

Sto Armat Miral Render System

Product Technical Statement: 104725



Sto render system for reinforced concrete block construction.

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Level of assurance needed to demonstrate NZ Building Code Compliance

Supporting documentation should include technical information by manufacturer and either an independent assessment or reference to an industry-based scheme



Sto confirms that this minimum level of assurance has been met or exceeded by the following:

BRANZ Appraisal
[488 \(2006\)](#)

Technical Statement

Product Description

The StoArmat Miral Render System for reinforced concrete block construction is a BRANZ appraised, high performance system that provides exceptional crack resistance and weather protection.

The StoArmat Miral Render System consists of a 5-10 mm thick basecoat incorporating LevelLite or StoLevell Novo mineral render to straighten any irregularities, a nominal 3 mm thick StoArmat Classic meshed reinforcement render, selected Stolit K or Stolit MP coloured finishing render and selected StoColor facade paint or clear sealer.

Stolit K finishing renders are available in a flat 1.0, 1.5, 2.0 or 3.0 mm aggregate. Stolit MP, MP Natural and Milano are fine pre-coloured sponge finishes.

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.

Stoanz Limited recommends that the selected finish colour must have a minimum Light Reflectance Value (LRV) of 20%. Where a colour with an LRV of less than 20% is selected, two (2) coats of StoColor X-black heat reflective facade paint are required.

Using modern technology with enhanced and well-engineered materials, this render system provides a solution that is strong, durable, fracture resistant and impact resistant. Finished with StoColor facade paint for ease of maintenance, the system is a modern, contemporary solution, designed to last the distance.

Scope of use

The StoArmat Miral Render System has been appraised by BRANZ as a solid plaster system for buildings within the following scope:

- with substrates of concrete masonry up to 3 storeys, with a maximum height from ground to eaves of 10 m; and,
- with floor plan area limited only by seismic and structural control joints; and,
- with supporting structures designed and constructed in accordance with the NZBC; and,
- situated in NZS 3604 Wind Zones up to, and including Extra High.

The StoArmat Miral Render System has also been appraised for bond, durability and weathertightness of the render system for concrete masonry buildings subject to specific design with no building height or wind exposure restriction.

The StoArmat Miral Render System must only be applied on vertical surfaces except for sills, concrete reinforced parapets and concrete reinforced balustrades which must have a minimum 10° slope and be waterproofed in accordance with the requirements of the Technical Literature and building designer.

The StoArmat Miral Render System is appraised for use with aluminium window and door joinery that is installed with vertical jambs and horizontal heads and sills.

New Zealand Building Code (NZBC)

The product will, if employed in accordance with the supplier's installation and maintenance requirements, assist with meeting the following provisions of the building code:

- **Clause B2 Durability:** Performance B2.3.1(b), B2.3.1(c)
- **Clause C3 Fire affecting areas beyond the fire source:** Performance C3.7
- **Clause E2 External moisture:** Performance E2.3.2
- **Clause F2 Hazardous building materials:** Performance F2.3.1

Notes

The StoArmat Miral Render System meets the performance requirements of NZBC Clause B2.3.1(b), 15 years for the render system, and the requirements of Performance B2.3.1(c), 5 years for the paint finish.



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Company Contact Details



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The StoArmat Miral Render System will not present a health hazard to people.

Supporting Evidence

The product has and can make available the following additional evidence to support the above statements:



BRANZ Appraisal

[488 \(2006\)](#)

Product Criteria

Design requirements

The StoArmat Miral Render System is expected to have a serviceable life of at least 30 years provided the system is maintained in accordance with the Sto Specification, Warranty and BRANZ Appraisal, and the renders are continuously protected by a weathertight coating and remain dry in service.

Concrete masonry must be designed and constructed in accordance with NZS 4210 and either NZS 4229 or AS/NZS 1170.

The StoArmat Miral render and finishing system has a peak heat release rate less than 100 kW/m² and a total heat released less than 25 MJ/m². The system is suitable for use on buildings with a SH Risk Group classification, at any distance to the relevant boundary. Refer to NZBC Acceptable Solutions C/AS2 – C/AS6, Paragraph 5.8.1 for the specific exterior surface finish requirements for other building Risk Groups.

For a full breakdown of the system components, [Click Here](#).

Installation requirements

Installation and finishing of components and accessories supplied by Stoanz Limited and the Sto registered contractor must be completed by trained applicators, approved by Stoanz Limited.

Maintenance requirements

Regular maintenance is essential to ensure the performance requirements of the NZBC are continually met and to ensure the maximum serviceability of the system. Carry out an annual inspection and record this on the Sto Construction Systems Maintenance schedule.

Regular cleaning (at least annually) of the paint coating is required to remove grime, dirt and organic growth and to maximise the life and appearance of the coating. Grime may be removed by brushing with a soft brush, warm water and detergent. The paint system must be recoated at approximately 8-10 yearly intervals in accordance with Stoanz Limited instructions. Clear sealer systems require recoating at 5-7 yearly intervals.

Warrantees

With an increasing emphasis on the implementation of servicing exterior building elements, Sto has launched the StoArmat 20 Year Warranty and StoService Assurance documentation. This system, administered by Sto and carried out by Sto Contractors, ensures all specified StoArmat Rendered Systems are registered, serviced and certified every two and a half years to provide assurance that all building elements pertaining to the rendered facade are performing.

Refer to the StoArmat Warranty Document by [clicking here](#).

Company Product Information

Environmental

Protecting the natural basis for life and improving quality of life are important aims in social policy. Sto actively pursues these aims, always acting in accordance with the company's guiding principle: "Building with conscience."

In order to define and implement its ecological targets, Sto has developed a system of environmental management conforming to international standards. This relates to the entire process chain – from the procurement of the raw product, to production, packaging and logistics.

Quality Assurance



ISO 9001 (Quality Management)

Videos

[StoArmat Plaster Ball Drop Test](#)



Date last validated: **07 July 2020**



Date last updated: **07 July 2020**