in strong drying winds if the render is applied early in the morning it will be possible to scrape back in the late afternoon on the same day of application.

weber.therm M1 will set and gain hardness in a similar manner to all conventional mineral renders and in common with all other mineral renders, newly applied render must not be allowed to dry out too quickly i.e. the cement must be allowed to cure and fully hydrate. Therefore in extreme hot weather conditions it may be necessary to protect the newly applied render from the sun and drying winds. Refer to the BS 5262 *Code of Practice for External Renderings*.

Ashlar marking

The **weber.therm M1** is applied as above, but with an overall finished thickness of 15 mm. Light ashlar marking, no more than 2 – 3 mm deep, can be cut in the surface using a **Weber** square-edged cutting tool.

Dry dash finish

Apply the **weber.therm M1** to a thickness of 6 mm. Lay in the meshcloth, and when the render begins to take up, apply a further 6 mm forming a 12 mm monolithic render coat. Flatten-off and dry dash in the normal manner.

Spray roughcast finish

Apply a first pass approximately 6 mm thick. Lay in the meshcloth and when the render begins to 'take up', apply a further 6 mm, forming a 12 mm monolithic render coat.

Rule to achieve a level, flat surface.

Once again, when the render begins to 'take up', apply a light spray-textured pass to achieve an overall thickness, maximum 15 – 16 mm.

Good practice

Do not apply:

- If frost is forecast within 24 hours of use
- In damp/wet conditions
- In temperatures below 5°C or above 30°C
- On elevations in direct sunlight or where the substrate is hot

To ensure colour consistency, the material required for complete and adjoining panels should be of the same batch number or be thoroughly mixed together before use.

Health and safety

Contains cement.
For full information on Health and Safety, please see inside back cover.

Technical support and advice

During the planning stages of a project, advice should be sought from **Weber** technical staff.

Advice based on technical expertise together with unrivalled practical experience is freely available and covers:
Design: assistance with the selection of the appropriate system, including working details and U-value calculations.
Pre-Contract Documentation: specifications, typical details, method statements.
Contract Documentation: site packages, available through the specialist contractor. These include approved details, specification and site procedures.

weber.therm M1

A new-generation one-coat, through-coloured mineral render for use with weber.therm XP external wall insulation system

Features and benefits

- One coat machine application, significantly, reducing the 'programme of works' and all associated costs
- Suitable for spray or hand application
- Through colour, thick mineral render for low maintenance and durability
- No lost time waiting for undercoats to cure
- Quality assured raw materials
- Ready mixed – only the addition of potable water required on site for ease of use
- Supported by comprehensive technical and architectural services
- Forms part of a BBA approved system certificate no. 09/4670

Storage and shelf life

Store in clean, dry conditions above 5°C. When stored unopened in correct conditions a shelf life of 12 months can be expected. Protect from frost.

Packaging and coverage

weber.therm M1 is supplied in 20 kg paper sacks, with batch code, description and colour on the side.

Use	Nominal thickness	Coverage
Scrape	12 mm (finish)	19 kg/m²
Scrape ashlar	15 mm (finish)	23 kg/m²
Dash	12 mm	15 kg/m²

Note: These estimates take no account of wastage and will vary according to the method of application.

weber.therm L1

A new-generation one-coat, through-coloured mineral render for use with weber.therm XP external wall insulation system

About this product

weber.therm L1 is a new-generation factory-batched, through-coloured mineral render for a one coat application on to external wall insulation with metal lath incorporating a scrape or dry-dash finish.

Technical data

weber.therm XP – external wall insulation system

Insulation Board	Reinforcement	Fixing	1st Coat	2nd Coat	Finish
Coated EPS	Ferritic stainless lath	Mechanical	**weber.therm L1**	N/A	Dry-dash, scraped texture, light ashlar marking or spray roughcast

Uses

- A new generation render, specifically designed and manufactured for a one coat application on to external wall insulation with lath

Constraints

The quality of application of this material depends on suitable operative skills and product familiarity.

Restrictions on weather conditions during application and curing must be respected.

Sound trade practices and printed instructions must be followed.

Good access and appropriate protection must be provided.

Colours

12 standard and 24 standard special colours.

Preparation

Ensure insulation and lath are securely fixed back to the substrate.

Remove any bulges in the lath and ensure all lath overlaps are tied as required. (Refer to the application guide)

Mixing and application

weber.therm L1 can be applied by hand, or by using a render spray machine (refer to **Weber** render solutions catalogue for examples of suitable pumps).

Scrape texture finish

Mix 25 kg of **weber.therm L1** with 5.25 – 5.75 litres of potable water then apply the **weber.therm L1** to a thickness of 10 – 12mm ensuring lath is fully encapsulated. When the first pass of **weber.therm L1** render begins to take up, apply a further 7 – 9 mm to form a minimum 19 mm monolithic render coat. Rule level and allow to set.

When **weber.therm L1** is 'green' (set but not fully hardened) it should be scraped in circular motions using a scraping tool. It is essential that this is done carefully and evenly, ensuring all laitance is removed and that no part is missed. Thoroughly brush down the surface of the scraped finish using a soft bristle brush.

Set time/scrape time

Estimating the setting and scraping time of a render is not an exact science. There are many factors that affect the setting time of a render including temperature, prevailing winds, water addition, thickness of coat and type of substrate i.e. high or low suction. The experience, skill and product knowledge of the applicator will play an important part in determining when to apply the render, to ensure the scraping time fits in with his working practice.

weber.therm L1 is generally a 'next day' scrape render. As with all mineral renders, in low temperatures setting times will be longer than in warmer periods. In hot weather or in strong drying winds, if the render is applied early in the morning, it will be possible to scrape back in the late afternoon on the same day of application.

weber.therm L1 will set and gain hardness in a similar manner to all conventional mineral renders and in common with all other mineral renders, newly applied render must **not** be allowed to dry out too quickly i.e. the cement must be allowed to cure and fully hydrate. Therefore in extreme hot weather conditions it may be necessary to protect the newly applied render from the sun and drying winds. Refer to the BS 5262 *Code of Practice for External Renderings.*

Ashlar marking

The **weber.therm L1** is applied as above, but with an overall average finished thickness of 19 mm.

Light ashlar marking, no more than 2 – 3 mm deep, can be cut in the surface using a **Weber** square-edged cutting tool.

Dry dash finish

Mix 25kg of **weber.therm L1** with 5.25 - 5.75 litres of potable water and apply the **weber.therm L1** to a thickness of 10 – 12 mm ensuring lath is fully encapsulated. When the render begins to take-up, apply a further 4 – 6 mm, flatten off and dry dash in the normal manner. The minimum mortar thickness should be 16 mm (overall finished thickness would be a minimum of 18 mm).

Spray roughcast finish

Spray-apply a first pass to a thickness of 15 mm, completely encapsulating the lath. Rule to achieve a level, flat surface. When the first pass begins to 'take up', apply a second pass, textured to produce a minimum overall thickness of 18 mm.

Good practice

Do not apply:

- If frost is forecast within 24 hours of use
- In damp/wet conditions
- In temperatures below 5°C or above 30°C
- On elevations in direct sunlight or where the substrate is hot

To ensure colour consistency, the material required for complete and adjoining panels should be of the same batch number or be thoroughly mixed together before use.

Technical support and advice

During the planning stages of a project, advice should be sought from **Weber** technical staff.

Advice based on technical expertise together with unrivalled practical experience is freely available and covers:

Design: assistance with the selection of the appropriate system, including working details and U-value calculations.

Pre-Contract Documentation: specifications, typical details, method statements.

Contract Documentation: site packages, available through the specialist contractor. These include approved details, specification and site procedures.

weber.therm L1

A new-generation one-coat, through-coloured mineral render for use with weber.therm XP external wall insulation system

Features and benefits

- One coat machine application, significantly, reducing the 'programme of works' and all associated costs
- Through colour, non-combustible, thick mineral render for low maintenance and durability
- Particularly suited to high rise applications and for areas where high impact resistance is required
- Quality assured raw materials
- Ready mixed – only the addition of potable water required on site for ease of use
- Supported by comprehensive technical and architectural services

Storage and shelf life

Store in clean, dry conditions above 5°C. When stored unopened in correct conditions a shelf life of 12 months can be expected. **Protect from frost.**

Health and safety

Contains cement.
For full information on Health and Safety, please see inside back cover.

Packaging and coverage

weber.therm L1 is supplied in 25 kg paper sacks, with batch code, description and colour on the side.

Use	Nominal thickness	Coverage
Scrape	16 mm	25 kg/m²
Scrape ashlar	19 mm	29 kg/m²
Dash	16 mm	21 kg/m²

Note: These estimates take no account of wastage and will vary according to the method of application.

weber.therm L2

A new-generation one-coat, cementitious render for use below DPC with weber.therm XP external wall insulation system

About this product

weber.therm L2 is a new-generation one-coat, lightweight, polymer-modified cementitious render for use below DPC. It is part of the **weber.therm XP** external wall insulation range.

Technical data

weber.therm XP – external wall insulation system

Insulation Board	Reinforcement	Fixing	1st Coat	2nd Coat	Finish
Coated XPS	Ferritic stainless lath	Mechanical	**weber.therm L2**	N/A	Plain with **weber.sil P**

Uses

- A new-generation render, specifically designed and manufactured for a one-coat application onto external wall insulation with lath

Constraints

The quality of application of this material depends on suitable operative skills and product familiarity.

Restrictions on weather conditions during application and curing must be respected.

Sound trade practices and printed instructions must be followed.

Good access and appropriate protection must be provided.

Preparation

Ensure insulation and lath are securely fixed back to the substrate.

Remove any bulges in the lath and ensure all lath overlaps are tied as required. (Refer to the application guide)

Application

Plain finish

Mix 20kg of **weber.therm L2** with 5.25 – 5.75 litres of potable water and apply to a minimum thickness of 15 mm in one or two passes ensuring lath is completely encapsulated. Rule level, and when material begins to 'take up', float and sponge finish in the normal manner.

The floated render thickness must be a minimum of 15 mm

Allow to dry and shrink completely before applying **weber.sil P** mineral paint. This will depend on weather conditions, but normally requires a minimum of 36 hours.

weber.therm L2 will set and gain hardness in a similar manner to conventional renders.

Good practice

Do not apply:

- If frost is forecast within 24 hours of use
- In damp/wet conditions
- In temperatures below 5°C or above 30°C
- On elevations in direct sunlight or where the substrate is hot

Storage and shelf life

Store in clean, dry conditions above 5°C. When stored unopened in correct conditions a shelf life of 12 months can be expected. Protect from frost.

Health and safety

Contains cement.

For full information on Health and Safety, please see inside back cover.

Technical support and advice

During the planning stages of a project, advice should be sought from **Weber** technical staff.

Advice based on technical expertise together with unrivalled practical experience is freely available and covers:

Design: assistance with the selection of the appropriate system, including working details and U-value calculations.

Pre-Contract Documentation: specifications, typical details, method statements.

Contract Documentation: site packages, available through the specialist contractor. These include approved details, specification and site procedures.

Packaging

weber.therm L2 is supplied in 20 kg paper sacks, with batch code and description on the side.

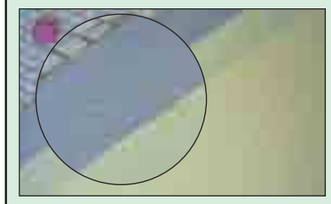
Coverage

Nominal thickness	Coverage
15 mm	18 kg/m²

Note: This estimate takes no account of wastage and will vary according to the method of application.

weber.therm L2

A new-generation one-coat, cementitious render for use below DPC with weber.therm XP external wall insulation system



Features and benefits

- Speed of application – one coat
- Thick mineral render for low maintenance and durability
- Quality assured raw materials
- Ready mixed: only the addition of potable water required on site for ease of use
- Supported by comprehensive technical and architectural services

weber.rend PTS

A factory batched, through-coloured polymer-modified mortar for use as a render top coat

About this product

weber.rend PTS is a medium-graded, dry powder, cement-based mortar

Technical data

External wall insulation systems – weber.therm XL and weber.therm XM

Insulation Board	Reinforcement option	Fixing	1st Coat	2nd Coat	Finish
weber.therm XL					
MFS	Ferritic stainless lath	Mechanical	**weber.rend MFU**	**weber.rend PTS**	Scrape texture
PHS			**weber.rend PUC**		
Coated EPS			**weber.rend PUC** or **weber.rend TUC**		
weber.therm XM					
MFS	Meshcloth	Mechanical	**weber.rend LAC**	**weber.rend PTS**	Scrape texture
EPS		**weber.rend LAC**			
PHS		Mechanical or **weber.rend LAC**			

Multi-coat render systems

Preparation	Reinforcement option	Fixing option	1st Coat	2nd Coat	Finish
Membrane or **weber.rend stipple**	Ferritic stainless lath	Mechanical	**weber.rend PUC** **weber.rend PUC**	**weber.rend PTS**	Scrape texture
Keyed surface	N/A	N/A	**weber.rend PUC** or **weber.rend TUC**	**weber.rend PTS**	Scrape texture

Uses

- Through-coloured top coat mortar for scrape texturing
- Can be used in **Weber** render protected, external wall insulation systems and in multi-coat render systems (see table below)

When used in strict accordance with manufacturer's instructions and within an appropriate system, **Weber** renders will have a minimum life of 10 years.

Constraints

The quality of application of this material depends on suitable operative skills and product familiarity.

Restrictions on weather conditions during application and curing must be respected.

Sound trade practices and printed instructions must be followed.

Good access and appropriate protection must be provided.

Colours

weber.rend PTS is available in a range of 10 colours. Specifiers should consult the Colour Chart on page 24 and, whenever possible, obtain samples prior to specification.

Mixing

Mix **weber.rend PTS** factory batched top coat mortar by adding clean water only to achieve workability. This mortar can be made up in any batch size desired with little wastage because it is pre-mixed dry. Add no other material unless directed.

To ensure colour consistency, the materials required for complete and adjoining panels should be of the same batch number or be thoroughly mixed together before use.

Application

Wet down scratched undercoat surface with water spray, as required, to control suction.

Apply **weber.rend PTS** 8 – 10 mm thick to prepared undercoat. Float finish to produce a smooth even surface plane. Use a 'derby' if necessary to produce even thickness and flatness. When mortar has taken up sufficiently after several hours drying (usually the following day) and when larger stones spring easily from the surface, texture the surface using a scratching pad to produce an even appearance. The pad is used lightly in a circular motion. Remove all surface 'glut' and scratch the entire surface, taking care not to miss areas. When completed, **weber.rend PTS** should have a minimum thickness of 6 mm.

Take care not to damage the surface, especially at corners with scaffolding or ladders.

Carefully brush down the surface of the scraped finish, using a soft bristle brush.

Arrises can be dealt with:
a) Using a mitred rule, which is slow and needs skill, but is very effective.
b) Using rigid PVC corner beads.

Good practice

Do not apply:
- If frost is forecast within 24 hours of use
- In damp/wet conditions
- In temperatures below 5°C or above 30°C
- On elevations in direct sunlight or where the substrate is hot

Storage and shelf life

When stored unopened in a dry place at temperatures above 5°C, shelf life is 12 months from date of manufacture.

Health and safety

Contains cement.

For full information on Health and Safety, please see inside back cover.

weber.rend PTS

A factory batched, through-coloured polymer- modified mortar for use as a render top coat

Features and benefits

- Exceptional and consistent quality
- Durable, through-coloured, scrape textured render requiring no painting
- Polymer-modified for improved bond strength
- Available in a range of 10 pastel colours
- Established track record in varying climatic conditions
- National Standards Authority of Ireland approved

Packaging

weber.rend PTS is packaged in 3-ply 25 kg bags with batch code, description and colour on the side.

Coverage

Finish type	Nominal thickness	Coverage
Scraped	6 mm (finished)	16 kg/m² (applied)

Note: These estimates take no account of wastage and will vary according to the method of application.

CI/SfB (41) Pq4
Uniclass L51 April 2006

weber.rend stipple

Preparatory key coat for rendering

About this product

weber.rend stipple is a cementitious polymer-modified material. The powder blend includes an integral bonding agent so that it requires only the addition of clean water on site.

Technical data

Proprietary mix, designed to be used as an adhesive stipple pretreatment as described in BS 5262.

Suitable specification clauses for dealing successfully with most types of substrates are available from our Technical Services Department.

BS 5262, *Code of practice for external renderings*, and BS 8000-10, *Workmanship on building sites. Code of practice for plastering and rendering* should be followed at all times.

Uses

- To achieve a good key for rendering onto smooth or otherwise unsuitable but sound surfaces
- Ideal as a pre-treatment for renderings required to resist severe exposure conditions
- Suitable substrates:
  dense concrete
  brickwork
  blockwork
  masonry
  clean, sound, well adhered existing render (< 19 mm)

Constraints
Do not apply to gypsum plaster or previously painted surfaces.

The quality of application of this material depends on suitable operative skills and their familiarity with the product .

Restrictions on weather conditions during application and curing must be respected.

Sound trade practices and printed instructions must be followed.

Good access and appropriate protection must be provided.

Preparation

All surfaces must be sound, clean, dry and free from any material which may impair adhesion.

Scaffolding must be independently tied to allow uninterrupted application. Any faults in the structure, particularly those which may lead to moisture penetration, must be rectified.

Mask around the areas where material is to be applied. Masking tape must be removed before the material has dried out.

Mixing

Mixing and application can be messy. Spillage stains are difficult to remove so:
protect vulnerable areas carefully;
to facilitate clearing don't mix too much material at one time;
wear protective clothing particularly gloves.

Thoroughly mix **weber.rend stipple** with clean water at the rate of 5 – 5.5 litres of water per bag in a plastic container using a paddle mixer attachment.

Application

Stipple coating of designated areas is required in order to produce a mechanical key on smooth surfaces or where rendering has been removed and the brick joints are flush, or to provide a stand-off for **Weber** expanded metal lath.

weber.rend stipple is polymer modified for maximum bond to the substrate and should be stipple textured to a bold, peaked surface the rougher, the better.

Apply 2 – 3 mm thick to prepared surface with a hawk and trowel. Immediately after coating, fill a textured roller and pull down over the surface of applied material in one pass to create a stipple effect.

It is important that the final texture achieved, is a deep, heavy stipple finish.

Allow to fully dry and shrink. The drying period will vary according to weather conditions.

Good practice
Do not apply:
- If frost is forecast within 24 hours of use
- In damp/wet conditions
- In temperatures below 5°C or above 30°C
- On elevations in direct sunlight or where the substrate is hot

Storage and shelf life

When stored unopened in a dry place at temperatures above 5°C, shelf life is 12 months from date of manufacture.

Health and safety

Contains cement.

For full information on Health and Safety, please see inside back cover.

weber.rend stipple

Preparatory key coat for rendering

Features and benefits

- Equalises suction on mixed backgrounds
- Provides excellent suction control across both high and low suction substrates
- Resists the penetration of external water to improve the weather resistance of rendering systems
- Quality controlled and factory blended to give a consistently high quality product
- Easy to apply by hawk and trowel

Packaging

weber.rend stipple is packaged in 3-ply 25 kg bags with batch code.

Coverage

At 2 – 3 mm thickness the coverage is approximately 5 kg/m².

Note: This estimate takes no account of wastage and will vary according to the type of substrate.

Allowance must be made for extra material required on high suction or uneven substrates.

weber.rend PTC

A polymer-modified, dry powder cement-based mortar for use as a render top coat

About this product

weber.rend PTC is a polymer-modified, dry powder cement-based mortar.

Technical data

1 As a high performance top coat in 2-coat work onto masonry backgrounds, suitable for a variety of finishes

2 As part of an external wall system – weber.therm XL or weber.therm XM

Insulation Board	Reinforcement option	Fixing	1st Coat	2nd Coat	Finish
weber.therm XL					
MFS	Ferritic stainless lath	Mechanical	**weber.rend MFU**	**weber.rend PTC**	Dry-dash, or **weber PR310** and Synthetic texture
PHS			**weber.rend PUC**		
Coated EPS			**weber.rend PUC** or **weber.rend TUC**		
weber.therm XM					
MFS	Meshcloth	Mechanical	**weber.rend LAC**	**weber.rend PTC**	Dry-dash, or **weber PR310** and Synthetic texture
EPS		**weber.rend LAC**			
PHS		Mechanical or **weber.rend LAC**			

3 As part of a multi-coat render system

Preparation option	Reinforcement option	Fixing	1st Coat	2nd Coat	Finish
Membrane or **weber.rend stipple** or	Ferritic stainless lath	Mechanical	**weber.rend PUC**	**weber.rend PTC**	Dry-dash, or **weber PR310** and Synthetic texture
			weber.rend PUC		
Keyed surface	N/A	N/A	**weber.rend PUC** or **weber.rend TUC**		

Uses

- As the second coat, or top coat in thick render protected external wall insulation systems, such as **weber.therm XL**, and in multicoat render systems (see table below)
- **weber.rend PTC** can be float finished to take synthetic finishes or dry dashed using **Weber** decorative aggregates

When used in strict accordance with manufacturer's instructions and within an appropriate system, **Weber** renders will have a minimum life of 10 years.

Constraints

The quality of application of this material depends on suitable operative skills and product familiarity.

Restrictions on weather conditions during application and curing must be respected.

Sound trade practices and printed instructions must be followed.

Good access and appropriate protection must be provided.

Mixing

Mix **weber.rend PTC** mortar by adding clean water only to achieve workability. This mortar can be made up in any batch size desired with little wastage because it is pre-mixed dry. Add no other material unless directed.

To ensure colour consistency, the materials required for complete and adjoining panels should be of the same batch number or be thoroughly mixed together before use.

Application

Wet down scratched undercoat surface with water spray, as required, to control suction. Apply to undercoat 6 – 8 mm thick in accordance with BS 5262 and finish

- with selected dry-dash
- smooth using float and sponge, followed by primer and synthetic finish.

Good practice

Do not apply:

- If frost is forecast within 24 hours of use
- In damp/wet conditions
- In temperatures below 5°C or above 30°C
- On elevations in direct sunlight or where the substrate is hot

Colours

weber.rend PTC is available in both unpigmented and coloured forms. There is a range of 11 colours available as dashing renders including white. Specifiers should consult the Colour Chart on page 28 and, whenever possible, obtain samples prior to specification.

Storage and shelf life

When stored unopened in a dry place at temperatures above 5°C, shelf life is 12 months from date of manufacture.

Health and safety

Contains cement.

For full information on Health and Safety, please see inside back cover.

weber.rend PTC

A polymer-modified, dry powder cement-based mortar for use as a render top coat

Features and benefits

- Exceptional and consistent quality
- Practical benefits of smooth application, speed, economy and shelf-life
- Technical support from a Quality Assured company
- Excellent solid colours, consistent from batch to batch
- Established track record in varying climatic conditions
- Conforms to BS 5262
- Slower curing time in hot weather
- Forms part of a number of approved insulation systems

NSAI BBA

Packaging

weber.rend PTC is packaged in 3-ply 25 kg bags with batch code, description and colour on the side.

Coverage

Top Coat type	Nominal thickness	Coverage
Floated	6 mm	10 kg/m²
To receive Dry-dash	6 mm	10 kg/m²

weber.rend PUC

A polymer-modified dry powder cement-based mortar for use as a render undercoat

About this product

weber.rend PUC is a polymer-modified dry powder cement-based mortar.

Technical data

1 As a high performance undercoat in 2-coat work onto masonry backgrounds
2 As part of an external wall system – weber.therm XL

Insulation Board	Reinforcement option	Fixing	1st Coat	2nd Coat	Finish
Coated EPS PHS	Ferritic stainless lath	Mechanical	**weber.rend PUC**	**weber.rend TTC** or **weber.rend PTC** or **weber.rend TTS** or **weber.rend PTS**	Dry-dash, or **weber PR310** and Synthetic finish Scrape texture

3 As part of a multi-coat render system

Preparation option	Reinforcement option	Fixing	1st Coat	2nd Coat	Finish
Membrane or **weber.rend stipple** or Keyed surface	Ferritic stainless lath N/A	Mechanical N/A	**weber.rend PUC**	**weber.rend TTC** or **weber.rend PTC** or **weber.rend TTS** or **weber.rend PTS**	Dry-dash, or **weber PR310** and Synthetic texture Scrape texture

Uses

- As the first coat in render protected external wall insulation systems, such as **weber.therm XL**
- As an undercoat in multi-coat render systems

weber.rend PUC should be scratched horizontally to provide a key for subsequent coats.

When used in strict accordance with manufacturer's instructions and within an appropriate system, **Weber** renders will have a minimum life of 10 years.

Constraints

The quality of application of this material depends on suitable operative skills and product familiarity.

Restrictions on weather conditions during application and curing must be respected.

Sound trade practices and printed instructions must be followed.

Good access and appropriate protection must be provided.

Mixing

Mix **weber.rend PUC** mortar by adding clean water only to achieve workability. This mortar can be made up in any batch size desired with little wastage because it is pre-mixed dry. Add no other materials unless directed.

Application

Apply to prepared surface 10 – 12 mm thick in accordance with BS 5262 and thoroughly scratch horizontally to produce key.

Allow to dry and shrink completely before subsequent applications. This will depend on weather conditions, but normally requires a minimum of 36 hours.

Good practice

Do not apply:
- If frost is forecast within 24 hours of use
- In damp/wet conditions
- In temperatures below 5°C or above 30°C
- On elevations in direct sunlight or where the substrate is hot

Storage and shelf life

When stored unopened in a dry place at temperatures above 5°C, shelf life is 12 months from date of manufacture.

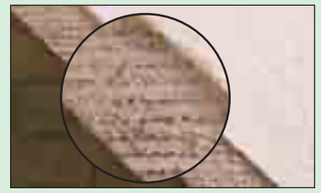
Health and safety

Contains cement.

For full information on Health and Safety, please see inside back cover.

weber.rend PUC

A polymer-modified dry powder cement-based mortar for use as a render undercoat



Features and benefits

- Exceptional and consistent quality
- Bond strength improved
- Improved water resistance
- Practical benefits of smooth application, speed, economy and shelf-life
- Slower curing time in hot weather
- Technical support from a Quality Assured company
- Established track record in varying climatic conditions
- Conforms to BS 5262
- Forms part of a number of approved insulation systems

NSAI BBA

Packaging

weber.rend PUC is packaged in 3-ply 25 kg bags with batch code and description on the side.

Coverage

Undercoat type	Nominal thickness	Coverage
1st Coat	10 mm	18 kg/m²

CI/SfB (41) Pq4
Uniclass L5171 April 2010

weber.rend TTC

Factory batched, dry powder, cement-based mortar for use as a render top coat

About this product

weber.rend TTC is a factory batched, dry powder, cement-based mortar. This product forms part of a number of approved insulation systems.

Technical data

1 As an economical top coat in 2-coat work onto masonry backgrounds, suitable for a variety of finishes
2 As part of an external wall system – weber.therm XL

Insulation Board	Reinforcement option	Fixing	1st Coat	2nd Coat	Finish
MFS	Ferritic stainless lath	Mechanical	**weber.rend MFU**	**weber.rend TTC**	Dry-dash or **weber PR310** and **weber.plast TF** or **weber.plast DF** or **weber.sil TF** or **weber.sil P**
PHS			**weber.rend PUC**		
Coated EPS			**weber.rend PUC** or **weber.rend TUC**		

3 As part of a multi-coat render system

Preparation	Reinforcement option	Fixing option	1st Coat	2nd Coat	Finish
Membrane or **weber.rend stipple** or Keyed surface	Ferritic stainless lath	Mechanical	**weber.rend PUC**	**weber.rend TTC**	Dry-dash or **weber PR310** and **weber.plast TF** or **weber.plast DF** or **weber.sil TF** or **weber.sil P**
	N/A	N/A	**weber.rend PUC** or **weber.rend TUC**		

Uses

- As the second coat, or top coat in thick render protected external wall insulation systems, such as **weber.therm XL**, and in multicoat render systems (see table below)
- **weber.rend TTC** can be float finished to take synthetic finishes or dry dashed using **Weber** decorative aggregates.

When used in strict accordance with manufacturer's instructions and within an appropriate system, **Weber** renders will have a minimum life of 10 years.

Constraints

The quality of application of this material depends on suitable operative skills and product familiarity.

Restrictions on weather conditions during application and curing must be respected.

Sound trade practices and printed instructions must be followed.

Good access and appropriate protection must be provided.

Mixing

Mix **weber.rend TTC** mortar by adding clean water only to achieve workability. This mortar can be made up in any batch size desired with little wastage because it is pre-mixed dry. Add no other material unless directed.

To ensure colour consistency, the materials required for complete and adjoining panels should be of the same batch number or be thoroughly mixed together before use.

Application

Wet down scratched undercoat surface with water spray, as required, to control suction.

Apply to undercoat 6 – 8 mm thick in accordance with BS 5262 and finish

- with selected dry-dash
- smooth using float and sponge, followed by primer and synthetic finish

Good practice

Do not apply:
- If frost is forecast within 24 hours of use
- In damp/wet conditions
- In temperatures below 5°C or above 30°C
- On elevations in direct sunlight or where the substrate is hot

Colours

weber.rend TTC is available in both grey and coloured forms. There is a range of 11 colours available as dashing renders including white. Specifiers should consult the Colour Chart on page 28 and, whenever possible, obtain samples prior to specification.

Storage and shelf life

When stored unopened in a dry place at temperatures above 5°C, shelf life is 12 months from date of manufacture.

Health and safety

Contains cement.

For full information on Health and Safety, please see inside back cover.

weber.rend TTC

Factory batched, dry powder, cement-based mortar for use as a render top coat

Features and benefits

- Exceptional and consistent quality
- Practical benefits of smooth application, speed, economy and shelf-life
- Excellent solid colours, consistent from batch to batch
- Established track record in varying climatic conditions
- Conforms to BS 5262
- Forms part of a number of approved insulation systems

Packaging

weber.rend TTC is packaged in 3-ply 25kg bags with batch code, description and colour on the side.

Coverage

Top Coat type	Nominal thickness	Coverage
Floated	6 mm	10 kg/m²
To receive Dry-dash	6 mm	10 kg/m²

weber.rend TUC

Factory batched, dry powder, cement-based mortar for use as a render undercoat

About this product

weber.rend TUC is a factory batched, dry powder, cement-based mortar.

This product forms part of a number of approved insulation systems.

Technical data

1 As an economical and versatile undercoat in 2-coat work onto masonry surfaces
2 As part of an external wall system – weber.therm XL

Insulation Board	Reinforcement option	Fixing	1st Coat	2nd Coat	Finish
Coated EPS	Ferritic stainless lath	Mechanical	**weber.rend TUC**	**weber.rend TTC** or **weber.rend PTC**	Dry-dash **weber PR310** and Synthetic finish
				or **weber.rend TTS** or **weber.rend PTS**	Scrape texture

3 As part of a multi-coat render system

Preparation Option	Reinforcement option	Fixing	1st Coat	2nd Coat	Finish
weber.rend stipple or Keyed surface	Ferritic stainless lath	Mechanical	**weber.rend TUC**	**weber.rend TTC** or **weber.rend PTC**	Dry-dash, or **weber PR310** and Synthetic texture
				or **weber.rend TTS** or **weber.rend PTS**	Scrape texture

Uses

- As the first coat in multi-coat render systems, or as the undercoat in render protected external wall insulation systems, such as **weber.therm XL**

weber.rend TUC should be scratched horizontally to provide a key for subsequent coats.

When used in strict accordance with manufacturer's instructions and within an appropriate system, **Weber** renders will have a minimum life of 10 years.

Constraints

The quality of application of this material depends on suitable operative skills and product familiarity.

Restrictions on weather conditions during application and curing must be respected.

Sound trade practices and printed instructions must be followed.

Good access and appropriate protection must be provided.

Mixing

Mix **weber.rend TUC** mortar by adding clean water only to achieve workability. This mortar can be made up in any batch size desired with little wastage because it is pre-mixed dry. Add no other materials unless directed.

Application

Apply to prepared surface 10 – 12 mm thick in accordance with BS 5262 and thoroughly scratch horizontally to produce key.

Allow to dry and shrink completely before subsequent applications. This will depend on weather conditions, but normally requires a minimum of 36 hours.

Good practice

Do not apply:
- If frost is forecast within 24 hours of use
- In damp/wet conditions
- In temperatures below 5°C or above 30°C
- On elevations in direct sunlight or where the substrate is hot

Storage and shelf life

When stored unopened in a dry place at temperatures above 5°C, shelf life is 12 months from date of manufacture.

Health and safety

Contains cement.

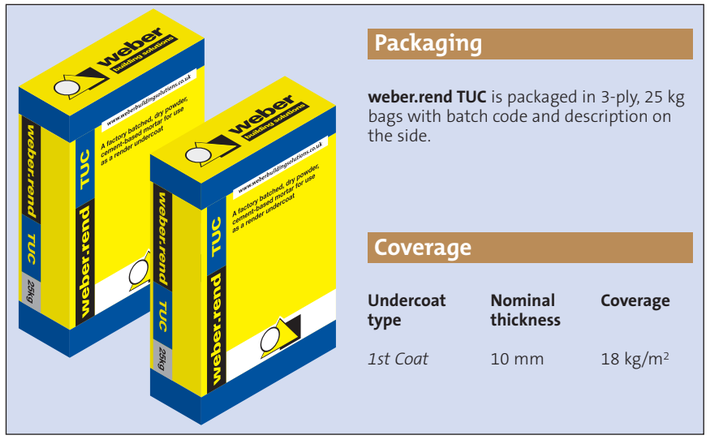
For full information on Health and Safety, please see inside back cover.

weber.rend TUC

Factory batched, dry powder, cement-based mortar for use as a render undercoat

Features and benefits

- Exceptional and consistent quality
- Practical benefits of smooth application, speed, economy and shelf-life
- Established track record in varying climatic conditions
- Conforms to BS 5262
- Forms part of a number of approved insulation systems



Packaging

weber.rend TUC is packaged in 3-ply, 25 kg bags with batch code and description on the side.

Coverage

Undercoat type	Nominal thickness	Coverage
1st Coat	10 mm	18 kg/m²

alpine

White travertine finish

About this product

alpine finish is a white cement based mix containing aggregates that provides a decorative travertine finish.

Technical data

Suitable specification clauses for dealing successfully with most types of substrates are available from our Technical Services Department.

BS 5262, *Code of practice for external renderings*, and BS 8000-10, *Workmanship on building sites. Code of practice for plastering and rendering* should be followed at all times.

Fire resistance
alpine is non-combustible and would be expected to meet a Class 0 fire rating when applied to non-combustible substrates.

Uses

- Enhances the protection of a traditional rendering system
- Suitable for external or internal use
- Ideal for application onto primed **weber.rend OCR** or other cement based render

Constraints
Do not apply to gypsum plaster or previously painted surfaces.

10

Preparation

All surfaces must be sound, clean, dry and free from any material which may impair adhesion, and lightly floated to provide key. Scaffolding must be independently tied to allow uninterrupted application. Any faults in the structure, particularly those which may lead to moisture penetration, must be rectified.

To avoid dampness and discolouration rendering should be avoided below DPC or within 150 mm of ground level.
All surfaces must be suction free to ease application and texturing as well as accentuating the whiteness of the material. For this purpose, prime the surface with either white **weber PR310** or a dilution of 1 part **weber.tec latex**.

alpine *must be applied before the priming coat has fully dried.*

Mask around the areas where material is to be applied. Masking tape must be removed before the material has dried out.

Mixing

Mix with clean water at a rate of approximately 6 litres per 25 kg bag, using a clean tumble mixer or suitable drill with whisk attachment.

Mix for 3 – 4 minutes to give a workable consistency. Allow to stand for 10 – 15 minutes before re-mixing for maximum workability.

Mix only sufficient material for use within the hour.

To ensure colour consistency, the materials required for complete and adjoining panels should be of the same batch number or be thoroughly mixed together before use.

Application

Trowel apply **alpine** as a tight coat while the primer is still tacky. When being properly spread, the material tends to 'chatter' under the trowel.

To obtain the travertine texture, draw a wood float across the face of the work with the minimum of pressure, in sharp horizontal or vertical strokes in one direction only. It is essential that this is carried out before the material stiffens on the wall.

As a contrast, the reveals to doors and windows may be 'dragged' vertically when the main areas are textured horizontally.

To obtain the circular texture, the material should be finished with a light circular action.

To prevent joints from showing, application should be continuous up to angles or features.

To maintain the texture at internal angles or close to soffits, the edge of the float should be pulled lightly in short strokes away from the angle.

Curing with a fine spray of clean water may be necessary during rapid drying conditions. In hot climates curing is essential for 3 – 5 days after application.

Protection
Protect from unfavourable weather conditions during application and early curing.

Good practice
Do not apply:
- If frost is forecast within 24 hours of use
- In damp/wet conditions
- In temperatures below 5°C or above 30°C
- On elevations in direct sunlight or where the substrate is hot

Cleaning

Clean equipment by washing immediately after use with clean water. Do not dispose of waste material into drainage systems.

alpine

White travertine finish

Features and benefits

- Excellent weather resistance and durability
- Low maintenance white finish
- May be over-painted when dry with a suitable masonry paint if required
- Easy and quick to apply
- Simple to finish

Storage and shelf life

When stored unopened in a dry place at temperatures above 5°C, shelf life is 12 months from date of manufacture.

Health and safety

Contains cement.

For full information on Health and Safety, please see inside back cover.

Packaging

alpine is supplied in 25 kg bags.

Coverage

alpine: For each mm of thickness, you will require approximately 1.52 kg per m². When applied at the correct thickness of 3 mm, coverage is approximately 5 – 6 m² per 25 kg bag.

Priming coat: Approximately 4 m² per litre of **white weber PR310** or 15 – 20 m² per litre of **weber.tec latex** after dilution 1:3 with water.

Note: These estimates take no account of wastage and may vary according to the type of surface involved.

10

cullamix tyrolean

Tyrolean and rubbed-tyrolean finish

About this product

cullamix tyrolean is a white or coloured cement based mix, which provides a decorative and protective rendering. It is applied by hand or power operated machines and provides an open honeycomb textured (Tyrolean) finish.

Technical data

cullamix tyrolean is a cementitious finish; BS 5262 *Code of practice for external renderings*, and BS 8000-10 *Workmanship on building sites. Code of practice for plastering and rendering*, should be followed at all times.

Suitable specification clauses for dealing successfully with most types of substrates are available from our Technical Services Department.

Fire resistance
cullamix tyrolean is non-combustible and would be expected to meet a Class 0 fire rating when applied to non-combustible substrates.

Uses

- Suitable for internal or external use
- Suitable for most environments - coastal, town suburban and rural
- Suitable substrates:
  Externally
  weber.rend OCR;
  traditional cement rendering;
  fair faced concrete;
  exterior grade composition and cement boards;

This list is not exhaustive and other smooth, flat surfaces may be considered.
In addition, brickwork and blockwork may be coated where the joints will be accepted as a feature.
The substrate must show some suction to achieve the **cullamix tyrolean** texture.

Constraints
Do not apply to gypsum plaster or previously painted surfaces.

Preparation

All surfaces must be sound, clean, dry and free from any material which may impair adhesion. Rendering should be of good alignment, finished with a wood or plastic float and unkeyed.

Scaffolding must be independently tied to allow for an uninterrupted application.
Any faults in the structure, particularly those which may lead to moisture penetration must be rectified.

To avoid dampness and discolouration external finishes should be avoided below DPC or within 150 mm of ground level.

Mask around the areas where material is to be applied. Masking tape must be removed before the material has dried.

Expansion joints should be included as required by the substrate and carried through all applied materials.

Mixing

Mix 5 measures of **cullamix tyrolean** with 2 measures of clean water in a suitable container. Mix for 3 – 4 minutes to a thick, pourable consistency.

Mix only sufficient material for use within the hour. Stir frequently to avoid settlement.

To ensure colour consistency, the materials required for complete and adjoining panels should be of the same batch number or be thoroughly mixed together before use.

Application

Spray equipment
cullamix tyrolean is applied using a hand-operated machine available from suppliers of **Weber** products. Alternatively machines may be hired from local hire shops.

cullamix tyrolean may also be applied by an open hopper spray machine. Finer textures are more typical of applications using this type of equipment.

The tyrolean finish is obtained by building up several passes to a finished thickness of 4 – 6 mm. Care should be taken to leave sufficient time between passes to avoid merging and patchiness in the texture. The direction of application should be varied with successive passes.

Splashes and overspray should be removed immediately with clean water.

For a rubbed tyrolean finish, the application of **cullamix tyrolean** as above must be of the highest standard. When this is hard, but not fully cured, remove the peaks by rubbing in circular action with a carborundum stone. Brush out any dust on completion.

Curing
Curing with a fine spray of clean water may be necessary during rapid drying conditions. In hot climates curing as above is essential for 3 – 5 days after application.

Protection
Protect from unfavourable weather conditions during application and curing.

Note: As with all cement-based products, **cullamix tyrolean** may be subject to lime bloom. The likelihood of lime bloom occurring is increased when applied in adverse weather conditions or if the background is damp.

Good practice
Do not apply:
- If frost is forecast within 24 hours of use
- In damp/wet conditions
- In temperatures below 5°C or above 30°C
- On elevations in direct sunlight or where the substrate is hot

Cleaning

All equipment must be washed with clean water immediately after use. Waste material should not be emptied into drainage systems.

Colours

cullamix tyrolean is available in a range of 6 Millennium Colours. Specifiers should consult the Colour Chart on page 31 and, whenever possible, obtain samples prior to specification.

Note: As with all batch-made materials an exact colour match cannot always be achieved.

cullamix tyrolean

Tyrolean and rubbed-tyrolean finish

Features and benefits

- Pre-blended – requires only the addition of clean water on site
- Durable and weather resistant
- Through coloured – requires minimal maintenance and no subsequent painting
- Suitable for most environments: coastal, suburban and rural
- Can be used as an attractive, sound-absorbing textured finish on internal render

Storage and shelf life

When stored unopened in a dry place at temperatures above 5°C, shelf life is 12 months from date of manufacture.

Health and safety

Contains cement.

For full information on Health and Safety, please see inside back cover.

Packaging

cullamix tyrolean is supplied in 25 kg bags.

Coverage

For each mm of thickness, you will require approximately 1 kg/m².

When applied at a thickness of 4 – 6 mm, coverage is approximately 5 m² per 25 kg bag.

Note: These estimates take no account of wastage and will vary according to the type of surface involved. Coverage is dependent on the texture applied and suction of the backing surface involved.

CI/SfB (41) Vw9
Uniclass L519 April 2006

weber CL150

Features and benefits

- Fast acting
- Simple application
- Established track record in varying climatic conditions
- Untinted versions show no residue after treatment
- Ready for use
- 25-litre tinted version for easy identification of coated areas

Masonry biocide

About this product

weber CL150 is a water-based masonry wash containing carefully selected biocides effective against a broad range of bacterial, fungal, algal, yeast and mould species. It is used as a masonry cleaner and steriliser to kill green, black and other organic growths on walls and other masonry, particularly prior to the application of decorative finishes.

Note: The 25 litre drums of **weber CL150** can be supplied tinted for ease of identification of treated areas. If **weber CL150** is being used to treat finished surfaces, ensure that unpigmented **weber CL150** is specified.

Technical data

Water based solution of chemical biocides approved by Health and Safety Executive and by Dept. of Agriculture for Northern Ireland.

Cleaning

All equipment must be cleaned immediately after use with water. Waste material should not be emptied into drainage systems.

Health and safety

Contains coco alkyl dimethyl benzyl ammonium chloride.

For full information on Health and Safety, please see inside back cover.

Packaging

weber CL150 is supplied ready for use in 25 litre bottles.
A tinted option is available.

Coverage

Coverage is approximately 10 m²/litre.

This will vary considerably depending on the suction of the substrate and method of application.

Uses

- Can be used on most interior and exterior surfaces, including brickwork, blockwork, concrete, stone, cement based board, gypsum plaster, timber and previously decorated surfaces
- Suitable for use in the preparation of surfaces where the **Weber** range of renders and decorative finishes are to be applied

Preparation

Organic growths may indicate consistently damp conditions. Sources of moisture should be identified and rectified to prevent reoccurrence. Condensation, rising damp, faulty plumbing or guttering, etc. should be considered as possible sources.

Application

As soon as access is available, drench apply **weber CL150** solution onto the wall surfaces ensuring they have already been tested for soundness.

Where existing bossed render is being removed as part of the preparation, **weber CL150** solution should be applied to the affected areas after the defective render has been removed.

weber CL150 is ready for use.

When treating large areas, **weber CL150** is best applied using a pressurised knapsack or garden sprayer but can be brush applied if areas are limited. **weber CL150** must be left for a minimum of 48 hours to take effect and kill the growing moss and unseen spores. Dead growth should be removed by brushing with a stiff bristle or wire brush or alternatively by power washing.

Wear protective clothing and safety equipment.

Do not apply **weber CL150** in rain or in temperatures below 5°C or if exposure to these conditions is likely within 24 hours of application.

Storage and shelf life

Store in cool, dry conditions at a temperature greater than 5°C. Protect from sunlight and sources of direct heat. The container should be kept sealed when not in use.
25 litre plastic drums - stack no more than 2 high.
Shelf life of product stored in correct conditions is 12 months.

CI/SfB (41) Vv1
Uniclass L517 July 2008

weber SL410

Uses

- As a sealer for porous or friable surfaces prior to the application of **santane** or **weber.tene** finishes

Constraints
Do not use:
- On horizontal or sloping surfaces exposed to wet conditions
- Below DPC
- On hot or frozen/thawing surfaces
- On a substrate that is friable throughout its full thickness

Do not apply during adverse weather conditions or on surfaces exposed to drying winds.

Preparation

Substrates must be clean, basically sound, dry and free from dust or other contamination.

Application

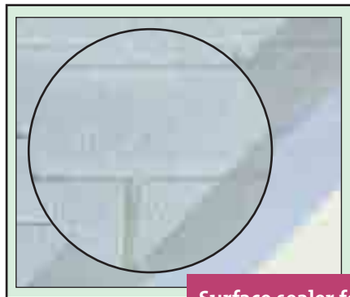
weber SL410 is supplied ready for use – do not add water, but stir thoroughly before use.

Apply one coat of **weber SL410** using a wool roller or brush.

Allow at least 24 hours to dry before applying the decorative coating.

Storage and shelf life

Store in dry conditions between 5°C and 30°C. Shelf life of unopened can in correct storage conditions is a least 12 months. Protect from frost.



Features and benefits

- Highly penetrating formulation
- Binds surfaces that would otherwise be unsuitable to receive coatings

Surface sealer for porous/friable surfaces

About this product

weber SL410 is a sealer to stabilise substrates that may have a friable and porous surface prior to the application of synthetic decorative finishes.

Technical data

Composition	White spirit dispersed polyurethane resin
Colour	Clear
Density	0.8

EU VOC regulations 2008

EU limit for weber SL410 (cat A/h): 750 g/l (2007)/750 g/l (2010).
weber SL410 contains <675 g/l VOC.

Health and safety

Contains low boiling point naptha (white spirit).

For full information refer to the Materials Safety Data Sheet for this product, available from Weber Technical Services.

Packaging

weber SL410 is supplied in 15 litre metal cans.

Coverage

Coverage is approximately 150 to 350 ml/m².

CI/SfB (41) Pq4
Uniclass L5171 April 2006

weber.rend EXF

Features and benefits

- Speed of application, 50 – 70 mm build-up, generally in one pass with no slumping
- Levels/removes surface irregularities as part of a **Weber** multi-coat render or EWI system
- Exceptional and consistent quality
- Practical benefits of smooth application, speed, economy and shelf life
- Established track record in varying climatic conditions

Polymer modified lightweight dubbing-out mortar

About this product

weber.rend EXF is a non-structural, polymer-modified, low-density, cement-based mortar, specifically designed for dubbing out large voids or irregularities in masonry substrates, generally in a one coat application.

Technical data

weber.rend EXF is designed solely for dubbing out existing masonry with large voids or deep irregularities, prior to the application of **weber.rend IF** or a **Weber** external wall insulation system.

Whichever system is specified, all mechanical fixings must pass through the **weber.rend EXF** and locate into the existing masonry substrate.

Storage and shelf life

When stored unopened in a dry place at temperatures above 5°C, shelf life is 12 months from date of manufacture.

Health and safety

Contains cement.

For full information on Health and Safety, please see inside back cover.

Packaging

weber.rend EXF is packed in 10 kg paper sacks with batch code and description on the side.

Coverage

Nominal thickness	Coverage
1 mm	Approx. 0.75 kg /m²

Uses

- As a lightweight dubbing-out coat prior to the application of **Weber** insulated render systems and **weber.rend IF**

Preparation

All surfaces must be sound, clean, dry and free of any material which may impair adhesion.

Treat all areas of organic growth with **weber CL150** as directed on the data sheet.

On areas of smooth concrete, it may be necessary to create a mechanical key by using **weber.rend stipple** – refer to data sheet.

Scaffolding must be independently tied to allow for an uninterrupted application. Any faults in the structure, particularly those which may lead to moisture penetration must be rectified.

Mixing

Mix **weber.rend EXF** polymer modified mortar by adding clean water only to achieve a workable consistency.

This mortar can be made up in any batch size desired with little wastage because it is pre-mixed dry.

Add no other materials unless directed.

Application

Apply to the substrate voids in one or two passes.

Allow to dry. This will depend on weather conditions, but normally requires a minimum of 36 hours.

Note: whichever specified system is to follow, mechanical fixings must always be long enough to pass through the **weber.rend EXF** into the existing substrate.

Good practice

Do not apply:

- If frost is forecast within 24 hours of use
- In damp/wet conditions
- In temperatures below 5°C or above 30°C
- On elevations in direct sunlight or where the substrate is hot

CI/SfB (41) Vv8
Uniclass L517 April 2006

weber PR340

Uses

- Used to equalise or reduce excessive suction
- Will assist in ensuring that the subsequent finishes will have a minimum life of 10 years

Constraints

The quality of application of this material depends on suitable operative skills and product familiarity.

Restrictions on weather conditions during application and curing must be respected.

Sound trade practices and printed instructions must be followed.

Good access and appropriate protection must be provided.

Application

Stir well in buckets prior to applying to the work area.

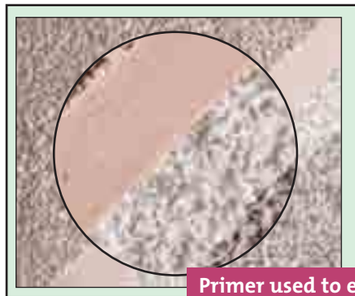
Apply to the wall surface using brush, spray or roller, ensuring complete coverage of all areas before over coating.

Where substrate suction control is required, **weber PR340** can be used as a wet-on-wet application, with **weber.rend fibrelite**. The primer must be allowed to migrate into the prepared background before applying the **weber.rend fibrelite** – this will take a minimum of 20 minutes. The primer should have turned tacky with no visible surface film. The curing period will be dependent on suction of the substrate and prevailing weather conditions at the time of application.

Where wet-on-wet procedure is not being adopted **weber PR340** should be applied at least 24 hours prior to application of **weber.rend fibrelite**. Once again, the drying period will vary according to weather conditions.

Spillages stain and are difficult to remove so:

- protect vulnerable areas thoroughly
- wear protective clothing.



Features and benefits

- Low viscosity
- Factory batched for consistency
- Practical benefits of ease of application, speed, economy and long shelf-life
- Established track record in varying climatic conditions

Primer used to equalise or reduce excessive suction when using weber.rend fibrelite

About this product

weber PR340 is an unpigmented liquid primer.

Technical data

weber PR340 is an effective method of preparing substrates by equalising or reducing excessive suction prior to the application of **weber.rend fibrelite**.

Storage and shelf life

When stored airtight in a dry place at temperatures above 5°C and protected from frost, shelf life is 12 months from date of manufacture.

Do not over-stack.

Health and safety

Essentially non hazardous.

For full information on Health and Safety, please see inside back cover.

Packaging

weber PR340 is packaged in 25 litre plastic containers with batch code and description on the side.

Coverage

Use	Nominal thickness	Coverage
Primer	N/A	0.25 litre/m²

Note: This estimate takes no account of wastage and will vary according to the type of substrate. Allowance must be made for extra material required on high suction substrates.

weber PR310

Features and benefits

- Low viscosity
- Factory batched for consistency
- Practical benefits of ease of application, speed, economy and long shelf-life
- Established track record in varying climatic conditions
- Forms part of a number of approved insulation systems

Pigmented liquid paint primer

About this product

weber PR310 is a general purpose pigmented liquid paint primer.

Technical data

weber PR310 is an effective method of preparing substrates by reducing suction and providing a colour wash prior to the application of many **Weber** finishes.
This product forms part of a number of approved insulation systems.

External wall insulation systems – weber.therm XL and weber.therm XM

Insulation Board	Reinforcement	Fixing	1st Coat	2nd Coat	Finish
weber.therm XL MFS, EPS or PHS	Ferritic stainless	Mechanical	**weber.rend MFU, PUC** or **TUC**	**weber.rend TTC and PTC**	**weber PR310** and Textured finish
weber.therm XM MFS, EPS or PHS	Meshcloth	**weber.rend LAC** or Mechanical	**weber.rend LAC**	None, or **weber.rend PTC**	**weber PR310** and Textured finish

Multi-coat render systems – weber.rend MT, OCR, IF, stipple, lath and render

System	Substrate	Reinforcement	1st Coat	2nd Coat	Finish
weber.rend MT	Calcium silicate or masonry	Meshcloth	**weber.rend POC**	**weber.rend LAC**	**weber PR310** and Textured finish
weber.rend OCR	Masonry		**weber.rend OCR**		**weber PR310** and Textured finish
weber.rend IF	Sheathing boards or masonry	Breather membrane & selected metal lath	**weber.rend PUC**	**weber.rend PTC** or **TTC**	**weber PR310** and Textured finish
Stipple, Lath and render	Masonry	Selected metal lath	**weber.rend PUC**	**weber.rend PTC** or **TTC**	**weber PR310** and Textured finish

Storage and shelf life

Wet pre-mixed materials must be stored frost-free and protected from direct sunlight and extreme heat.

To prevent ingress of air, buckets should be stacked no more than 2 high, and where a central support is used, to a maximum height of 4.

When stored under these conditions, the shelf life of the product is 12 months from the date of manufacture.

Packaging and coverage

weber PR310 is packaged in 10 litre plastic containers with batch code, description and colour on the side.

Use	Thickness	Coverage
Primer	N/A	0.25 litre/m²

Note: This estimate takes no account of wastage and will vary according to the type of substrate. Allowance must be made for extra material required on high suction substrates.

Uses

- For preparing substrates prior to the application of many **Weber** finishes
- Used to reduce suction and also to colour wash the substrate to ensure that the finish is not marred by 'grinning' from the preceding layer.
- Will assist in ensuring that the subsequent finishes will have a minimum life of 10 years.

Constraints

Do not apply:
- During very humid weather conditions or if rain is forecast
- During extreme hot weather or when exposed to strong winds
- On damp or frozen / thawing surfaces
- On horizontal or sloping surfaces exposed to wet conditions

Preparation

Substrates must be clean, sound, dry and free of dust or other contamination

Application

Check colour of material and stir well in buckets prior to applying to the work area. **weber PR310** is ready to use – do not add water.

Apply to the wall surface using brush, spray or roller. Ensure complete coverage of all areas before over coating, to prevent 'grinning through' of the background.

Apply **weber PR310** at least 24 hours prior to application of the synthetic finish. Allow to dry. The drying period will vary according to weather conditions.

Note: If the selected finish is **alpine**, refer to the Data Sheet for specific information regarding the application of the primer.

Spillages stain and are difficult to remove so:
- protect vulnerable areas thoroughly
- wear protective clothing
- clean tools with water immediately after use

Good practice

Do not apply:
- If frost is forecast within 24 hours of use
- In damp/wet conditions
- In temperatures below 5°C or above 30°C
- On elevations in direct sunlight or where the substrate is hot.

Health and safety

Essentially non-hazardous.

For full information on Health and Safety, please see inside back cover.

weber arêtes chrono monocouche

Uses

- May be used to assist in the rapid formation of traditional angles
- Ideal for use when the rapid fixing angle beads, stop beads or bellcast features with Monocouche is required
- Can be used to plug holes in stonework, or fill the ends of concrete blocks and bricks

Constraints

weber arêtes chrono monocouche is not suitable for the acceleration of the finished elevation due to the rapid nature of set.

Do not use in conjunction with render pumps.

Preparation

The instructions regarding the application of Monocouche renders still apply with respect to substrate preparation and appropriate good practice.

The substrate must not be frozen and material should not be applied if there is a risk of frost within 24 hours.

The minimum application temperature is + 5°C for all Monocouche renders.

Fill a standard bucket with Monocouche powder (approx. 11 litres of powder). Measure out enough water to achieve a wet Monocouche mix (typically 3.5 to 4 litres of water for **weber.pral M**) into an appropriate mixing trough in preparation for mixing the powder..

Mixing

weber arêtes chrono monocouche must be added to the wet mix of Monocouche to ensure the maximum working time is achieved. Do not blend neat **weber arêtes chrono monocouche** with Monocouche powder.

It is recommended that the prepared powder and water components are mixed together mechanically with a drill and whisk to achieve a homogenous wet paste mixture.

Open a 2 kg sachet of **weber arêtes chrono monocouche** and pour entire contents into the Monocouche and mix rapidly to achieve workable consistency.
Do not add additional sachets of **weber arêtes chrono monocouche** as working time will be seriously reduced.

Once mixed do not attempt to remix.

Features and benefits

- Temporary battens can be removed within 1.5 hours when forming traditional angles
- **weber arêtes chrono** is supplied in 2 kg sachets which is enough to treat 15 – 16 kg of Monocouche
- Powder additive has no effect on the appearance of the finished product

Powder additive accelerator for Monocouche renders

About this product

weber arêtes chrono monocouche is a powder additive for Monocouche renders which allows the rapid formation of traditional angles against temporary battens. The additive is also useful for the rapid fixing of standard bead profiles using mixed Monocouche.

Technical data

Physical properties
White powder component. A 2 kg sachet of **weber arêtes chrono monocouche** should be used with approximately 16 kg of mixed Monocouche.

Mechanical properties

pH	12.5
Density	1.2

Application

Apply product as required.

For the formation of traditional edges ensure that once the temporary formwork is removed (typically 1.5 hours) scrape the exposed edges to ensure a good future bond with the main application of Monocouche.

Do not apply outside the temperature range of +5°C to +35°C.

It is important that the main application of Monocouche follows the preparation of traditional edges in reasonable time to prevent contamination of the exposed faces.

Storage and shelf life

When stored airtight in a dry place at temperatures between 5°C and 30°C, shelf life is 6 months from date of manufacture.

Protect from frost and heat.

Health and safety

Essentially non hazardous.

For full information on Health and Safety, please see inside back cover.

Packaging

weber arêtes chrono monocouche is supplied in a 20 kg plastic bucket containing 10 x 2 kg sachets of powder. A pallet of **weber arêtes chrono monocouche** consists of 9 buckets with a total weight of 180 kg.

Coverage

1 sachet of **weber arêtes chrono monocouche** is estimated to treat enough Monocouche mix to apply approximately 15 linear metres of traditional edges.

CI/SfB (41) Pu2
Uniclass L517 November 2010

weber accelerateur monocouche

Features and benefits

- As a liquid component it can directly replace a proportion of the product gauging water
- If added at the correct dose it will achieve 20°C scrape times when working at 5°C.
- Colourless liquid has no effect on the appearance of the finished product

Liquid additive accelerator for Monocouche renders

About this product

weber accelerateur monocouche is a liquid setting accelerator solution for Monocouche through-coloured renders to speed up the time to scrape during colder application periods.

Technical data

Physical properties
Colourless liquid component.

Mechanical properties
0.1 litres of additive is enough to treat 1 x 25 kg bag of Monocouche render. For a 6 bag render pump mix this equates to 0.6 litres of additive. Do not add more than 1.25 litres per 6 bag mix.

pH	7
Density	1.45

Finishing

weber accelerateur monocouche solution will accelerate the initial set time such that, at 5°C working temperature, the scrape time of a Monocouche product will be the same as that during the summer months (20°C).

Please note that the temperature of the mix may be different than that of the ambient temperature due to the water supply/ powder temperature. Due to this fact the setting period is only an given as an indication.

Storage and shelf life

When stored airtight in a dry place at temperatures between 5°C and 30°C, shelf life is 12 months from date of manufacture. Protect from frost and heat.

Health and safety

Contains calcium nitrate tetrahydrate (CAS No. 13477-34-4) and calcium chloride (CAS No. 10043-52-4)
For full information on Health and Safety, please see inside back cover.

Packaging

weber accelerateur monocouche is supplied in 20 litre plastic containers weighing 29 kg each.
A pallet of **weber accelerateur monocouche** consists of 32 containers with a total weight of 928 kg.

Yield

0.1 litres of product per 25 kg bag of Monocouche.

Uses

- May be used to reduce the time of scrape for through-coloured Monocouche renders
- For use at temperatures over 5°C for Monocouche work in the winter
- Ideal for use when hand mixing or using a diesel driven render pump (i.e. with separate mixing and pumping chambers

Constraints
weber accelerateur monocouche is not an antifreeze.
weber accelerateur monocouche is not suitable for warm weather work other than sample areas.

Preparation

The instructions regarding the application of Monocouche renders still apply with respect to cold weather working.

The substrate must not be frozen and material should not be applied if there is a risk of frost within 24 hours.

The minimum application temperature is 5°C for all Monocouche renders.

Replace correct proportion of Monocouche mixing water with the **weber accelerateur monocouche** solution. Dosages are given in the application section.

Mix product in accordance with standard product recommendations using the modified gauging water.

If using an electric continuous mixer pump the feed water connected to the render pump must be modified to the correct dosage using a water butt feed.

Mixing

weber accelerateur monocouche must be added to the gauging water for the Monocouche prior to adding the powder to ensure full dispersion.

The correct dosage per 25 kg bag of Monocouche is 0.1 litres of **weber accelerateur monocouche**. Mix addition thoroughly into gauging water before adding powder. The total modified water mix must not exceed the allowable water content for the product used.

When using a discontinuous mixer pump (such as a Putzmeister P11) the dosage per 6 bag mix is 0.6 litres of **weber accelerateur monocouche** replacing the same proportion of gauging water.

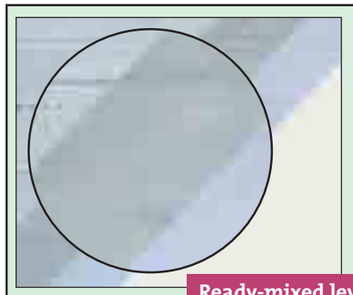
When using a continuous mixer pump such as an M-tec Duomix every 10 litres of gauging water must include 0.2 litres of **weber accelerateur monocouche**.

Application

The usage of the Monocouche product remains the same. Refer to the appropriate product instructions.

CI/SfB (41) Pr4
Uniclass L517 July 2008

renovex P



Features and benefits

- Ready-mixed product
- Water-based
- Disguises joints and irregularities in substrates which would otherwise be visible in decorative coatings
- Certification; Cahier des Charges VERITAS (on mosaics and ceramic tiles) No. 5159 UTN 788100

Ready-mixed levelling coat for external or internal wall surfaces

Uses

- External or internal walls
- Over non-flexible polymer-based coatings
- Existing paint in sound condition (except silicate and polyurethane paints)
- Concrete, sand/cement rendered masonry. Internal: gypsum plaster and fair-faced brick or blockwork
- Mosaics (glass or ceramic) and 5 cm x 5 cm (max.) unglazed ceramic tiles

For other substrates, please contact our Technical Advisory Service.

Constraints
Do not apply:
On horizontal or sloping surfaces exposed to wet conditions
Below DPC level
Onto flexible coatings

Preparation

Surfaces must be clean, sound, dry and well adhered to the background.

On roller applied polymer-based coatings, scrape and flatten the textured surface by suitable means in order to reduce the thickness of application of **renovex P**.

Clean the surface by using a high pressure water jet.

On porous/dusty surfaces, apply one coat of **weber SL410**.

Storage and shelf life

Store in dry conditions between 5°C and 30°C.

Shelf life of material in unopened plastic bucket kept under correct storage conditions is at least 12 months.

Protect from frost.

Do not over-stack.

Health and safety

Essentially non-hazardous.

For further information, see Health and Safety section, starting on page 232.

About this product

renovex P is a ready-mixed levelling treatment for facades prior to the application of decorative coatings such as the **santane** and **weber.tene** coating systems and finishes. It is an acrylic polymer dispersion containing selected aggregates and additives.

Technical data

pH	8
Colour	Off white
Dry density when set	1.85
Adhesion to sand/cement render	> 1 N/mm²

This data represents laboratory tests on hardened **renovex P** and may vary according to the application conditions.

Application

Prior to applying **renovex P**, prime with one coat of **weber PR335** using a wool roller or a brush. Depending on climatic conditions, allow at least 4 hours for the primer to dry out. **renovex P** is ready to use: do not add water.

Apply **renovex P** using a stainless steel trowel, and level out. The thickness of application may vary from 0.5 mm to 2.5 mm per coat up to a maximum of 5 mm thickness (in 2 coats).

Allow the **renovex P** to dry out (3 hours between coats) and then remove any imperfections from the hardened surface with the edge of a smoothing trowel.

Allow 2 to 3 days for **renovex P** to completely dry prior to applying any other coating.

Apply in temperatures (ambient and surface) between 5°C and 30°C.

Do not apply:
- During very humid weather conditions or if rain is forecast.
- During extreme hot weather or when exposed to strong winds.
- On damp or frozen/thawing surfaces.
- On hot or frozen/thawing surfaces.

Clean tools after use with water.

Packaging

renovex P is supplied in 25 kg plastic buckets.

Coverage

Approximately 1.5 to 2.0 kg per mm of thickness applied.

Note: These estimates take no account of wastage and will vary according to the type of surface involved.

weber.rend aid

Preparatory key coat for rendering

About this product

weber.rend aid is a polymer modified cement and sand mix. The powder blend includes an integral bonding agent so that it requires only the addition of clean water on site.

Technical data

Proprietary mix, designed to be used as an adhesive stipple pre-treatment as described in BS 5262. Can be supplied based on sulphate-resisting cement for use in common bricks.

Suitable specification clauses for dealing successfully with most types of substrates are available from our Technical Services Department.

BS 5262, *Code of practice for external renderings*, and BS 8000-10, *Workmanship on building sites. Code of practice for plastering and rendering* should be followed at all times.

Uses

- To achieve a good key for rendering onto smooth or otherwise unsuitable but sound surfaces
- Ideal as a pre-treatment for renderings required to resist severe exposure conditions
- Suitable substrates:
  - dense concrete
  - brickwork
  - blockwork
  - masonry
  - clean, sound, well adhered existing render (<19mm)

Constraints

Do not apply to gypsum plaster or previously painted surfaces.

For applications where the codes of practice recommend sulphate resistance, use only the sulphate-resistant cement formulation.

10

Preparation

All surfaces must be sound, clean, dry and free from any material which may impair adhesion.

Scaffolding must be independently tied to allow uninterrupted application. Any faults in the structure, particularly those which may lead to moisture penetration, must be rectified.

Mask around the areas where material is to be applied. Masking tape must be removed before the material has dried out.

Mixing

Mix three parts of **weber.rend aid** with one part of clean water in a clean container, using a suitable drill with whisk attachment. For smaller quantities a hand whisk may be used.

After mixing, leave to stand for approximately 5 minutes before remixing to a workable consistency, adding more water if necessary.

Application

With a hawk and trowel or an open hopper spray gun, apply a tight layer 2 – 3 mm thick to the substrate. Texture the surface using a roller or by thoroughly raking with a proprietary render comb. If preferred, **weber.rend aid** may be applied and stippled in a single operation, with a well loaded roller.
Apply no more than 2 – 3 m² before texturing.

It is important that the final texture achieved should be a deep, heavy stipple finish with a textured depth of 5 – 10 mm.

For difficult substrates, such as those with low suction or those retaining dust after cleaning, scrub **weber.rend aid** well into the surface with a small hand brush and then texture with the brush or roller.

Cure for 2 – 3 days before over coating.

During rapid drying conditions such as hot climates, curing with a fine spray of clean water may be necessary.

Protection

Protect from unfavourable weather conditions during application and early curing.

Good practice

Do not apply:
- If frost is forecast within 24 hours of use
- In damp/wet conditions
- In temperatures below 5°C or above 30°C
- On elevations in direct sunlight or where the substrate is hot

Cleaning

Keep equipment clean by washing frequently during application and wash immediately after use with clean water. Do not dispose of waste material into drainage systems.

Storage and shelf life

When stored unopened in a dry place at temperatures above 5°C, shelf life is 12 months from date of manufacture.

Health and safety

Contains cement.

For full information on Health and Safety, please see inside back cover.

Packaging

weber.rend aid is supplied in 25 kg bags.

Coverage

For each mm of thickness, you will require approximately 1.4 kg per m².
When trowel applied to a thickness of 2 – 3 mm, coverage is approximately 7.5 m² per 25 kg bag.

Note: These estimates take no account of wastage and will vary according to the type of substrate. Allowance must be made for extra material required on high suction or uneven substrates.

weber.rend aid

Preparatory key coat for rendering

Features and benefits

- Equalises suction on mixed backgrounds
- Provides excellent suction control across both high and low suction substrates
- Resists the penetration of external water to improve the weather resistance of rendering systems
- Quality controlled and factory blended to give a consistently high quality product
- Easy to apply by hawk and trowel and/or roller

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CI/SfB (4-) Pu2
Uniclass L51 April 2006

triple strength medusa

Features and benefits

- Provides increased water repellence
- Assists in providing even suction in undercoats
- Reduces water permeability
- Reduces the risk of surface crazing of in-situ and precast concrete
- Reduces surface water absorption

Water-repellent admixture for cement mixes

About this product

triple strength medusa is an admixture in white powder form. Its addition to a concrete or mortar mix will improve the water repellence of the finished work

Technical data

BS 5262 *Code of practice for external renderings* and BS 8000-10 *Workmanship on building sites. Code of practice for plastering and rendering*, should be followed at all times.

Storage and shelf life

Store in dry conditions.
Shelf life of unopened sachet is at least 12 months.

Health and safety

Essentially non-hazardous.

For full information on Health and Safety, please see inside back cover.

Packaging

triple strength medusa is available in 330 g sachets (20 per carton) or 20 kg sacks.

Coverage

One 330 g sachet is sufficient for a mix containing 50 kg (2 x 25 kg sacks) cement.

Uses

- To provide economical and durable renderings and mortars with increased water repellence
- To reduce surface water absorption and hence staining of rendering, in-situ concrete and precast concrete

Constraints
triple strength medusa is not suitable for use with high alumina or calcium aluminate cements

Mixing

Mix **triple strength medusa** at a rate of one 330 g sachet per 50 kg (2 x 25 kg bags) of cement.

Mix the powder with the cement and aggregates in the dry state. Thorough mixing is essential, but air entrainment and possible loss of strength may occur if machine mixing of concrete is unduly prolonged once the water is added. Only clean, sharp, well graded sand should be used for rendering and clean, well graded aggregates for concrete.

In all cases the strength of the mix should be in accordance with the specification and British Standards applicable to the particular work to be carried out.

As a guide, however: concrete should contain not less than 300 kg cement per cubic metre (although a richer mix is often necessary) and for render mixes, best results are obtained if the mix is not weaker than mix designation 1, as described in BS 5262.

The addition of **triple strength medusa** will not compensate for incorrectly proportioned mixes or for poorly compacted concrete.

Mixes containing **triple strength medusa** are water repellent. For floors it is recommended that a vapour barrier be provided in accordance with BS 743 *Specification for materials for damp-proof courses*.

Preparation and application

Preparation and Application should be in accordance with the specification and relevant British Standards for the work to be carried out.

Technical reference

Standards and Classification of Renders

The established code of practice for external renderings, BS 5262, is currently the most well known standard for detailing the specification of cementitious renders. However, the recent introduction of the European Norm BS EN 13914-1:2005 *Design, preparation and application of external rendering and internal plastering, Part 1 external rendering* provides more recent guidance regarding the preparation and use of renders. This document is designed to be used in conjunction with EN 998-1

Specification for mortar for masonry. Rendering and plastering mortar .
It is understood that both the standard and the norms will run concurrently as the new European norm does not appear to replace the current standard.

BS 5262

The BSi (British Standards Institute) Code of practice classifies renders according to formulation and sets out a range of mix formulae, based on proportions of cement/lime/sand (by volume), that are suitable for use in different locations.

Mix designation	Mix design (cement/lime/sand)	Use
I	1: ¼ :3	Strong impervious renderings for strong backgrounds
II	1: ½ :4 to 4½	
III	1:1:5 to 6	
IV	1:2:8 to 9	
V	1:3:10 to 12	For sheltered locations and for remedial work to weak lime based renders

Mix designation III is the 'workhorse' formulation being suitable for most medium dense blockwork with adequate key and suction and, at the correct thickness, most exposures.

EN 998-1

The European Norm EN 998-1 approaches the classification of renders from the aspect of 'performance in use'.

Rendering/plastering mortars are defined
1 according to the concept as either, *(a)* designed mortars; or *(b)* prescribed mortars;
2 according to the mode of manufacture as either, *(a)* factory-made mortars; semi-finished factory mortars; or *(b)* site-made mortars;
3 according to the properties and/or use, as either, *(a)* general purpose rendering/plastering mortar; *(b)* lightweight rendering/plastering mortar; *(c)* coloured rendering mortar; *(d)* one-coat rendering mortar; *(e)* renovation rendering/plastering mortar; *(f)* thermal rendering/plastering insulating mortar.

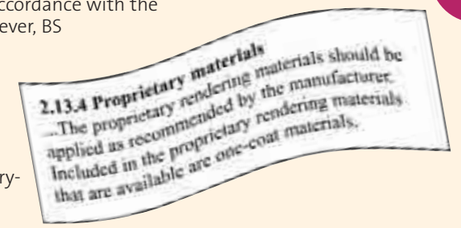
Labelling carries declared values in two tables. Compressive strength, capillary water absorption and thermal conductivity are classified in table one. Properties of the hardened mortar relevant to the intended use and/or type of product are declared in table two. These include, L1 – dry bulk density, L2 – compressive strength, L3 – adhesion, L4 – adhesion after weathering cycles, L5 – capillary water absorption, L6 – water penetration after capillary water absorption test, L7 – water permeability on relevant substrates after weathering cycles, L8 – water vapour permeability coefficient, L9, L10 – thermal conductivity (W/m. K), L11 – reaction to fire, L12 – durability.

The European Standard EN 13914-1:2005 specifies requirements and recommendations for the design, preparation and application of mineral-based external renderings, on all common types of backgrounds, to both vertical walls and horizontal soffits. The standard includes guidance on rendering to new and old backgrounds and the maintenance/repair of existing work.

BS 5262 review

Proprietary renders

BS 5262 deals in the main with site made render produced from loose materials and where it does refer to factory produced or proprietary renders it advises that they are applied in accordance with the manufacturers instructions. However, BS 5262 contains a wealth of information based on amassed experience concerning backgrounds, detailing, exposure etc. that remains of critical value to the designer, specifier and applicator alike when using factory-produced renders.

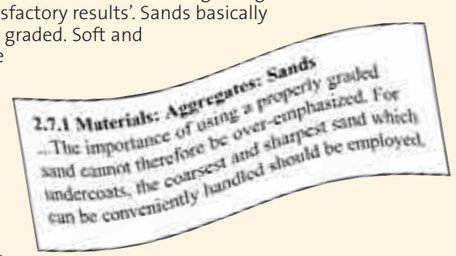

2.13.4 Proprietary materials
The proprietary rendering materials should be applied as recommended by the manufacturer. Included in the proprietary rendering materials that are available are one-coat materials.

Choice of renderings

The choice and type of render depends upon the nature of the background, the exposure of the site and the aesthetic requirements. Architectural features, detailing and preparation also need to be considered.

Raw Materials

As far as the standard is concerned cement (BS 12) and lime (BS 890) are factory-produced materials and as long as they conform to their relative standards they are deemed to be adequately controlled. Sands should comply with BS 1199 but the position here is a little more difficult as some gradings outside the standard, it says, 'can give satisfactory results'. Sands basically must be clean, sharp and well graded. Soft and fine buildings sands should be approached 'with extreme caution' as high drying shrinkage may result from their high water demand.



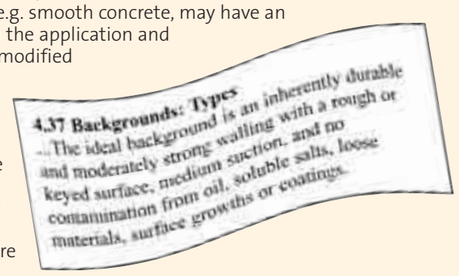
2.7.1 Materials: Aggregates: Sands
...The importance of using a properly graded sand cannot therefore be over-emphasized. For undercoats, the coarsest and sharpest sand which can be conveniently handled should be employed.

Attention is rarely paid to any water used, but the standard indicates that it should be suitable for drinking (potable).

Backgrounds

As with almost any other discipline, renders are only as good as the backgrounds to which they are applied.

Renders adhere to their substrate through a combination of suction and mechanical key. A light spray of clean water immediately before application may control excessive suction, however, excessive amounts of water should not be used. Surfaces with poor key, e.g. smooth concrete, may have an artificial key provided through the application and rough texturing of a polymer modified coating.

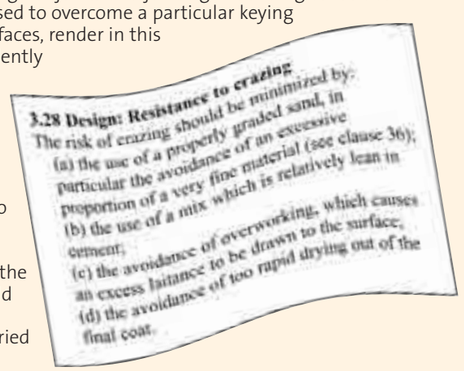


4.37 Backgrounds: Types
...The ideal background is an inherently durable and moderately strong walling with a rough or keyed surface, medium suction, and no contamination from oil, soluble salts, loose materials, surface growths or coatings.

Organic growth should be removed and treated with a suitable algicide as part of the preparation. Cement based renders should not be applied to substrates that have previously been plastered or are painted.

Crack control

Render is usually fully bonded to and moves with, not independently of, its substrate. As a result the code only deals specifically with movement joints in renders applied to expanded metal. It recommends that stresses in other substrates should be relieved in accordance with BS 5628, Code of practice for use of masonry Part 3 Materials and components, design and workmanship, and BS 6093, Code of practice for design of joints and jointing in building construction. (As expanded metal is only used to overcome a particular keying problem, i.e. over painted surfaces, render in this instance may move independently of the background and therefore needs its own movement joints to relieve its own stresses.)



3.28 Design: Resistance to crazing
The risk of crazing should be minimized by:
(a) the use of a properly graded sand, in particular the avoidance of an excessive proportion of a very fine material (see clause 36);
(b) the use of a mix which is relatively lean in cement;
(c) the avoidance of overworking, which causes an excess laitance to be drawn to the surface;
(d) the avoidance of too rapid drying out of the final coat.

The most common cause of cracking in rendering is due to movement in the substrate following shrinkage deriving from the initial drying out of the background. Substrates should therefore be mature, dry and stable before rendering is carried out.

Rendering should be broken across construction joints and also at other straight joints in the substrate where differential movement may occur.

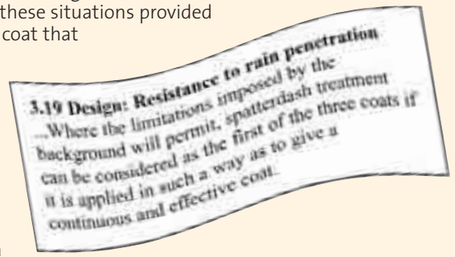
Crazing is often included under the 'cracking' heading however the cause is very different. Correct grading of sands is especially important as crazing is often an indicator of high drying shrinkage or overworking of the surface during trowelled finishes. Adherence to the recommendations regarding the build up of coats, thickness, strengths and key is essential.

Exposure

The code deals with exposure as a matter of a driving rain index dependant on the geographical location of the project, however, exposure is site-specific and needs to be calculated on a project basis. Another method of calculation is one based on the wind-driven rain wall spell index calculated according to BS 8104:1992 *Code of practice for assessing exposure of walls to wind-driven rain*. An overview of this method may be found in Section 7.

Thickness and number of coats

The code states that traditional plain face two-coat work at 16mm is suitable for sheltered and moderate exposure conditions. For exposed situations three-coat 20mm work is recommended, although the standard does allow for two-coat work to be used in these situations provided it is combined with a stipple coat that has been applied as a continuous layer.



3.19 Design: Resistance to rain penetration
...Where the limitations imposed by the background will permit, spatterdash treatment can be considered as the first of the three coats if it is applied in such a way as to give a continuous and effective coat.

In general, the first render coat should be weaker than the background and each successive coat not stronger than that to which it is applied. In colloquial terms, 'Don't put a strong man on a weak man's back'.

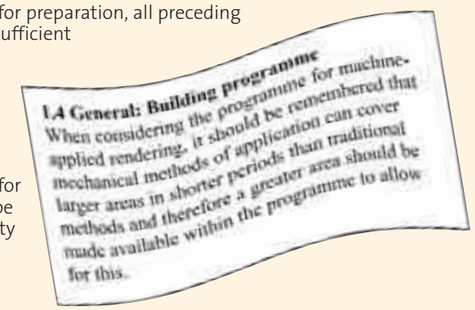
A good key to the substrate and between coats is essential. A purpose made 'render comb' should be used to make a mechanical key between successive coats.

Colour consistency

The code notes that complete colour consistency is always difficult to achieve. Substrates should be even in suction and be executed in sequence. Random panel work should be avoided.

Programme

Programmes need to allow for preparation, all preceding trades to be complete and sufficient intervals to allow for curing between coats/application of finishes. Machine applications cover much larger areas in shorter periods.
Programmes need to allow for a larger amount of area to be available to ensure continuity of work.



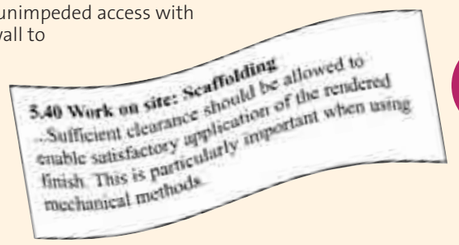
1.4 General: Building programme
When considering the programme for machine-applied rendering, it should be remembered that mechanical methods of application can cover larger areas in shorter periods than traditional methods and therefore a greater area should be made available within the programme to allow for this.

Accessories

Metal lathing and beads used with rendering are unavoidably exposed to moist conditions. While the rate of corrosion is dependant upon a range of atmospheric conditions, to minimise the risk, beads should be stainless steel. Galvanised steel may be used in areas of moderate or sheltered exposure or on renovation work of buildings not exceeding two storeys.

Access

Scaffolding needs to allow for unimpeded access with sufficient clearance from the wall to enable application. This is especially important when using mechanical applications and even more so when the finishes themselves require mechanical application.



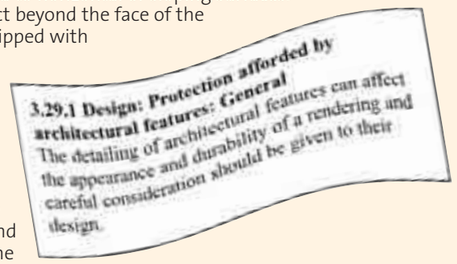
5.40 Work on site: Scaffolding
...Sufficient clearance should be allowed to enable satisfactory application of the rendered finish. This is particularly important when using mechanical methods.

Detailing

Architectural detailing can affect the appearance and durability of rendering and careful consideration should be given to its design.

In general the top of the vulnerable bond to the substrate should be protected and detailing should direct water away from the wall surface.

Renders should not be applied to horizontal or sloping surfaces. Copings should always project beyond the face of the rendering and should be equipped with some form of throating or drip to prevent water from tracking back to the wall.


3.29.1 Design: Protection afforded by architectural features: General
The detailing of architectural features can affect the appearance and durability of a rendering and careful consideration should be given to their design.

Rendering below DPC should be avoided. Where it is necessary to render below DPC, a break should be made to avoid unsightly cracking and transmission of water past the course.

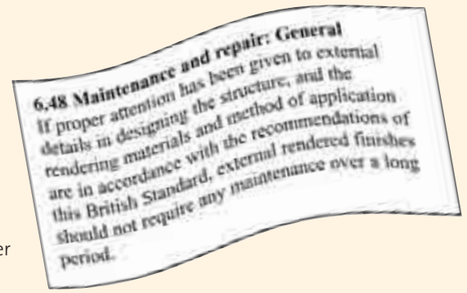
Weather

Application should be discontinued during inclement weather and when the temperature cannot be maintained above 5°C during application and curing. The incidence of lime bloom is exacerbated by rendering when the background is very wet.

Maintenance

Rendering need not be a maintenance liability.

Inconspicuous cracks that remain dry and sound are usually best left alone. Cutting and repairing, however carefully done, invariably results in some differences in appearance over the area of the repair.


6.48 Maintenance and repair: General
If proper attention has been given to external details in designing the structure, and the rendering materials and method of application are in accordance with the recommendations of this British Standard, external rendered finishes should not require any maintenance over a long period.

Other British Standards and reference standards

BRE Good Building Guides

The BRE have a range of guides; GBG 18, *Choosing an external render*, GBG 23, *Assessing an external rendering for replacement or repair* and GBG 24, *Repairing external rendering*, to list a few that may be of interest.

Insulation for Sustainability

A research study and analysis carried out by XCO2 conisbee Ltd consulting engineers.

Good Practice Guide 293: External insulation systems for walls or dwellings

Produced by BRESCU for the Energy Efficiency Best Practice Programme in connection with INCA.

Appropriate plasters, renders and finishes for Cob and Random Stone Walls in Devon

This publication is produced by the Devon Earth Building Association and deals with the specialist activity of renderings applied to cob or packed earth buildings.

BS 1199

Specifications for building sand from natural sources.

BS 5628

Code of practice for use of masonry Part 3 Materials and components, design and workmanship.

BS 6093

Code of practice for design of joints and jointing in building construction.

BS 8000

Workmanship on building sites, Part 10 Code of practice for plastering and rendering.

BS 8104

Code of practice for assessing exposure of walls to wind-driven rain.

Glossary of terms

BBA
British Board of Agrément.

Cementitious
A material whose primary binder is cement.

Coloured rendering mortar
A designed rendering/plastering mortar specially coloured.

Declared value
A value that a manufacturer is confident in achieving, bearing in mind the precision of test and variability of process.

De-lamination
The failure of a system at one of the layers building up the construction, often at the interface between them.

Designed rendering/plastering mortar
A mortar whose composition and manufacturing method is chosen by the producer in order to achieve specified properties (performance concept).

Dew point
The point at which, because of the temperature and humidity conditions, moisture will condense from the atmosphere.

Efflorescence
The formation of a white powder on the surface due to the drying of a crystalline hydrate.

ETICS
External Thermally Insulated Composite System.

EWI
External Wall Insulation.

Factory-made rendering/plastering mortar
A mortar batched and mixed in a factory. It may be 'dry mortar' which is ready mixed only requiring the addition of water, or 'wet mortar' which is supplied ready for use.

Final coat
The last coat, decorative or not, of a multicoat rendering or plastering system.

Fresh rendering/plastering mortar
A mortar completely mixed and ready for use.

Friable
A substrate or fixing surface that is soft and can be easily scraped away with a knife.

Fuel poverty
Fuel poverty arises when people have insufficient income to heat their homes to a comfortable standard. A common definition of a fuel poor household is one that needs to spend more than 10% of its income to maintain heating levels.

General purpose rendering/plastering mortar
A rendering/plastering mortar without special characteristics. It can be prescribed or designed.

IAB
Irish Agrément Board.

Insurance-backed guarantee
An independent insurance policy that underwrites the installers guarantee. If the contractor ceases to trade, the insurers will take the place of the guarantee for the remaining term of cover.

Interstitial condensation
Moisture, which condenses from the atmosphere at the interface between different layers of the construction 'sandwich'.

K-value
See Lambda value,

Laitance
Generally referring to concrete. A thin cement rich skin of material that has been brought to the surface by trowelling or vibration while placing.

Lambda value
A measure of the thermal conductivity of a material. A definition of the number of heat units that can be transmitted in a unit of time through a unit thickness of material over a unit area. Measured in W/mK.

Latent defect
A defect that remains undiscovered at the time of practical completion but which results in actual physical damage later. It could be the result of a failure either in materials used or in the application of those materials.

Latent defects guarantee
A guarantee that meets the cost of rectifying defects in materials or workmanship, or error or omission in design, which are not apparent when a project is finished, but which come to light later.

Lightweight rendering/plastering mortar
A designed rendering/plastering mortar with a dry hardened density below a prescribed figure.

Monocouche
A one coat, through coloured render pioneered by **Weber** in France.

One-coat rendering mortar for external use
A designed rendering mortar applied in one coat which fulfils all the functions of a multicoat system used externally and which is usually specified coloured. One coat mortars for external use may be manufactured using normal and/or lightweight aggregates.

Pre-batched rendering/plastering mortar
A mortar whose constituents are wholly batched in a factory, supplied to the building site and mixed there according to the manufacturer's specification and conditions.

Premixed lime-sand rendering/plastering mortar
A mortar whose constituents are wholly batched and mixed in a plant, supplied to the building site where further constituents specified or provided by the factory are added (e.g. cement).

Prescribed rendering/plastering mortar
A mortar made in pre-determined properties, the properties of which are assumed from the stated proportion of the constituents (recipe concept).

Render/plaster coat
A layer applied in one or more operations or passes with the same mix, with the previous pass not being allowed to set before the next one is made (i.e. fresh on fresh).

Render/plaster
Materials used externally are generally referred to as a render/rendering and materials used internally as plaster/plastering in the UK and Ireland. Care needs to be exercised as some ready-mixed external coatings are referred to as plasters on the continent.

Rendering/plastering mortar
A mix of one or more inorganic binders, aggregates, water and sometimes admixtures and/or additions, used as external renders or internal plasters.

Rendering/plastering systems
A sequence of coats to be applied to a background which can be used in conjunction with the possible use of a support and/or reinforcement and/or a pre-treatment (Note: in some cases the pre-treatment may be regarded as a separate coat in addition to the specified system).

Renovation mortar
A designed rendering/plastering mortar used on moist masonry walls containing water-soluble salts. These mortars have a high porosity and vapour permeability and reduced capillary action.

Scabble
To remove or roughen the surface layer of a substrate with the use of tools that employ multiple vibrating chisels or needles.

Site-made rendering/plastering mortar
A mortar composed of individual constituents batched and mixed on the building site.

Suction
The force that draws water or liquid into a substrate.

Thermal conductance
Time rate of heat flow through a body (frequently per unit area) from one of its bounding surfaces to the other for a unit temperature difference between the two surfaces, under steady conditions.

Thermal insulating mortar
A designed mortar with specific insulating properties.

Thermal resistance
The measure of a material's ability to resist heat flow. The reciprocal of thermal conductance.

Thermal transmittance
The coefficient of heat transmission (air to air). It is the time rate of heat flow per unit area and unit temperature difference between the warm side and cold side air films.

UKAS
United Kingdom Assessment Service.

Undercoat
The lower coat or coats of a system.

U-value
This is a measure of the rate of heat loss through a building component. It is expressed as Watts per square metre, per degree Kelvin, W/m²K.

Safe handling

The building industry is the most dangerous work environment bar none. Much effort has been put into improving the generally dismal historical record. As a responsible manufacturer **Weber** is constantly reformulating products to reduce possible risks to users and clearly states what risks are involved with all products.

These risks only apply during application. Once cured, the products are non-hazardous in all respects.

All materials carry Health and Safety labelling in a clear easily recognisable format as recommended by the HSE (Health and Safety Executive).

Lifting

Even when labelled as non-hazardous, a practical, common sense approach to material usage is to be recommended. **Weber** materials manufactured in the UK are kept to weights of 25 kg and below. Lifting should be carried out with the back straight and upright with the load as close to the body as possible. Do not cut corners by attempting to carry multiple packs above 25 kg.

Expanded metal lathing

While not hazardous in its own right, sheets of expanded metal lathing are awkward to handle and cut edges are very sharp. Care should be taken and gloves worn at all times.

Products

weber.therm XL systems
weber.therm XP systems (those that include **weber.therm L1**)
weber.rend IF systems

Insulation slabs

When working with or cutting these materials dust may be created – dust mask, gloves and suitable protective clothing are recommended.

Polystyrene slabs

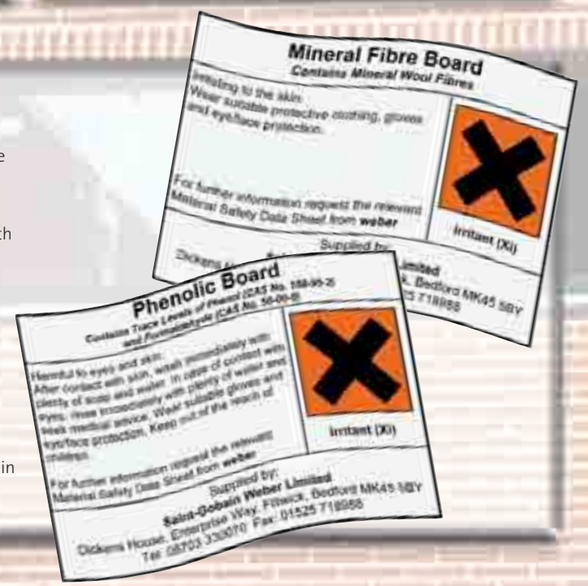
Essentially non-hazardous. Although the boards are treated with a fire retardant, they should be stored away from sources of ignition and the fire brigade informed that polystyrene is involved if they are associated with any outbreak of fire.

Mineral wool (slab and lamella)

Essentially non-hazardous, however the fibres may cause transient mechanical irritation to skin. High dust levels may irritate the throat and eyes. The Health and Safety label reproduced here applies to the fibres.

Phenolic

The material contains trace levels of phenol and formaldehyde in the product, which may be irritating to eyes and skin.

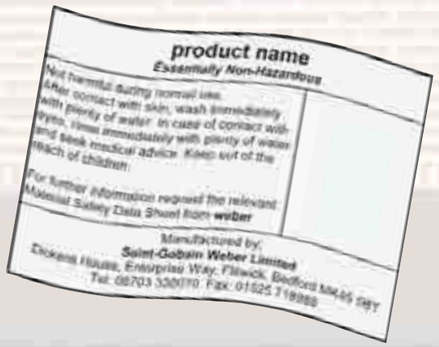


Non-hazardous

Our pastes, liquids and sealants are generally non-hazardous in use but may be difficult to remove when dry. The generic Health and Safety label reproduced here carries common sense precautions.

Products

flexirend highbuild
weber arêtes chrono monocouche
weber.tene SG
renovex P
santane
triple strength medusa
weber PR310
weber PR330
weber PR335
weber PR340
weber.plast DF
weber.plast P
weber.plast TF
weber.sil P
weber.sil TF



Cementitious

The HSE has identified the small amount of soluble chromium VI that naturally appears in grey ordinary Portland cement as the element that stimulates an allergic dermatological reaction in some people that results in 'cement burns'. Legislation now requires manufacturers to keep levels of soluble chromium VI below 2 parts per million of the total dry weight of the cement content.

White cement/sulphate-resisting cement and cement fondu all have contents below this level and are therefore naturally compliant.

Ordinary Portland cement, however, needs to be treated to achieve these levels.
All material supplied by **Weber** is either naturally compliant or has been treated to be compliant for the stated shelf life. Bags must be stored unopened, in clean dry conditions, off the ground and above 5°C. Use of treated products after the end of the declared storage period may increase the risk of an allergic reaction.

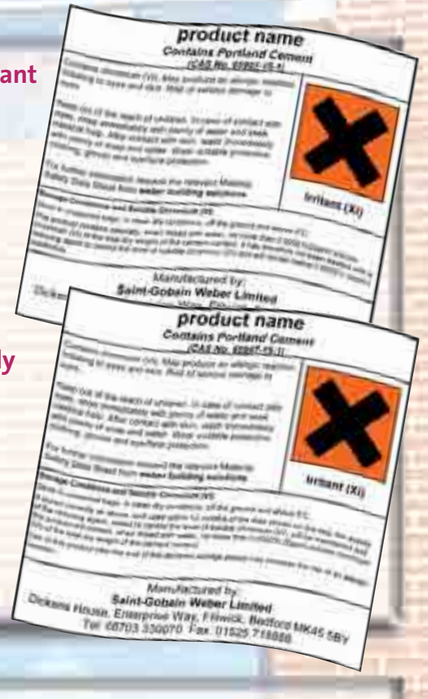
Cementitious mixes may contain relatively sharp, often angular aggregates and are therefore generally abrasive when wet. Newly applied product is also very alkaline.

Naturally compliant

alpine finish
cullamix tyrolean
weber.pral D
weber.pral M
weber.rend aid
weber.rend fibrelite
weber.rend PTC
weber.rend PTS
weber.rend TTC
weber.rend TTS
weber.therm L1
weber.therm M1

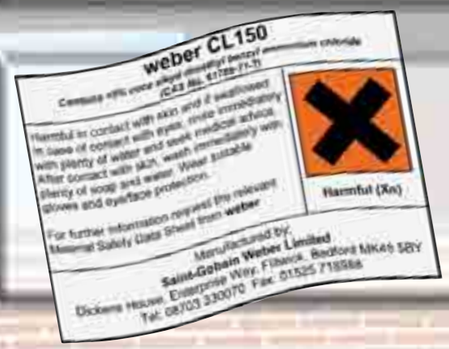
Treated to comply

weber.rend BPM
weber.rend EXB
weber.rend EXF
weber.rend LAC
weber.rend MFU
weber.rend OCR
weber.rend POC
weber.rend PUC
weber.rend RB
weber.rend stipple
weber.rend TUC
weber.therm L2



weber CL150

weber CL150 is a water-based solution of chemical biocides approved by the HSE and Department of Agriculture of Northern Ireland. It is classified as an irritant. Steps should be taken to prevent contamination of soil, drains or surface water.



weber accelerateur monocouche

weber accelerateur monocouche is a liquid accelerator for use in cold weather with **Weber** Monocouche renders. It is a water-based solution containing inorganic nitrates and calcium chloride. Store upright and in its original containers.

weber SL410

A highly penetrative sealer, **weber SL410** is white spirit based. Ensure adequate ventilation. Avoid breathing vapours. Vapours are heavier than air – avoid their accumulation. Store in original undamaged containers securely closed. Store between 5°C and 35°C, away from direct sunlight. Store in an adequately bunded area. Store away from any sources of ignition. Avoid static discharges.

Individual product-specific Safety Data Sheets are available on request or by visiting our website **www.netweber.co.uk**