StoRend
Render systems

Exceptional performance. Stunning results.

For over 50 years, Sto has been synonymous with render. This reputation is based on our commitment to innovation, maintaining the highest quality standards and investing in cutting-edge research and development.

Sto render systems allow you the flexibility to realise your most demanding designs, whether flat or curved, concave or convex, white or vibrantly coloured.

By specifying Sto thin-coat synthetic renders, you avoid the problems associated with conventional cementitious renders, such as cracking and colour fading. Sto renders feature greater durability, exceptional flexibility and are through-coloured to reduce maintenance requirements.

Specify Sto and you can be sure of a beautiful solution that will stay looking good for years – an attractive prospect for developers and end users alike.

Details, illustrations, general technical information and diagrams contained in this document are only general proposals and details describing basic functions schematically. No precise dimensions are included. The applicator/customer is independently responsible for determining the suitability and completeness for the product in question. Neighbouring works are described only schematically. All specifications and information must be adjusted or agreed in light of the local conditions and do not constitute work, detail or assembly plans. The technical specifications and information on the products contained in the Technical Data Sheets and system descriptions/approvals must always be observed.

The benefits of synthetic render

In 1955, Sto became the first company to develop synthetic renders for commercial use. Using an acrylic or silicone resin base, graded aggregates and water, Sto renders are thin, durable and have a wide range of benefits over traditional renders.

Crack resistance
The binders in Sto synthetic renders are highly flexible, providing much better resistance to surface cracks than traditional cement-based renders.

Excellent adhesion
Sto synthetic renders can be applied to a wide variety of substrates, including onto concrete and masonry, synthetic and mineralic rendered surfaces and StoVentec render carrier boards.

Weather resistant
All renders provide a certain level of weather protection for buildings. Sto cement-free renders are polymeric, allowing them to repel water far better than traditional thick coat renders.

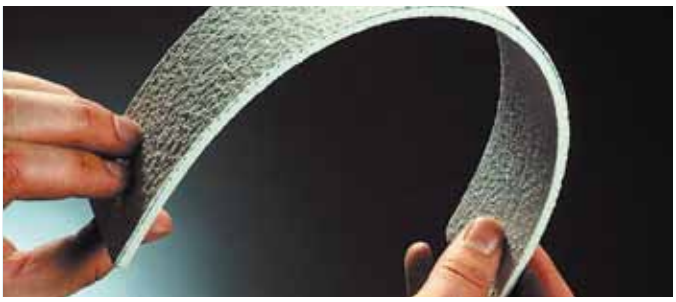
Vapour permeable
Sto synthetic renders have been specially formulated to allow the render to breathe.

Prevention of algae and fungus growth
The growth of algae and fungus on facades can be an ongoing problem for building owners, causing unattractive staining, increasing maintenance costs and, if left untreated, damaging the fabric of the building.

While algae and fungus can be treated with biocides, this is only a short-term solution and can have a negative impact on the environment.

The revolutionary StoLotusan render finish creates a superhydrophobic surface that sheds water naturally. When it rains, loose dirt is washed from the walls. Without dirt or water, algae and fungus are unable to survive on the surface.

Our investment in innovative solutions to everyday problems is just one reason we have been setting industry standards for over 50 years.



StoColor System: An architectural palette

Years in development, the StoColor System has been refined to suit the specific needs of architecture. Rigorously tested in all weather conditions, you can rest assured that our 800 colours will maintain their attractive appearance for many years.

The StoColor System espouses the human perception of colour. It is based primarily on the colours yellow, orange, red, violet, blue and green. These six sections are mixed to form the 24 basic tones, and each basic tone is assigned five colour rows with a gradient of light to dark.

This guarantees the StoColor System's high degree of functionality, designed in line with the aesthetic colour requirements in construction.

Lighting effects
There can be a vast difference in how colours appear depending on the time of day, or how light is dispersed within the surrounding environment. Sto colours have been individually selected to minimise these tonal differences caused by lighting effects.

Through-coloured
Mineralic renders have to be overpainted to achieve a wider range of colours, but even minor wear and tear exposes the unpainted render underneath. Sto renders are through-coloured, so everyday wear does not affect the appearance of the facade.

Lightfastness
All pigmented materials run the risk of fading under exposure to heat and ultraviolet light. The extent of colour fade depends upon the type and quality of pigment, the binder composition and the levels of UV exposure.

Naturally occurring mineralic and inorganic pigments provide the strongest lightfastness, their colour depending upon the particular metal compounds present in the ground where they are mined. Organic pigments, derived from vegetable or animal matter, have the greatest propensity to fade and should be avoided in facade applications.

Advances in technology have allowed the production of synthetic pigments, allowing for bright colours with lightfast qualities, although they can be more expensive to manufacture.

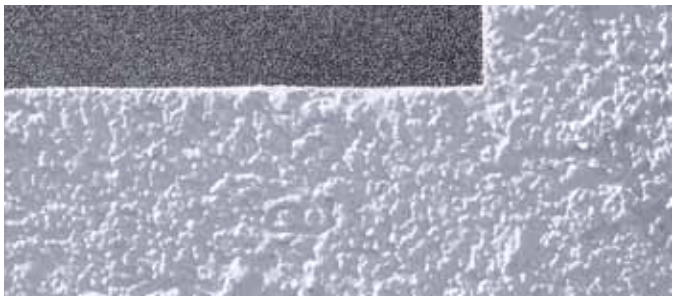
In line with our commitment to quality, Sto only uses the highest grade pigments available. Where possible, we use lightfast inorganic materials, but where a stronger, brighter colour is required, we use the very best synthetic pigments.

Test standards for colour stability are largely unreliable and place focus on the textile industries. In order to provide reliable data for facade coatings, Sto performs long-term weathering tests at measuring stations in a variety of climates around the world.

When you select a colour from the StoColor System, you can be sure that it will be an enduring element of the building's design. Sto Technical Consultants are available to offer advice on colour and product choice to ensure optimum durability.

Inspirational finishes

Render is the ideal building material to realise the breadth of your creativity. Available in a vast range of colours and textures, render provides flexibility for your most demanding or simple designs.



Stolit

Our competence in facade systems was founded on the classic acrylic render Stolit, which has undergone over 40 years of refinement. A balanced formulation and high quality raw materials provide Stolit with outstanding qualities in application, building characteristics and individual design.

Features & benefits

- Available in the full 800 colours of the StoColor System, including bright, vibrant colours.
- Extremely low water absorption.
- Optimum adhesion to the substrate.
- High elasticity.
- Exceptional resistance to mechanical stress.
- Exceptional colour stability following the drying process – does not require an equalisation coat.
- High whiteness for brilliant facades.

StoSuperlit

An incredibly robust acrylic render with exposed aggregate for a natural stone aesthetic. StoSuperlit can be applied over entire surfaces or as a highlight on entrance axes, balconies and plinths.

Features & benefits

- High resistance to mechanical stress
- High elasticity
- Good water permeability
- High weather resistance

Colour options

The StoSuperlit colour collection was inspired by nature. The colorits have been matched so mixtures similar in appearance to stone or granite can be used for highlight areas, and lighter mixtures used for broad surfaces.

Sto renders at a glance

	Base	Color range	Grain sizes	Textures
Stolit	Acrylic resin	Full (800)	1.5, 2.0, 3.0, 6.0 mm	Stippled, Rilled, Freestyle
StoSuperlit	Acrylic resin	Natural stone (13)	2.0 mm	Natural stone aggregate
StoSilco	Silicone resin	Limited (493)	1.5, 2.0, 3.0 mm	Stippled, Rilled, Freestyle
StoLotusan	Silicone-modifed acrylic resin	Limited (493)	1.5, 2.0, 3.0 mm	Stippled, Freestyle

StoSilco

Silicone resin render StoSilco provides high levels of water repellence. Such renders are frequently used in highly exposed areas for their superior protection against weathering and damp.

Features & benefits

- Very good CO_2 and water vapour permeability, increasing the rate of moisture transfer and evaporation for a breathable wall.
- Highly water repellent.
- Resistant to aggressive atmospheres.
- Resistant to algae and fungus growth.

StoLotusan

A breakthrough in render technology.
StoLotusan is the only render with the patented Lotus-Effect®, demonstrating unbeatable water and dirt repellence, and providing the best natural protection against algae growth.

As StoLotusan cures, the surface forms a unique microstructure similar to that found on the lotus leaf, greatly reducing the surface contact of water and dirt particles. Every time it rains, the rainwater simply beads off the facade, picking up loose dirt particles as it goes.

Features & benefits

- Water and dirt are unable to grip the surface, so the facade is cleaned every time it rains.
- Very good CO_2 and water vapour permeability.
- Provides the best natural resistance to algae and fungus growth.

	Vapour permeability	Water repellence	Flexibility
	●●	●	●●●
	●●	●	●●
	●●●	●●	●●
	●●●	●●●	●●●

Key: ● Minimum ●● Medium ●●● Maximum

Stippled render

Stolit K, StoSilco K, StoLotusan K

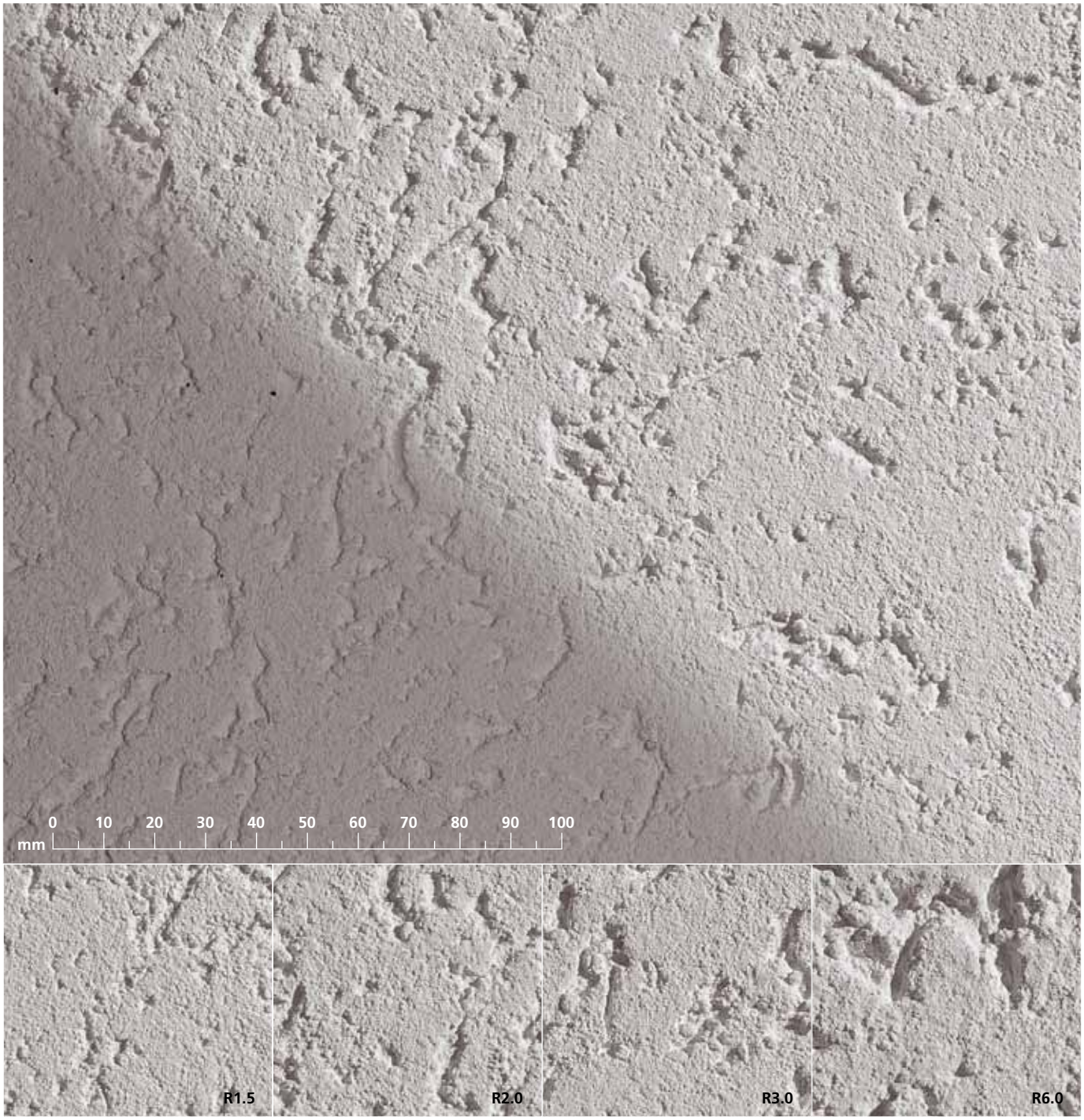
A classic finish for synthetic renders. The even texture helps to give the finished substrate a flatter aspect when compared to a smooth, floated surface which can highlight even minor trowel marks. The stippled texture can also help to promote effective water shedding in rainy weather.

Grain sizes (mm): 1.5, 2.0, 3.0, 6.0
Products: Stolit K, StoSilco K, StoLotusan K

Sto advises the use of 2.0 grain size or above to ensure an even appearance. 6.0 grain size available in Stolit K only.

Rilled render

Stolit R, StoSilco R



An attractive drag finish for synthetic renders with the appearance of a scratch plaster. The rilled texture helps to give the finished substrate a flatter and more even appearance.

Grain sizes (mm): 1.5, 2.0, 3.0, 6.0
Products: Stolit R, StoSilco R

Sto advises the use of 2.0 grain size or above to ensure an even appearance. 6.0 grain size available in Stolit R only.

Freestyle special effect render

Stolit MP, StoSilco MP, StoLotusan MP

If a unique, bespoke facade finish is required, MP renders are the ideal solution. The material can be rubbed up to give a near smooth texture or provide a variety of textures for the facade.

The MP finish is a specialist technique requiring highly skilled applicators. Please contact Sto for more information.

Products: Stolit MP, StoSilco MP, StoLotusan MP

Exposed aggregate render

StoSuperlit

An attractive, multicoloured finish with a heavy texture and natural stone aggregate, ideal for high impact areas and splash zones below the damp-proof course. Available in 13 aggregate colour combinations, the finish can be used for selected areas or over the entire elevation.

Grain sizes (mm): 2.0
Products: StoSuperlit K

Render systems

Choosing which render system meets your needs depends on a number of factors, such as substrate type and risk of movement. Sto systems are designed to handle a wide range of situations, from ideal building conditions to highly problematic substrates.

Our position as a market leader in render has been achieved by developing systems based upon the needs of our customers.

All Sto render systems can be finished in any of the Sto synthetic render top coats, providing weather resistant, through-coloured protection in a wide range of colours and textures.

Our technical team is available to discuss the most appropriate system for your needs, as well as detailing requirements specific to your project.

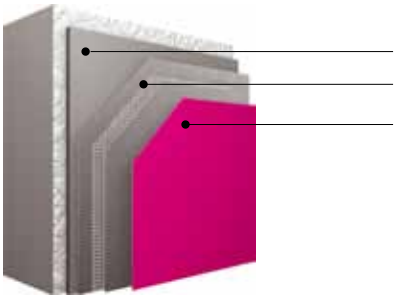
Substrate	Masonry, brickwork, blockwork		Porous/smooth (e.g. aerated concrete)		Damaged substrates	
System						
	StoRend Flex Cote	**StoRend Cote**	**StoRend Fibre Plus**	**StoRend Fibre**	**StoRend Flex**	**StoReno**
Project Type	New build / Refurb	New build / Refurb	New build / Refurb	New build / Refurb	New build / Refurb[1]	Refurb
Cost	●●●	●	●●●	●●	●●	●●●
Adhesion	●●	●●	●●●	●●●	●●	●●●
Levelling	●●●	●●●	●●●	●●●	●	●●
Crack resistance	●●●●	●	●●●	●●	●●●	●●●

[1] Ideally suited for refurb

●●●● Maximum ●●● High ●● Medium ● Low

StoRend Flex Cote

The flagship reinforced render system, setting the industry benchmark for over 25 years.



System components

Levelling coat	**StoLevell Cote** cement-based, polymer modified levelling coat.
Reinforcement	**StoArmat Classic** cement free, flexible reinforcing render with **Sto-Glass Fibre Mesh** embedded into StoArmat Classic while wet.
Render finish	**Stolit**, **StoSuperlit**, **StoSilco**, **StoLotusan** synthetic, through-coloured, low maintenance render finishes. Other finishes are also available.

Dental Clinic, Obihiro, Japan

Our flagship synthetic render system has set the industry benchmark for over 25 years, using only the highest quality materials to provide exceptional crack resistance, weather protection and a durable, good looking render finish.

The cement free StoArmat Classic, combined with a glass fibre mesh, provides up to 15 times more crack resistance than traditional cement based reinforcement. StoArmat Classic is more cost effective than similar products on the market and is still the highest performing reinforcing coat available.

StoRend Flex Cote is strong enough to render over existing surface cracks and bridge joints between dissimilar substrates with the correct Sto detailing (Please refer to Sto Technical Services for more information).

StoRend Flex Cote provides all of the benefits of synthetic render finishes, for weather resistant, breathable and through coloured surfaces with low maintenance requirements.

StoRend systems use specialist materials applied by trained, registered Sto applicators. Please consult your regional Technical Consultant for more details.

System overview

Area of application
- Brickwork, blockwork and masonry substrates.
- Suitable for new build and refurbishment.

Features
- Levelling coat for correcting irregularities in the substrate, up to 20mm in a single application.
- Reinforcing coat and mesh provide more than 15 times the crack resistance of conventional mineralic renders.
- Resistant to weathering.
- Vapour permeable.

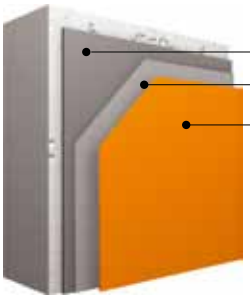
Appearance
- Available in up to 800 colours (depending on choice of finish).
- Through-coloured for lower maintenance.
- Stippled (K), rilled (R) and freestyle (MP) textures and a range of grain sizes available (depending on choice of finish).

Application
- Levelling uneven substrates adds cost to the system. Blockwork should be constructed to fair-face tolerances.
- Ready-to-use components.
- Standard detail drawings available on request.
- Selected Sto products are available using QS technology for winter working in temperatures as low as +1°C.

The technical specifications and information on the products contained in the Technical Data Sheets and system descriptions/approvals must be observed.

StoRend Cote

Cost-effective levelling system with attractive render finish.



System components

Levelling coat	**StoLevell Cote** cement-based, polymer modified levelling coat.
Intermediate primer	**Sto-Primer** filled, pigmented intermediate coat for render finishes.
Render finish	**Stolit**, **StoSuperlit**, **StoSilco**, **StoLotusan** synthetic, through-coloured, low maintenance render finishes. Other finishes are also available.

Office Building SP8, Neuss, Germany

Where the benefits of through-coloured, weatherproof, low maintenance synthetic renders are desired, but cost is a major issue for the project, StoRend Cote is the ideal render system.

The StoRend Cote system has been designed for projects where the risk of substrate movement is minimal. If there is a risk, the StoRend Flex Cote system should be used.

Substrate preparation is essential to ensure correct functioning of the system. The levelling of uneven blockwork will add additional cost to the system. The substrate should therefore be constructed as true as possible, ideally to fair-face tolerances.

StoRend systems use specialist materials applied by trained, registered Sto applicators. Please consult your regional Technical Consultant for more details.

System overview

Area of application
- Brickwork, blockwork and masonry substrates.
- Suitable for new build and refurbishment.

Features
- Levelling coat for correcting irregularities in the substrate, up to 20mm in a single application.
- Resistant to weathering.
- Vapour permeable.

Appearance
- Available in up to 800 colours (depending on choice of finish).
- Through-coloured for lower maintenance.
- Stippled (K), rilled (R) and freestyle (MP) textures and a range of grain sizes available.

Application
- Levelling uneven substrates adds cost to the system. Blockwork should be constructed to fair-face tolerances.
- Ready-to-use components.
- Standard detail drawings available on request.
- Selected Sto products are available using QS technology for winter working in temperatures as low as +1°C.

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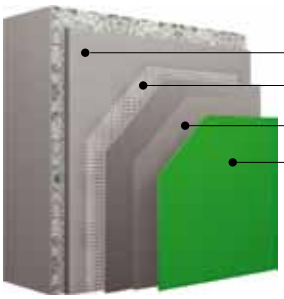
StoRend Fibre Plus

Synthetic render system with modified levelling coat and reinforcement for application onto smooth/porous substrates.



System components

Levelling coat	**StoLevell Reno** cement-based, fibre reinforced levelling coat.
Reinforcement	**Sto-Glass Fibre Mesh** embedded into StoLevell Reno while wet.
Intermediate primer	**Sto-Primer** filled, pigmented intermediate coat for render finishes.
Render finish	**Stolit**, **StoSuperlit**, **StoSilco**, **StoLotusan** synthetic, through-coloured, low maintenance render finishes. Other finishes are also available.

Atrium House, private house, Poland

StoRend Fibre Plus is a high quality render system from Sto using a fibre reinforced levelling coat combined with a tough, flexible reinforcing mesh to yield exceptional levels of crack resistance.

Designed for use on porous or smooth substrates with poor adhesion, such as aerated concrete.

The combination of high polymer content and fibres in the levelling coat provide greater adhesion characteristics. They have the added benefit of slowing down the rate at which the substrate will suck water out of the levelling coat, which can lead to unwanted surface defects, such as crazing.

Sto-Glass Fibre Mesh is embedded into the levelling coat to provide additional crack resistance up to 5 times greater than a conventional cement-based system.

Substrate preparation is essential to ensure correct functioning of the system. The levelling of uneven blockwork will add additional cost to the system. The substrate should therefore be constructed as true as possible, ideally to fair-face tolerances.

StoRend systems use specialist materials applied by trained, registered Sto applicators. Please consult your regional Technical Consultant for more details.

System overview

Area of application
- Smooth or porous substrates.
- Suitable for new build and refurbishment.

Features
- Levelling coat for correcting irregularities in the substrate, up to 20mm in a single application.
- Fibre reinforcement plus mesh provide improved crack resistance caused by thermal movement or mechanically indused stress.
- Resistant to weathering.
- Vapour permeable.

Appearance
- Available in up to 800 colours (depending on choice of finish).
- Through-coloured for lower maintenance.
- Stippled (K), rilled (R) and freestyle (MP) textures and a range of grain sizes available.

Application
- Levelling uneven substrates adds cost to the system. Blockwork should be constructed to fair-face tolerances.
- Ready-to-use components.
- Standard detail drawings available on request.
- Selected Sto products are available using QS technology for winter working in temperatures as low as +1°C.

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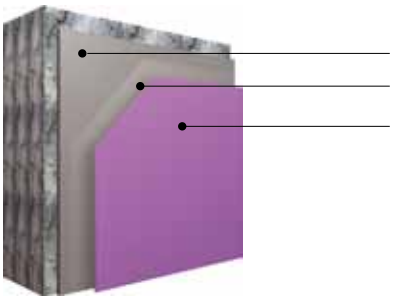
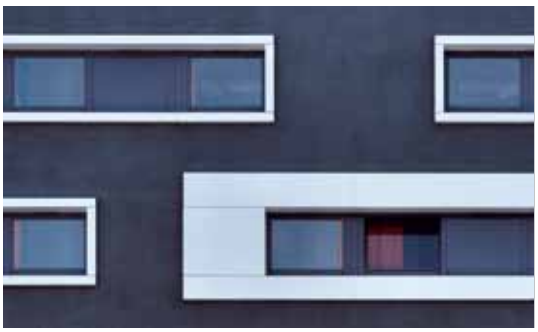
StoRend Fibre

Synthetic render system with modified levelling coat for application onto smooth and porous substrates.



System components

Levelling coat	**StoLevell Reno** cement-based, fibre reinforced levelling coat.
Intermediate primer	**Sto-Primer** filled, pigmented intermediate coat for render finishes.
Render finish	**Stolit**, **StoSuperlit**, **StoSilco**, **StoLotusan** synthetic, through-coloured, low maintenance render finishes. Other finishes are also available.



B&B Hotel, Hamburg, Germany

A modified, fibre reinforced levelling system from Sto, designed for improved adhesion to porous and smooth substrates, such as aerated concrete.

The combination of high polymer content and fibres in the levelling coat provide greater adhesion characteristics. They have the added benefit of slowing down the rate at which the substrate will suck water out of the levelling coat, which can lead to unwanted surface defects, such as crazing.

The StoRend Fibre system has been designed for projects where the risk of substrate movement is minimal. If there is a risk, the StoRend Fibre Plus system should be used.

Substrate preparation is essential to ensure correct functioning of the system. The levelling of uneven blockwork will add additional cost to the system. The substrate should therefore be constructed as true as possible, ideally to fair-face tolerances.

StoRend systems use specialist materials applied by trained, registered Sto applicators. Please consult your regional Technical Consultant for more details.

System overview

Area of application
- Porous substrates.
- Suitable for new build and refurbishment.
- Not suitable for joint bridging.

Features
- Levelling coat for correcting irregularities in the substrate, up to 20mm in a single application.
- Fibre reinforcement provides improved crack resistance caused by thermal movement or mechanically indused stress.
- Resistant to weathering.
- Vapour permeable.

Appearance
- Available in up to 800 colours (depending on choice of finish).
- Through-coloured for lower maintenance.
- Stippled (K), rilled (R) and freestyle (MP) textures and a range of grain sizes available.

Application
- Levelling uneven substrates adds cost to the system. Blockwork should be constructed to fair-face tolerances.
- Ready-to-use components.
- Standard detail drawings available on request.
- Selected Sto products are available using QS technology for winter working in temperatures as low as +1°C.

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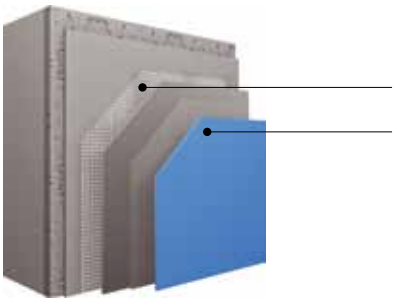
StoRend Flex

Synthetic render system for the renovation of existing render substrates or for application onto StoVentec carrier boards.



1 **StoVentec render carrier board (if required)**
2 **Reinforcement**
3 **Render finish**

System components

Render carrier board (if required)	**StoVentec** 12mm carrier board made from recycled glass granulate.
Reinforcement	**StoArmat Classic** cement free, flexible reinforcing render with **Sto-Glass Fibre Mesh** embedded into StoArmat Classic while wet.
Render finish	**Stolit**, **StoSuperlit**, **StoSilco**, **StoLotusan** synthetic, through-coloured, low maintenance render finishes. Other finishes are also available.

Westbourne Grove Canal Building, London

StoRend Flex is a highly flexible and crack resistant synthetic render system designed for the refurbishment of existing rendered substrates or for application onto the StoVentec render carrier board.

The system uses StoArmat Classic; an acrylic reinforcing coat which is up to 15-times more flexible than traditional cement-based reinforcing coats, when combined with Sto Glass Fibre Mesh. StoArmat Classic has helped revolutionise our approach to the design of render systems. StoArmat Classic is manufactured far more cost effectively than similar products from competitors and is still the highest performing reinforcing coating available to date.

StoRend Flex offers all of the system benefits expected of acrylic render systems, such as completely weather proof, breathable and through coloured, low maintenance surfaces.

As a thin coat render system, please ensure that all surfaces are completely level before application. If surfaces require levelling, StoRend Flex Cote should be used in preference.

StoRend systems use specialist materials applied by trained, registered Sto applicators. Please consult your regional Technical Consultant for more details.

System overview

Area of application
- Render carrier board or existing level render substrates.
- Ideal for refurbishment projects.

Features
- Reinforcing coat and mesh provide more than 15 times the crack resistance of conventional mineralic renders.
- Can be used to bridge existing cracks and board joints (expansion joints through the wall must be mirrored)
- Resistant to weathering.
- Vapour permeable.

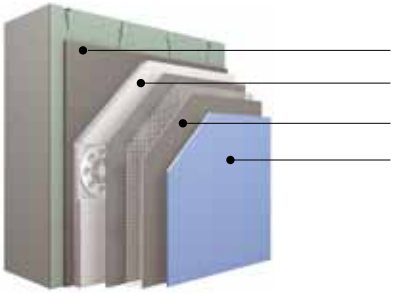
Appearance
- Available in up to 800 colours (depending on choice of finish).
- Through-coloured for lower maintenance.
- Stippled (K), rilled (R) and freestyle (MP) textures and a range of grain sizes available.

Application
- If applying to levelled render, the substrate must be primed. If using StoVentec carrier board, no primer is required.
- Ready-to-use components.
- Standard detail drawings available on request.
- Selected Sto products are available using QS technology for winter working in temperatures as low as +1°C.

The technical specifications and information on the products contained in the Technical Data Sheets and system descriptions/approvals must be observed.

StoReno

Reinforced and dowelled synthetic render system for the renovation of damaged render or external wall insulation systems.



System components

Adhesive bedding coat	**StoLevell Uni** adhesive coat for fixing StoReno Plan carrier board.
Carrier board	**StoReno Plan** recycled glass carrier board with dowel recesses, reinforced with glass fibre mesh on both sides.
Reinforcement	**StoArmat Classic** cement free, flexible reinforcing render with **Sto-Glass Fibre Mesh** embedded into StoArmat Classic while wet.
Render finish	**Stolit**, **StoSuperlit**, **StoSilco**, **StoLotusan** synthetic, through-coloured, low maintenance render finishes. Other finishes are also available.

StoReno is an innovative system for the renovation of render and external wall insulation systems, avoiding the disruption caused by demolition and removal.

The StoReno system ensures the sustained reliability of facades, even on problematic substrates. The system is relatively thin, meaning that existing elements such as window sills can usually be left in place.

The functional core of the StoReno system is the StoReno Plan render carrier board, which consists of 96% recycled glass granulate. It is laminated on both sides with glass fibre mesh and incorporates a dowel fitting strip.

A range of through-coloured, ready-to-use synthetic render finishes serve as top coats.

Private house, Horgen, Switzerland

System overview

Area of application
- Damaged render and external wall insulation.
- Ideal for refurbishment projects.

Features
- Reinforcing coat and mesh provide more than 15 times the crack resistance of conventional mineralic renders.
- Can be used to bridge existing cracks and board joints (expansion joints through the wall must be mirrored)
- Resistant to weathering.
- Vapour permeable.

Appearance
- Available in up to 800 colours (depending on choice of finish).
- Through-coloured for lower maintenance.
- Stippled (K), rilled (R) and freestyle (MP) textures and a range of grain sizes available.

Application
- Ready-to-use components.
- Standard detail drawings available on request.
- Selected Sto products are available using QS technology for winter working in temperatures as low as +1°C.

The technical specifications and information on the products contained in the Technical Data Sheets and system descriptions/approvals must be observed.

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