



**Stoanz Ltd**  
*Authorized partner of Sto*

## **STOMIRAL PLASTER SYSTEM SPECIFICATION**

### **STOMIRAL PLASTER OVER CONCRETE BLOCK GARDEN WALLS**

Based on BRANZ Appraisal No 515 (2007) - ACAD Details [www.sto.co.nz](http://www.sto.co.nz) building with Sto

**Project:**

**Prepared for:**

#### **StoMiral Plaster System on concrete block garden walls**

This specification is written for the application of the **StoMiral Plaster System** incorporating; **StoFlexyl waterproofing** as required, **LevelLite / Multiscreed** meshed basecoat plaster to straighten the blocks, followed by **Stoplex W sealer** and **Stolit K 1.0 or 1.5mm** coloured finishing render coated in **StoColor Maxicryl** façade paint over concrete block garden wall construction.

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## **1. CONSTRUCTION & DETAILING**

### **Responsibility**

All work in this section shall be the responsibility of the Main Contractor. All concrete block construction must be in accordance with the project drawings, specifications and block manufactures technical data. The Main Contractor is to ensure that they are fully conversant with all Sto standard installation and fixing details (Sto ACAD details [www.sto.co.nz](http://www.sto.co.nz)) and their responsibilities before the block work commences. The Main Contractor is also responsible for all liaisons with the various sub contractors to ensure that all items or elements affecting the Sto plaster system are correctly detailed before installing the plaster system.

### **Concrete Blocks**

The concrete block installation including reinforcement and concrete infill shall be made in strict accordance with the project drawings, specifications and the block manufactures technical data. In particular the blocks shall be laid true in both vertical and horizontal planes with all openings correctly formed and waterproofed in accordance with Sto details. Control joints must be installed as per the projects structural drawings or manufactures details to manage shrinkage and structural stress. At least 28 days shall be allowed after concrete placement as per AS/NZS 2311:2000, for curing and stabilization to take place before installing the plaster system. All maximum tolerances shall be in strict accordance with NZS 4210: 2001 2.7.1.4 Table 2.2, i.e. no more than 3mm surface alignment deviation over a 1200mm radius. The concrete blocks shall be clean, dry and free of all surface contaminants before plastering and the Main Contractor is to ensure that any areas or details adjacent to the Sto plaster system have been adequately waterproofed or flashed to avoid any water migration behind the plaster.

### **Concrete Block Wall Construction**

The information contained in this Specification is based on our experience and testing and represents the latest information available at the date of production. No responsibility is taken for uses to which this information may be put, but we advise that where application of products and processes is in complete conformity with this specification an appropriate warranty is available. We reserve the right to alter or update information parameters and formulations at any time without prior notice.

- Control joints are placed at maximum 6.0metre centres refer to the project documentation and NZS 4229 for placement and detailing.
- Mortar to be minimum 12.5MP, tool smooth and compressed as per NZS 4210.
- Where specified use manufactures bagged mortar.
- Mortar to full depth of webbing up to 20mm thick in first course and then 10mm +/- 3mm.
- Ensure there is no impediment to grout flow remove ends or biscuits to prevent air pockets
- Blocks should be filled in 1.2 lifts and mechanically vibrated to avoid air voids and subsequent efflorescence.
- Remove any grout slurry from block faces before it sets.
- Drying times vary according to block thickness, grout and weather a minimum 28 days is required for settlement and curing – the blocks must be completely dry before coating.
- Where retaining walls are back filled a 50 year tanking membrane is required.
- Always waterproof blocks behind or adjacent to any overlays or abutments such as concrete staircases, separate adjoining walls, etc.
- Exposed tops of walls must be waterproofed and should be finished with block caps.

## 2. SURFACE PREPARATION

### Responsibility

All work in this section shall be the responsibility of the **Main Contractor** or his sub contractors with the **Sto Contractor** responsible for the Sto plaster work unless it is otherwise expressly agreed.

### Detailing

All plaster detail should be in accordance with the specific project details or Sto Miral ACAD details available from [www.sto.co.nz](http://www.sto.co.nz).

### Plastered Wall Caps & Foundations

All plastered horizontal surfaces must have a minimum 10° fall and have **StoFlexyl waterproofing** membrane installed on **wall caps**. **StoFlexyl** must be correctly mixed (drill mix 1/1- with **fresh** cement) and applied with a layer of Sto mesh embedded into the StoFlexyl coat giving a minimum film thickness of 1.0mm. The StoFlexyl should extend 75 mm up or down adjacent vertical surfaces as per Sto ACAD Details and be left to dry normally overnight.

Foundation splash zones are to have two coats of Sto Flexyl waterproofing brush applied over the basecoat plaster from 150mm above ground level to 50mm below the plaster termination point or join onto paved surfaces. **Note: StoFlexyl meshed waterproofing** has been tested by BRANZ to meet **AS/NZS 4858** for a waterproof membrane as required by **CCANZ : CP01 2011 & E2/AS3**.

### Penetrations

Penetrations such as fixtures shall be adequately flashed and waterproofed prior to the plaster installation. Note: All penetrations through the Sto Plaster System shall be adequately sealed with MS Sealant applied as a minimum 6.0mm joint after the mesh coat. PEF rod should be used as a backer material as required depending on the width of the joint. Any electrical wiring that penetrates the Sto plaster system shall be in cased in appropriate sized uPVC conduit sheathing acting as an insulator installed @ a minimum 5° down wards rake. The conduit and any plumbing piping etc must then be sealed using M S Sealant once the base meshed coat has been applied.

### Architectural Shapes & Profiles

Decorative detailing shall be correctly cut to size and fitted using **Gluecoat Mortar** notch towelled to the back of the shape prior to placing. As required construction fixings are used to mechanically fix large or heavy shapes but care is required to avoid distortion. Joins are butted together using **StoEze Joint filler** and any control joints must be carried through the profile.

## 3. STOMIRAL PLASTER SYSTEM

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## Responsibility

All work in this section shall be the responsibility of the **Sto Contractor** up to and including provision of the plaster system, sealant beads and coating system. The **Sto Contractor** is to satisfy themselves that the concrete block surfaces are satisfactory before plastering commences.

## Materials

**Stoanz Ltd** supplies all the following materials:

**LevelLite / Multiscreed meshed** basecoat plaster  
**Stolit K 1.0 or 1.5mm** coloured finishing render  
**StoColor Maxicryl** façade paint  
**Sto uPVC pre meshed drip edges**

**Sto Stoplex W** sealer  
**Sto Flexyl** waterproofing  
**Sto uPVC 12/8mm control joints**

## General

Installation of the **StoMiral Plaster System** shall be carried out incorporating; **Sto Flexyl** waterproofing as required, **LevelLite / Multiscreed** meshed basecoat plaster, sealed with **Stoplex W** and finished in **Stolit K 1.0 or 1.5mm** coloured finishing render coated with **StoColor Maxicryl** façade paint.

## Control Joints

All control joints as designated by the project drawings, set out by the engineer or manufacturer's specifications must be mirrored through the plaster system. **Sto uPVC 12/8mm control joints** are normally installed using **Gluecoat** plaster to bed the joints in. Either paint two coats in the coating system and leave as a negative detail or fill with MS Sealant concave tooled.

## Waterproofing – Walls Caps /Horizontal Surfaces/Foundation Splash Zones

Apply **Sto Flexyl waterproofing** correctly mixed with Portland cement to the top of all walls embedding a layer of Sto Glass Mesh into Sto Flexyl and float to a level plane surface extending the coating 75 mm up or down adjacent vertical surfaces as previously detailed **Note:** Foundation splash zones are to have two coats of StoFlexyl thinned to brushing consistency applied from 150mm above ground level to 50mm below the plaster termination point.

## LevelLite/ Multiscreed meshed plaster

To clean, dry and cured block surfaces, apply one straightening coat of **LevelLite / Multiscreed** by hawk and trowel or pump at approximate thickness of 6.0 mm (thickness to level-dependent on surface minimum 3.0mm). Float or screed the surface with an **h** rule to achieve an even straight plane surface free of hollows and deviations and while the plaster is still wet, lightly embed **Sto mesh** ensuring adjacent drops of mesh are overlapped by a minimum of 75mm floating the surface to ensure that the mesh has been embedded into the plaster and leave to dry. Remove any ridging in **LevelLite / Multiscreed** with a Sto Rasp. As required install Sto pre meshed corners on all external corners.

## Stoplex W Sealer

To clean dry, cured plastered surfaces apply one coat of **Stoplex W** sealer by brush and roller.

## Sealant Installation:

After the sealer coat application has dried, all junctions between joinery/adjacent surfaces/differing materials junctions and the mesh coat shall be sealed with **MS Sealant** and allowed to cure.

## Finishing Render

### Stolit K 1.0 or 1.5mm coloured finishing render

To all exterior plastered surfaces apply **Stolit K 1.0 or 1.5mm** coloured finishing render with a stainless steel trowel gauging to the thickness of the aggregate size and finished with a plastic trowel to the requisite pattern and leave to dry overnight. The spreading rate shall be approx 9 -12 m<sup>2</sup>/per pail.

### StoColor Maxicryl façade paint

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All rendered and sealed surfaces shall receive one (1) coat of **StoColor Maxicryl** façade paint tinted to the selected colour and applied by brush and roller at approximately 6/7 m<sup>2</sup> per litre. **Note:** Always maintain wet edges between cutting in and roll in tight to ensure an even film build is maintained.

#### 4. GENERAL NOTES

##### Colour

The project colours are normally selected by the Architect or Client and if required the applicator shall prepare a sample for approval before the main works commence. Stoanz recommend a minimum LR Value of 20% to avoid interior heat retention and thermal stress on elevations exposed to the sun.

#### 5. MAINTENANCE

##### Refer; Sto Maintenance Schedule for comprehensive guide

The **StoMiral Plaster System** is to be cleaned annually by washing to remove all existing surface contaminants with special attention to non-rain washed areas. When recoating is required, at the 7/8-year period to maintain long-term integrity and a pristine condition this can be carried out using the appropriate coating over a cleaned surface. Where a colour change is required Stoanz Limited should be consulted for a specific specification. Physical damage must be repaired using Sto plasters and recoating as required.

Annual inspections are to be implemented after completion to clearly identify any faults in the cladding, sealant beads, flashings and any other connections. A repair process must be implemented immediately to address any faults so the long-term warranty is not compromised.

#### 6. WARRANTY

The **StoMiral Plaster System** described in this specification is warranted for a period of ten (10) years from the date of practical completion. This is to comply with the relevant clauses in the New Zealand Building Code for this type of building element with normal maintenance requirements as set out in the Sto Maintenance Schedule are followed.

The warranty is supplied by the Sto Contractor with a five (5) year workmanship warranty signed off on completion of the work. The warranty document and the material warranty is issued by Stoanz Limited provided that;

- (a) All specified work is carried out by the approved Sto Contractor who must complete and sign the Sto QA Compliance Procedure Forms and a PS3 Workmanship Warranty
- (b) All work is carried out in accordance with this Specification or any written amendments issued by the Manufacturers.
- (c) The warranty does not cover situations where the plaster system is subjected to physical disturbance, chemical spillage or interference.

