MONOCOUCHE
RENDER SYSTEMS

MONOCOUCHE **XF** - CONSTRUCTION GUIDE

Understanding Material Selection and Movement Control

A guide to the best practice when constructing a property which will receive a Monocouche XF through colour render coating.

www.monocouche.co.uk

What is Monocouche..??

The term Monocouche is derived from the French language meaning "One Coat"

Monocouche XF is one of the original and leading brands of these "one coat" through colour, cement based renders.

The term Monocouche has since been adopted by the European render industry to distinguish between these modern renders and traditional multiple layer sand and cement renders that need to be painted.

Monocouche XF is a breathable through colour cement based render system available in a stunning range of colours typically scratch finished but also able to achieve a number of more traditional styles such as rough cast, sponge and trowel finish.

Key System Benefits

- Available in a range of colours and finishes
- Flexibility to achieve most recognised styles of render finish
- Low maintenance without the need to paint and repaint
- Breathable while protecting the buildings structure
- Weatherproof and far more durable than traditional sand and cement renders
- Ready mixed with the addition of water the only requirement to install
- Hand or machine applied enabling large areas to be completed
- Greatly reduced program allowing trades to continue earlier and scaffolding to be off hired sooner
- Bagged, palletised and wrapped for ease of delivery and safe storage on site
- Actual finished render samples available upon request
- In stock and ready for delivery to site within days
- Next day delivery available
- 10 Year system warranty
- A1 Fire rated

Masonry Application – One Coat

Monocouche XF can be applied in one coat onto suitable open faced 7kn general purpose concrete blockwork.

The masonry substrate should be constructed with a sufficient movement control design containing bed joint reinforcement and or expansion joints as per masonry manufacturers guidelines and in conjunction with 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 key to a successful one coat installation relies on the selection of a suitable block type, the management and control of materials and workmanship during the construction of the substrate and the inclusion of a suitable movement control design to ensure that the blockwork performs as it should when constructed.

Masonry Application - Best Practice

Monocouche XF can be installed onto 7kn general purpose concrete block, lighter weight and lessor density blockwork, brickwork, stonework and concrete with the support of a layer of MonoBase XF polymer modified base coat with MonoMesh XF imbedded throughout to prepare in what we advise to be best practice in all scenarios.

This comprehensive approach provides a consistent base layer without impurity that controls and equalises suction onto which the through coloured Monocouche XF coating is applied thus going as far as possible to protect the render system against issues which may be caused due to the condition and behaviour of the masonry substrate.

The addition of the MonoBase XF and MonoMesh XF layer provides greater resistance to movement within the substrate and increases protection against water penetration and weathering.

This guide outlines what needs to be considered and applied during construction if you wish to install Monocouche XF and it is our advice that no matter if you are installing in one coat or in best practice described the criteria is followed.

How do cracks occur..?

Cracks are not common but are generally caused through excessive movement or shrinkage within the masonry substrate or when adjoining masonry components expand and contract at different rates without an allowance for this ongoing movement.

If the substrate materials have moved excessively behind the cured Monocouche XF due to the selection or condition of the masonry and or the lack of a suitable movement control design this may then transfer through the render and become apparent in the form of cracking.

Monocouche XF simply does not crack in a straight line or in the shape of the masonry bonding behind the system and it is highly likely that if you investigate any form of cracking in Monocouche XF it will be found that the crack were formed in the masonry behind which then cracked the render and the crack would be visible in the masonry upon inspection.

Therefore we must ensure that we fully understand the type of masonry that will be used, how it should be stored and installed and furthermore supported by a suitable movement control design.

It is also very important that each project is approached on its own merit and you should never apply a generic masonry and render specification to a project without first understanding the specific substrate materials and how they need to be installed.

Understanding this criteria and describing it clearly at the design and specification stage of a project is

the key to avoiding any frustrating and potentially costly latent defective issues with the exterior render coating.

A "Latent Defect" is a defect which remains undiscovered when the works are initially completed but

later appears by way of actual physical damage.

“One Coat” Block Selection.

Monocouche XF render has been developed to be applied “directly” to a suitable open faced 7kn-10kn general purpose concrete block with a suitable texture or key.

These highly stable blocks offer sufficient key or grip combined with the resistance required as the Monocouche XF cures.

The rate in which the water is drawn from the Monocouche XF material to the block is also sufficient and ensures a consistent aesthetic is achieved when finished.

Even though a block may have the correct density and strength, care must still be taken that it has a suitable face to achieve successful bonding.

Important: Blocks should be kept as dry as possible prior to the application of the Monocouche XF render, a block that contains more than 12% moisture when the render is applied would almost certainly mean cracking would occur due to excessive shrinkage when drying out and settlement occurs.

Other Block, Brick or Substrate Types.

Monocouche XF can also be installed onto lightweight block, brickwork, stonework and most masonry construction with the support of a layer of MonoBase XF polymer modified base coat and MonoMesh XF installed to prepare in what we advise to be best practice in all circumstances.

The addition of the MonoBase XF and MonoMesh XF layer provides greater resistance to movement within the substrate whilst increasing protection against water penetration and weathering.

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Bed Joint Mortar.

A fundamental component in the construction of any property is the mortar used to bind the blocks together.

It is crucial that the mixing or batching of the mortar material is controlled ensuring the same consistency is reached and more importantly the strength of mix is continuous throughout the entire project or build.

To allow stress to flow throughout the structure as it is designed, it is recommended that the mortar joints should be weaker than the blocks that it has combined.

If the mortar joints are stronger than the block, this serves to restrict any movement within the blocks which may then be due to a build-up of stress fail, again often in the form of a crack.

A mortar mix such as 1:1:6 using Cement, Lime and Sand is suggested

Bed Joint Reinforcement.

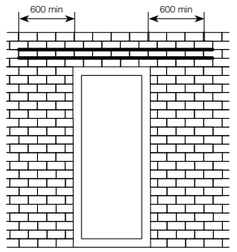
The substrate should be constructed with a sufficient movement control design containing bed joint reinforcement and/or expansion joints as per the specific blockwork manufacturers guidelines and in conjunction with BS 5628-3 Code of practice for use of masonry and BS 6093 Code of practice for design of joints and jointing in building construction.

Information and guidance on the required movement control system should be requested from the selected blockwork manufacturer.

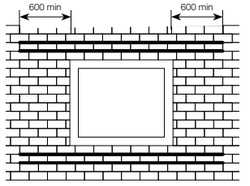
Bed Joint Reinforcement and Movement Joints are installed to allow movement with the substrate.

Movement Joints within the substrate are then mirrored within the render coating using a UPVC Expansion Bead.

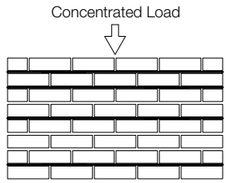
Bed Joint Reinforcement Typical Scenarios



Typical door opening



Typical window opening



Load spread situations

Movement Joints

Guidance as to where these movement joints should occur should be obtained by the manufacturer of the particular block installed at site.

This advice should be used in conjunction with BS 5628-3 Code of practice for use of masonry, BS 6093 Code of practice for design of joints and jointing in construction and the Concrete Block Associations guide to movement control.

As a rule of thumb joints should be installed through the entire wall build up and render coating;

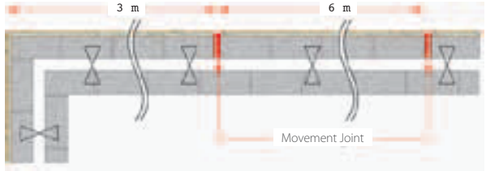
Up to every 6 meters for unreinforced blockwork

Up to 3 meters from corners

Changes in wall loading

Changes in wall height and thickness

Zones within 1 to 3 meters from corners



Material Application.

Monocouche XF and its installation is a specialist undertaking which should be carried out by experienced applicators, below is a list outlining some of the fundamental principles which must be followed during the install process;

1. Mixing of Material

Monocouche XF render must be mixed with equal volume of water throughout the application of any particular project, this combined with increased output and efficiency is the reason that we state that application by render machine is best practice, however, with experience it can be mixed using a cement or paddle mixer and applied with conventional hand (hawk and trowel) methods.

2. Material Thickness

Monocouche XF render is designed to be applied at 15mm thickness no less.

This thickness allows the correct amount of time for curing, achieves the required resistance to the substrate and protection against water ingress when cured.

3. Weather Conditions

Monocouche XF should only be applied in temperatures between 5c and 30c, caution should be taken that temperatures do not drop below 5c during the evening after an afternoon application session.

Monocouche XF should never be applied during or before heavy and persistent rain or frost.

4. Bonding of Beads and Mesh

Beads and MonoMesh XF should be stuck with Monocouche XF or MonoBase XF only no mechanical fixings

should be used and the use of 3rd party compounds such as dry lining adhesive is strictly forbidden.

5. Time of Scratch Finishing

The correct timing of the scratch finishing is crucial to achieve a consistent and uniform finish.

Being able to gauge when this time has arrived comes with experience in using the material.

The time of day at which the materials are applied, current and prevailing weather conditions and daylight hours are all factors when planning the finishing of a particular application session.

Ready to Render Checklist

The following checklist can be copied and used at site to determine if a particular site is suitable and ready to receive a Monocouche XF coating in one coat.

Block Selection

Has the correct block been installed throughout the entire exterior and is the face of this block suitable to achieve a good key?

There should be one type of block within the entire substrate, all cut and infill pieces should be from the same block, no bricks or other types of masonry should be present to infill gaps of make-up heights.

If multiple masonry components are presents MonoBase XF and MonoMesh XF must be installed to prepare the minimised risk of damage through differential movement.

Mortar Strength

Has the mortar been mixed to ensure that it is weaker than the strength of the selected block, is it mixed consistently with the same strength throughout?

Bed Joint Reinforcement

Has Bed Joint Reinforcement been installed as per the specific block manufacturer's guidelines?

Expansion Joints

Have Expansion Joints been installed as per the specific block manufacturer's guidelines?

Substrate Condition

Is the blockwork free from dust and loose material and are the blocks suitably dry across the area ready to receive render?

Protection of Elements

Are windows, doors, porch roofs and other vulnerable features protected from overspray

during application; are architectural elements such as sills, copings also protected from render

staining due to contact during application?

Weather Conditions

Are the current and prevailing weather conditions correct for successful application?

Approved Applicator

Is the material being installed as per our guidelines by a fully experienced installer?

If there is any doubt as to the suitability of a substrate always consult a Monocouche Render Systems

technical advisor: www.monocouche.co.uk

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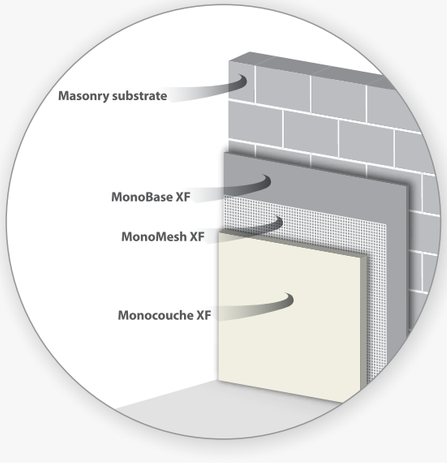
Monocouche XF Best practice specification



Monocouche XF Best Practice

System: Monocouche XF

Colour: To be confirmed

Build up: Best Practice onto suitable and stable masonry

15mm UPVC beads bonded using Monocouche XF or MonoBase XF

4mm layer of MonoBase XF applied over the entire substrate between the beads

MonoMesh XF imbedded into the entire MonoBase XF layer whilst wet overlapping strips by 100mm at each end and ensuring that it is all mesh pushed below the surface of the MonoBase XF base coat

A second layer of MonoMesh XF is imbedded diagonally passing all corners by 300mm to further reinforce this area

MonoBase XF is rolled to stipple or combed horizontally to key and left to cure sufficiently

Monocouche XF is hand or machine applied in the desired finish style level with the UPVC beading

MonoBase XF applied to 4mm thickness onto masonry

MonoMesh XF imbedded into entire MonoBase XF layer

Monocouche XF finished flush with 15mm UPVC beads

Total system thickness 15mm + depth of bead bedding

Monocouche XF System Warranty Options

Standard XF System Warranty

The Monocouche XF system is supplied with a 10 year materials warranty covering the performance of the system components when installed at any given site or project. Details of this warranty are explained in our terms and conditions which can be received upon request.

2 Year Defects Liability Warranty

Monocouche Render Systems offer the 2 year defects liability warranty to national house builders and developers where we assume complete responsibility for the external Monocouche XF render at a registered site, project or plot throughout the entire defects liability period.

This comprehensive cover means that should a latent defect such as hairline cracking appear in a building during the builder's liability period the builder or owner of the property would make direct contact with Monocouche Render Systems and we would attend to repair the fault using the MonoMend RXF system absolutely free of charge.

The standard 10 year XF system warranty would also run alongside and remain in place giving new and prospective purchasers a level of confidence in the external render that is not offered elsewhere.

No other render system manufacturer in the United Kingdom is able to offer such an encompassing warranty and it is our complete confidence in the integrity of our best practice system that enables us to do so. Details on the comprehensive 2 Year Defects Liability Warranty are available upon request.

Systems in brief

MONOCOUCHE XF
Through colour Cement based render system

Monocouche XF is our breathable through colour cement based render system available in a stunning range of colours typically scratch finished but also able to achieve a number of more traditional styles such as rough cast, sponge and trowel finish.

Monocouche XF can be installed onto blockwork, brickwork, stonework, concrete and most other forms of stable masonry.

MONOTHERM TXF
Flexible insulated render system

MonoTherm TXF is a highly flexible thin coat silicone based render system designed to achieve a weatherproof decorative finish over a multitude of substrates used in masonry, timber and steel frame construction and various forms of external insulation.

MonoTherm TXF can be applied to EPS and mineral wool insulation, ICF formwork, approved render carrier boards and most stable masonry.

MONOMEND RXF
Acylic Renovation & repair system

MonoMend RXF is a silicone based overcoat system that can be applied to existing Monocouche to repair, rejuvenate and or change the colour of the coating.

The system is particularly effective when there are aesthetic issues in newly installed Monocouche due to frost, water damage and or ghosting caused by rendering onto saturated masonry during the initial installation.

LAF SYSTEM
Lightweight Architectural Features

The LAF system is a lightweight cost and time saving alternative to creating and installing decorative architectural features with traditional stonework especially beneficial when specified for renovation projects where perhaps a commercial or office building is to be reconfigured as apartments or simply to improve the external appearance of a given building.

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RENDER SYSTEMS

The information within this document is offered as a general guide only.
It is strongly advised to consider each application scenario within its own specific set of conditions and environment.
Monocouche Render Systems accept no responsibility for the conditions of usage and labour involved in the application of this system.
Testing and approval of the system is the responsibility of the end user and should be carried out before going forward.

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