



StoPoren Panel Facade System
Solid construction
with lightweight concrete

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Reinforced with a Sto Render System for maximum system longevity, reliability and weather resistance, the StoPoren Panel Facade System delivers quality and high-performance value for all architectural and construction demands, residentially and commercially.

Developed in Europe, lightweight, steel-reinforced autoclaved aerated concrete (AAC), approximately 20% the weight of traditional concrete, became commercially available in the 1930s. This innovative building material has gained popularity as a solid, durable, energy-efficient product providing insulation, fire and sound resistant properties.

Easy to use, StoPoren Panel construction combined with a ventilated cavity design is functional and versatile, reducing on-site project costs, meeting today's increasing demands for a dependable and solid exterior facade.



StoPoren Panel Facade System

Easy to use; this versatile energy-efficient system with an aerated composition provides insulation, fire and sound resistant properties recommended in the construction of today's residential and commercial properties

Materials you can rely on

The StoPoren Panel Facade System incorporates a proven Sto Render System over lightweight StoPoren Panels, autoclaved aerated concrete (AAC), which combines the highest quality standards and compliance requirements to provide long-term performance. Available throughout New Zealand from Sto Warehouses and the Sto Contractor network.

Solid construction with lightweight concrete

StoPoren Panel is made from autoclaved aerated concrete (AAC) and consists of sand, cement, lime, gypsum, water and an expansion agent. When processed this expands up to five times to achieve a weight approximately 20% that of concrete. Combined with ductile steel-reinforcement, the panels provide strength and security, guarding against substrate or seismic movement; are lightweight, easy to install, incredibly robust and when installed as part of the StoPoren Panel Facade System are guaranteed to meet New Zealand Building Code (NZBC) requirements.

Ventilated cavity design

The StoPoren Panel Facade System provides a ventilated cavity design. This incorporates a 20 or 40 mm ventilated and drainage cavity between the interior and exterior facade, and acts as a drying mechanism. This rainscreen system where the masonry facade stands proud of the exterior frame is based on tried and proven traditional principles.

Non-combustible and fire resistant

Manufactured from non-combustible material, the StoPoren Panel Facade System promises peace of mind when it comes to safety. This smart, functional building material has impressive fire-resistance properties to delay the spread of a fire and help protect occupants and premises.

Faster builds

StoPoren Panels are 2200 x 600 x 50 mm in dimension and laid horizontally to build a solid permanent structure. Measured, cut and laid, these solid panels stack up quickly, to close in the exterior effortlessly. This easy-to-use building material can cut residential and commercial build costs and lower construction time considerably.

Creating comfortable environments

With a personalised choice of rendered finish, the StoPoren Panel System is aesthetically attractive, and environmentally friendly. The innovative aerated design produces thermal qualities which support New Zealand energy-efficiency standards; providing exterior insulation against temperature fluctuations in the warm summer months, and as a barrier layer in the cooler months. With lower energy costs and impressive environmental benefits, the StoPoren Panel Facade System consists of the ideal choice of building materials to create a comfortable environment.

Acoustically engineered for modern life

The StoPoren Panel Facade System enhances the soundproofing of buildings, providing a buffer against external noise; ideal for use in apartment units and residential builds to guard against annoying noises. Acoustic performance levels achieved by the StoPoren Panel Facade System can reach up to STC: 45.

Green builds for a healthier environment

The manufacturing process of StoPoren Panel is highly efficient, using materials derived from naturally occurring resources. It is energy efficient, emits no pollutants and produces zero toxic waste. Any manufacturing waste is recycled back into the mixing process, thus earning ISO 14001 certification. The finished products are breathable, inert and contain no toxic ingredients. On-site building waste is also kept to a minimum due to the ease of customised cutting to size and greater reusability of off-cuts.

BRANZ Appraised

The StoPoren Panel Facade System has been tested and certified by BRANZ to ensure the elements meet the structural, weathertight and durability requirements as stipulated by the New Zealand government standards and building codes.



Left: The StoPoren Panel Facade System utilises autoclaved aerated concrete, which is reinforced with ductile steel to provide long-term protection.

Sto Render Systems

The perfect formula of modern technology with the added security of a StoWarranty and StoService Assurance for maximum performance and longevity

Sto renders are manufactured in Germany for guaranteed quality and application consistency. Sto organic renders have evolved over 50 years with a successful global history covering over 100 million square metres.

Crack resistance

The impact of climatic conditions and seismic activity can seriously threaten a property's facade. The binders in Sto renders are highly flexible, providing much greater resistance to surface cracks than traditional cement-based renders.

Vapour permeable

Sto renders promote breathability and water-vapour permeability, preventing moisture from becoming trapped between the render and substrate. Water retention behind the cladding is thus avoided, whereas with elastomeric plaster or paint, water can build up behind the coating, eventually leading to blistering.

Weather resistant

Sto renders guard against changing weather and climatic conditions to prevent and protect buildings from water damage. All Sto cement-free renders are polymeric, allowing them to repel water far more effectively than traditional thick-coat plasters.

The StoWarranty

Installations are carried out by a Sto Registered Licensed Building Practitioner Contractor with the added protection of a Sto 15 or 20 Year Warranty with StoService Assurance. This guarantees building code compliant materials are used and the application is in accordance with building code standards, including a service plan for long-term performance.

For more information read our StoArmat Warranty brochure at www.sto.co.nz



StoArmat bend test



Sto Render System



StoArmat impact test

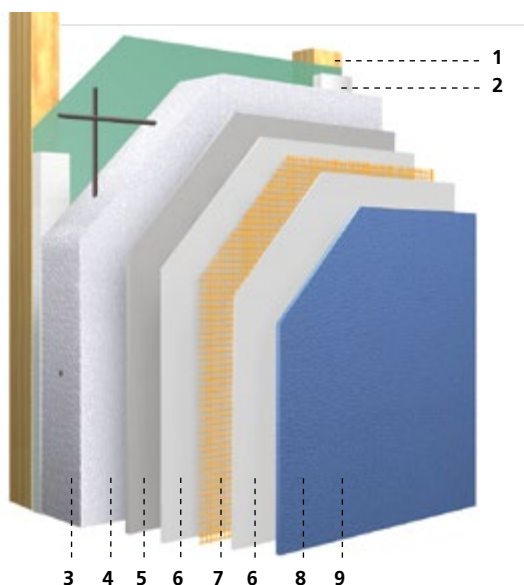
A bend test demonstrating extraordinary flexibility and an impact test proving the high-fracture resistance of StoArmat renders.



Blistered coating

Water vapour molecules pass through Sto renders and coatings while still promoting maximum weather-tight properties. Elastomeric plasters and paints can result in facade blistering and distortion as water vapour molecules become trapped.

StoPoren Armat Render System



1. Building Frame with Building Wrap

2. Cavity Batten

High-density polystyrene battens or timber spaces.

3. Substrate: StoPoren Panel

A solid, reinforced lightweight concrete panel (AAC).

4. Sealer: S-Protect WS205 Silane

Stay-dry sealer for AAC materials.

5. Basecoat: Poren Render

Lightweight mineral render with good build properties and water-retention agents and machine-application properties.

6. Reinforcement Render: StoArmat Render

An organic, weather resistant, cement-free and breathable, high-impact render, with a crack resistance six times higher than that of standard cement-based plasters.

7. Mesh: Sto Glass Fibre Mesh

Easy-to-install, meets the highest requirements for crack, stress and alkalinity resistance.

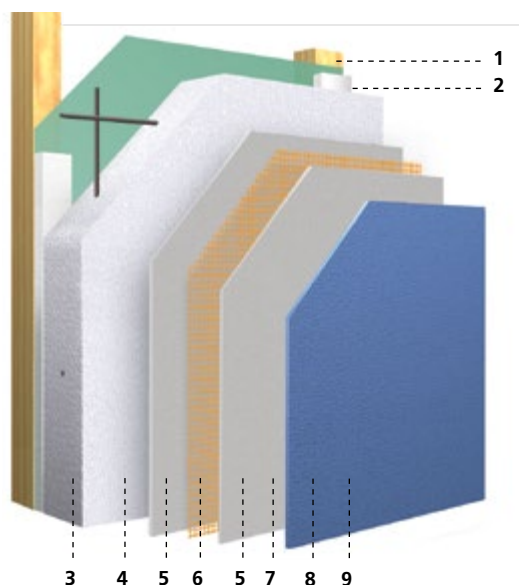
8. Coloured Finishing Renders: Stolit Renders

Organically bound, highly weather resistant, strong, hard-wearing, impact-resistant, pre-coloured finishing renders.

9. Facade Paint: StoColor

Finishing coating based on IQ Technology for functional facades.

StoPoren Render System



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4. Sealer: S-Protect WS205 Silane

Stay-dry sealer for AAC materials.

5. Render: Poren Render

Lightweight mineral plaster with good build properties, water-retention agents and machine-application properties.

6. Mesh: Sto Glass Fibre Mesh

Easy-to-install, meets the highest requirements for crack, stress and alkalinity resistance.

7. Sealer: StoPlex W

Water-based, siloxane-enhanced sealer with water repellent and stability properties.

8. Coloured Finishing Renders: Stolit Renders

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9. Facade Paint: StoColor

Finishing coating based on IQ Technology for functional facades.



StoArmat 20 Year Warranty
with StoService Assurance



Sto 15 Year Warranty
with StoService Assurance

Stolit: Coloured finishing renders

Providing your facade with optimum protection

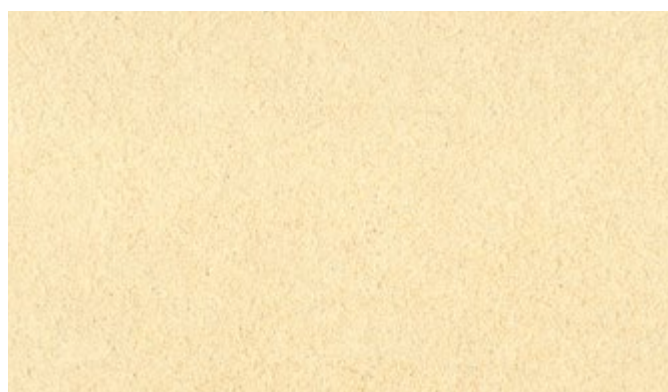
Stolit organic finishing renders are manufactured in Germany incorporating the latest technology; certified globally and successfully applied to rendered substrates in every climatic zone for over 50 years.

The Stolit range provides the perfect combination of properties: durable, strong, hard-wearing, impact-resistant, malleable, weather-resistant, colour-stable and highly resistant to microorganisms. In addition, its vapour permeability allows your building to breathe while still repelling water.

Whichever finishing render is chosen, each one is part of a tested and approved system, providing optimum protection and durability; This makes it indispensable in today's construction industry.

Benefits at a glance

- Available in the full spectrum of colours.
- Extremely low water absorption.
- Optimum surface adhesion.
- Shock-proof and highly resistant to cracking.
- Exceptional resistance to mechanical stress.
- Outstanding colour stability and product stability process – does not require an equalisation coat.
- Excellent application properties.



Stolit MP



Stolit MP Natural





All Stolit renders are easy to apply and can be tinted using the StoColor System or matched to the colour of your choice using the Sto Spectrometer.



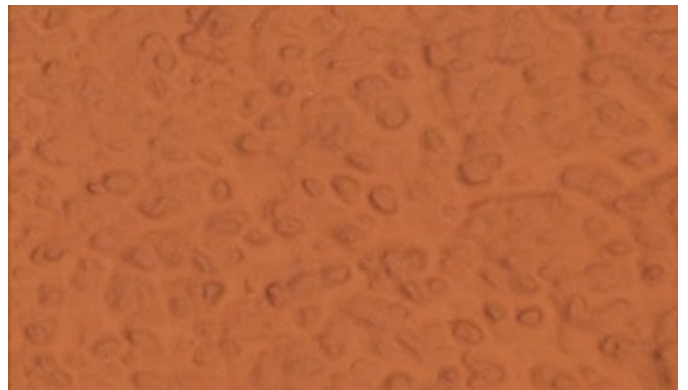
Stolit K 1.0mm



Stolit K 1.5mm



Stolit K 2.0mm



Stolit K 3.0mm



Stolit renders are polymeric, allowing them to repel water and breathe, providing long-term protection superior to traditional, painted plaster systems.



Stolit Milano

The perfect finish

Facades as individual as you and your project

The StoColor finish, a serviceable coating embodying intelligent technology for a range of surface functions to compliment the architectural structure and design. The StoColor System, with 800 shades or matched to any colour using the Sto Spectrometer, provides a clear framework and systematic approach to colour based on integrated layers, combining texture and colour for aesthetic appeal.

Tested protection and quality

Sto paints establish easy-to-maintain surfaces and an outer layer of the Sto protection system, fulfilling all-important physical building requirements in terms of serviceability and functionality. StoColor facade paint is based on Sto intelligent technology, inspiring an innovative range of surface functions.



The StoColor System comprises of 800 colours for use in architecture - or can be matched to any colour using the Sto Spectrometer to meet any colour design preference.



Sto has been conducting intensive research in the field of bionics for many years. The result: facade paint with iQ – Intelligent Technology where innovative surface functions provide clear added value.

StoColor X-black	StoColor Lotusan®	StoColor Maxicryl	StoColor Lastic Satin
<p>Strong colours for cool facades. A facade paint with X-black technology for dark-coloured facades.</p>	<p>Dirt runs off with the rain. A tried-and-tested facade paint with patented Lotus-Effect® technology for facades that stay cleaner for longer.</p>	<p>A natural looking, matt acrylate facade dispersion paint with high covering power and colour fastness. Suitable for masonry, brick, precast and all Sto rendered substrates.</p>	<p>Durable elastomeric facade paint that bridges cracks in the underlying substrate, for a waterproof solution.</p>
<p>At a glance:</p> <ul style="list-style-type: none"> • Reflects the near-infrared spectral region of solar energy. • Wide variety of colours and shades, a high level of colour stability. • Especially suited to dark colour shades. • Natural matt finish. 	<p>At a glance:</p> <ul style="list-style-type: none"> • Maximum resistance to atmospheric soiling. • Natural protection against algae and fungal attack. • Full colour selection. • Lotusan® is available with additional film protection. • Natural matt finish. 	<p>At a glance:</p> <ul style="list-style-type: none"> • Excellent hiding power. • Full colour selection. • Easy, simple application. • Natural matt finish. 	<p>At a glance:</p> <ul style="list-style-type: none"> • Elastomeric dispersion paint. • Water-vapour permeable. • Excellent hiding power. • Ideal refurbishment coating. • Good colour selection. • Low-sheen satin finish.
			

Well advised

Let yourself be inspired

Individual customer consultation and project support is the basis of a successful business relationship at Sto. Whether on the telephone, in the sales centre or on the construction site – the Sto team are pleased to provide you with advice, assistance and creative ideas.

Sto customer service

Service at Sto goes far beyond the development and sale of high-quality products. Ultimately, any product is only as good as its application. This is why Sto places great emphasis on service and consultation. The Sto team are focused on their customers, providing comprehensive information and tips on the practical use of new products and relaying detailed knowledge from the Sto technical department.

Smart and sustainable

Sto's impact on performance is big, but the footprint on the environment is small. All Sto products are vapour permeable, easy to apply, safe and non-toxic with low VOCs. Sto incorporates sustainable practices throughout its operations, earning ISO 9001 for quality assurance and 14001 certification for its environmental management system. Many Sto products help reduce the environmental impact of construction by providing insulation, reducing maintenance requirements and extending the life cycle of building facades.

For contact details of your nearest Consultant, please see the reverse side of this brochure.



BRANZ Appraised



QUALITY ASSURED



EN ISO 14001

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