



Building with conscience.

StoArmour Facade Panel System

Sustainable construction for today's environment

Facade



StoArmour Facade Panel embodies the latest in AAC technology with corrosion resistant ductile steel reinforcing, delivering a durable facade panel from a dependable supplier.

Tested for weathertightness, structural stability and fire protection to ensure all the building performance requirements are satisfied.





Solid construction with lightweight concrete

Autoclaved Aerated Concrete (AAC) has evolved into an innovative lightweight concrete building material used worldwide in various construction systems.

StoArmour Facade Panel embodies the latest in AAC technology with corrosion resistant ductile steel reinforcing, delivering a durable facade panel from a dependable supplier.

The StoArmour Facade Panel System finished in the StoArmat Miral Render System has passed a series of stringent compliance tests for commercial and residential construction, providing a superior weathertight and fire resistant facade system with good sound insulation properties and impact resistance.

- BRANZ Appraisal No. 772.
- Weathertightness testing: E2/VM1 and AS/NZS 4284 for residential or commercial high-rise construction.
- Face load tested up to 4.5 kPa ULS (booth connection sheared at 7.8kPa).
- Vertical spread of fire testing: ISO 5660-1 and BS 8414-2.
- Fire Resistance Rating (FRR): 120/120/120.
- Installation by Sto Registered Contractor (Licensed Building Practitioner).
- StoArmat 20 Year Warranty with StoService Assurance.

Cover: Cantilever House, Havelock North
Architect: Sumich Chaplin

Right: Erskine Housing Development, Wellington
Developer: The Wellington Company
Architect: Common Architecture





StoArmour Facades

This innovative lightweight concrete facade system provides superior weathertightness, fire resistance and sound insulation properties required in the construction of today's residential and multi-level buildings.

Materials you can trust

The StoArmour Facade Panel System incorporates the world-leading Sto render system over steel reinforced StoArmour Panel, combining 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 in construction

StoArmour Panel is made from autoclaved aerated concrete (AAC), which is approximately 20% the weight of traditional concrete. Combined with ductile steel-reinforcement, the panels are lightweight, easy to install, robust and when installed as part of the StoArmour Facade Panel System, are guaranteed to meet New Zealand Building Code (NZBC) requirements.

Ventilated cavity design

The StoArmour Facade Panel System incorporates a 20 or 40 mm deep ventilated drainage cavity, separating the external facade from the structural frame. The system is based on tried and proven weathertightness principles and has been tested to E2/VM1 and AS/NZS 4284.

Reduces external noise

Engineered for modern life, the StoArmour Facade Panel System enhances the soundproofing of buildings, providing a buffer against external noise.

Tested against the spread of fire

Recent events have focused worldwide attention on providing facade solutions for residential and multi-storey construction that prevent the spread of fire. The StoArmour Facade Panel System leads the way incorporating a non-combustible AAC panel with spread of fire compliance testing completed at BRANZ to ISO 5660-1 and BS 8414-2 (with assessment against BR 135 and AS 5113), and fire resistance testing to AS 1530.4 achieving a fire resistance rating (FRR) of 120/120/120.

Creating comfortable environments

With a personalised choice of rendered finish, StoArmour Facades are aesthetically attractive and durable. The innovative aerated panel produces thermal qualities that support New Zealand energy-efficiency standards, providing exterior insulation against temperature fluctuations.

Faster builds

StoArmour Panels are available 50 mm thick x 2200 mm long x 600 mm wide, or 75 mm thick x 2200 mm long x 600 mm wide. They are installed horizontally over a ventilated drainage cavity to build a solid permanent structure. Measured, cut and laid, these solid panels stack up quickly, to close in the exterior effortlessly and can cut residential and commercial build costs and reduce construction time.

Sustainable properties

Extending the life-cycle of the building facade, inhabitants, health and well-being, plus having a lower carbon footprint than many other manufactured masonry products, ensures we are treading lightly.



Left: StoArmour Facade Panel is made from autoclaved aerated concrete (AAC) and is reinforced with ductile steel, coupled with a robust anti-corrosion coating to provide long-term protection.

BRANZ Appraised

The StoArmour Facade Panel System has been tested and certified by BRANZ to ensure the elements meet the structural, weathertightness, durability and fire requirements as stipulated by the New Zealand government Standards and Building Codes.





Sto Render Systems

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

Crack resistance

The impact of climatic conditions and natural disruptions can seriously threaten building facades. Sto renders are highly flexible, providing much greater resistance to surface cracks than traditional cement-based renders. Sto systems provide optimal security and help maintain property investment by extending the life-cycle of the building facade.

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 proof

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

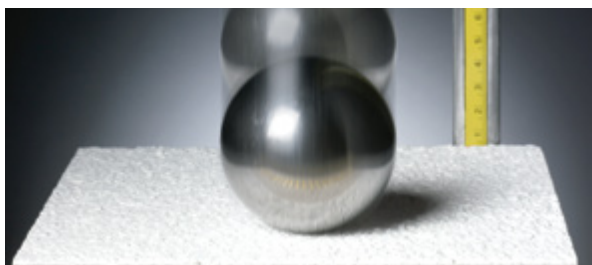
Installation is carried out by a Sto Registered Contractor (Licensed Building Practitioner) and comes with the added protection of a Sto 15 or 20 Year Warranty with StoService Assurance, ensuring the materials used and application meets building code standards, with a service plan for long-term performance.



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.

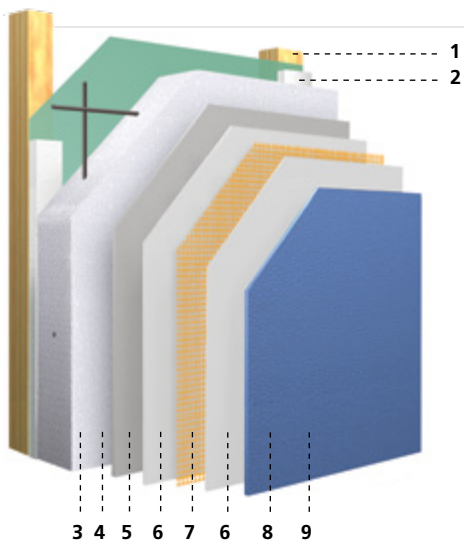


Blistered coating

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.

StoArmat Miral Render System

A high-performance render system, providing exceptional crack resistance, durability and weather protection.



1. Building Frame with Building Wrap or RAB

2. Cavity Batten

VH High-density EPS battens or H3.1 Timber Battens.

3. Substrate: StoArmour Facade Panel

A solid, steel reinforced lightweight concrete panel (AAC).

4. Sealer: S-Protect WS205 Silane

Stay-dry sealer for AAC materials.

5. Basecoat: StoLevell Novo Render

Lightweight mineral render with great build properties and water retention agents.

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 Coating: StoColor or StoClear

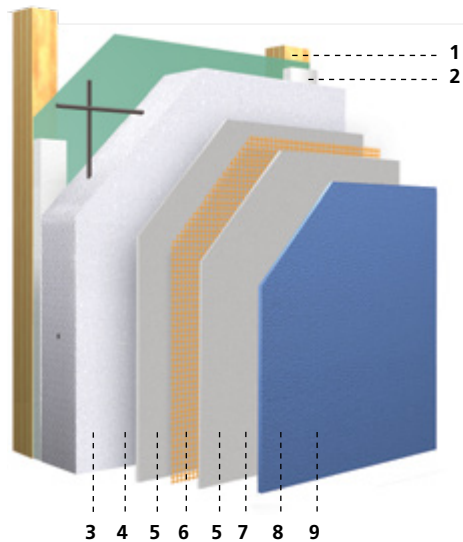
StoColor coating based on IQ Technology for functional facades or a StoClear sealer.



**StoArmat 20 Year Warranty
with StoService Assurance**

StoMiral Render System

A high-performance, cost-effective render system, that builds on the recognised stability of solid construction.



1. Building Frame with Building Wrap or RAB

2. Cavity Batten

VH High-density EPS battens or H3.1 Timber Battens.

3. Substrate: StoArmour Facade Panel

A solid, steel reinforced lightweight concrete panel (AAC).

4. Sealer: S-Protect WS205 Silane

Stay-dry sealer for AAC materials.

5. Render: StoLevell Novo Render

Lightweight mineral render with great build properties and water retention agents.

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 consolidating sealer with water repellent and stability properties.

8. Coloured Finishing Renders: Stolit Renders

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

9. Facade Coating: StoColor or StoClear

StoColor coating based on IQ Technology for functional facades or a StoClear sealer.



**Sto 15 Year Warranty
with StoService Assurance**



Stolit Coloured Finishing Renders

Facades as individual as you and your project.

A great combination of properties

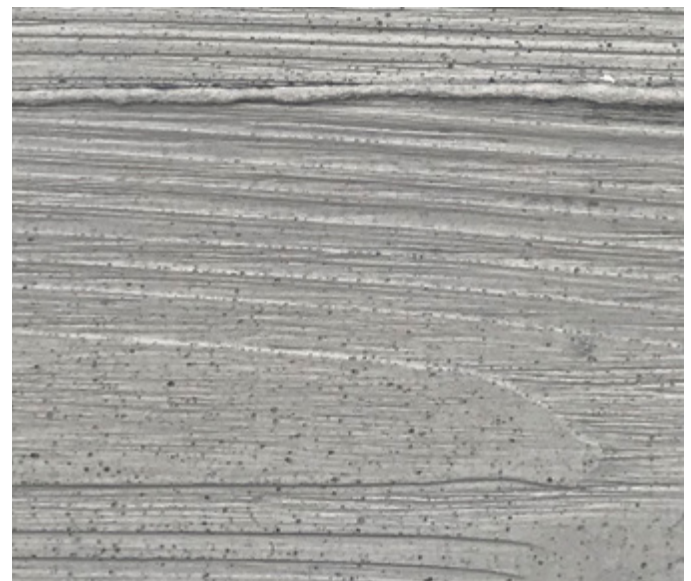
Stolit organic finishing renders are manufactured in Germany incorporating the latest technology. They are certified globally and have been successfully applied to rendered substrates in every climatic zone for over 50 years.

The Stolit range, in a variety of grain sizes and textures, provides the perfect combination of properties; durable, hard-wearing, impact-resistant, malleable, breathable yet weather-resistant and highly resistant to microorganisms. Whichever finishing render is chosen, each one is part of a tested and approved system, providing optimum protection and durability.

In addition, Stolit coloured finishing renders are tinted, so the intensity of colour and everyday wear will not affect the appearance or stability of the rendered exterior facade.



Stolit Milano - A coloured smooth render finish that can be applied and styled to duplicate the natural surface of precast concrete panel.



StoVeneer Wood - A mineral veneer board installed to achieve a timber board or timber board concrete formwork look.



Stolit MP - Coloured fine finishing render that can be floated, sponged or applied as a light adobe render.



Stolit MP Natural - Coloured fine finishing render with a salt and pepper look, that can be floated, sponged or applied as a light adobe render.



Stolit K 1.0mm - Coloured self-gauging float finishing render.



Stolit K 1.5mm - Coloured self-gauging float finishing render.



Stolit K 2.0mm - Coloured self-gauging float finishing render.



Stolit K 3.0mm - Coloured self-gauging float finishing render.



StoColor

The StoColor System

The StoColor System with 1000 colour shades, or AC Architectural Colours with a range of 300 colour shades, provide a systematic approach to colour based on integrated layers, combining texture and colour to complement the architectural structure and design.


Alternatively, the colours of your choice can be matched electronically.

Tested protection and quality

Sto facade paints or clear sealers establish easy-to-maintain surfaces and an outer layer of the Sto protection system, fulfilling important building requirements in terms of maintenance and functionality.



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 Maxicryl	StoColor Dryonic®	S-Protect SC Clear Sealer
<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>Biomimetic facade paint with Dryonic® Technology, for dry and clean facades to protect against algae and fungal attacks, with SunBlock and X-black Technology.</p>	<p>Invisible silane treatment to repel water instantly and help prevent the adhesion of contaminants.</p>
<ul style="list-style-type: none"> • Excellent hiding power. • Easy, simple application. • Natural matt finish. • Full colour selection. 	<ul style="list-style-type: none"> • Can be applied to virtually all conventional construction substrates, render, concrete, brick, metal or wood. • Dryonic® Technology for dry and clean facades to protect against algae and fungal attacks. • High level of colour stability thanks to SunBlock Technology. • X-black (heat reflective) Technology keeps the facade temperature below +65°C. • Slight silk gloss visible depending on angle. • Full colour selection. 	<ul style="list-style-type: none"> • Invisible silane treatment for the Stolit MP range and Stolit Milano render finishes. • Hydrophobic (water repellent), the treated facade stays dry. • Helps keep the facade clean, by preventing the adhesion of contaminants that are easily removed naturally by rain. • Invisible finish.

With you every step of the way

Well advised

The Sto architectural and technical team support architects, planners, and Sto Contractors from the design to application, right through to the finished facade.

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 here for their customers, providing comprehensive information, teamed with an experienced network of Sto registered LBP accredited Contractors who provide the best practical force on the construction site.

Smart and sustainable

Sto products are designed to contribute to the overall sustainability of a project. Benefits include; protection and extended life cycle of building facades; health and well-being. Sto incorporates sustainable practices throughout its operations, earning ISO 9001 for quality assurance and 14001 certification for its environmental management system, which relates to the entire process chain, from the procurement of the raw and recycled materials, to production, packaging and logistics.

Contact

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





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