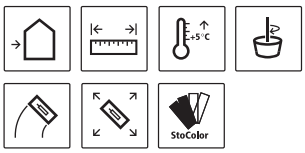
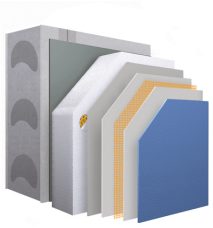
Sto Specification New Zealand

SS256I StoTherm Armat Insulation System over AFS LOGICWALL®

StoTherm Armat Insulation System
Over AFS Logicwall® Construction
Based on BRANZ Appraisal No. 604 and CCANZ CP 01:2014
Sto Details www.sto.co.nz

Sto Registration: To register your project with Stoanz Ltd please email the completed specification to info@sto.co.nz





1. PROJECT DETAILS	
Specifier:	
Project and Address:	
Project Owner:	
Sto Warranty:	**StoTherm Insulation System 15-year Warranty with StoService over AFS Logicwall®**
StoTherm Armat Render System over AFS Logicwall® construction:	This specification details the application of the **StoTherm Armat Insulation System** incorporating: **Selected StoTherm Insulation Panels** adhesive and mechanically fixed with **StoLevell Novo** and **StoTherm Anchors** over **AFS Logicwall®** construction, rendered in **StoLevell Novo** basecoat, sealed with **Stoplex W sealer** then rendered in **StoArmat Classic** meshed reinforced render finished in selected **Stolit coloured finishing render** coated with selected **StoColor facade paint** or **S-Protect SC sealer** on **Stolit MP finishes.** The **StoTherm Armat Render System** is built on 50 years of worldwide experience in insulating and refurbishing masonry buildings to achieve energy efficiency.
Select Finishing Render:	Select
Select Facade Coating:	Select
Select Insulation:	Select Insulation – White EPS, Graphite EPS, Mineral wool
Sto Registration Number: (Sto Use Only)	i.e. 23.01_StoReg tec_sales_SS256I_project address
Project Notes:	

Stoanz Ltd | Authorized Distribution Partner of Sto SE and Co KGaA.
72 Abel Smith Street, Wellington, 6011, New Zealand.
Ph: +64 4 801 7794, fax: +64 4 384 9828, email: info@sto.co.nz

SS256I StoTherm Armat Insulation System over AFS LOGICWALL®

2. CONSTRUCTION & DETAILING

2.1 Responsibility

All work in this section shall be the responsibility of the Main Contractor, unless previously agreed in writing. Stoanz Limited accepts no responsibility for defective workmanship in relation to the application of the Sto system, or for defects in the design, construction, or condition of the building, either as built or in relation to the works.

The Main Contractor is to ensure that they are fully conversant with exterior legislation requirements, the project specifications and details, current Sto Specification and Sto CAD details (www.sto.co.nz) and any specific AFS Logicwall® installation requirements relating to the Main Contractor's responsibilities before any works commence. The Main Contractor is also responsible for the various subcontractors to ensure that all items relating to weathertightness, penetrations and dissimilar material junctions affecting the construction system are strictly in accordance with project specific details, manufacturer's instructions and Sto CAD details, i.e. items such as roofs, soffits, openings, lights and security fittings, electrical wiring, flashings, deck membranes, dissimilar junctions etc. that abut, flash or penetrate the system. The Main Contractor shall also ensure that all exterior licensed work is undertaken by an LBP registered contractor and the joinery is installed in accordance with the project drawings, manufacturer's details and Sto CAD details.

A **Sto Quality Assurance Document** is to be filled out as a record of the work undertaken by the Sto Contractor and AFS Logicwall® installer.

2.2 AFS Logicwall® Construction

The AFS Logicwall® installation, including reinforcement and concrete infill, shall be undertaken in strict accordance with the project drawings, specifications, and the manufacturer's technical data. The walls shall be formed true in both vertical and horizontal planes with all joinery and service openings correctly formed and waterproofed in accordance with Sto details. Control joints must be installed as per the project's structural drawings or AFS Logicwall® manufacturer's details to manage shrinkage and structural stress. It is recommended that the interstorey floors should be poured within the structure leaving the outer shell to continue to avoid cracking. At least 28 days shall be allowed after concrete placement as per CCANZ CP01: 2014, for curing and stabilisation to take place before commencing the Sto Render System. The exterior surface shall be clean, dry and free of all surface contaminants before commencing and the Main Contractor is to ensure that any areas or details adjacent to the Sto Render System have been adequately waterproofed or flashed to avoid any water migration behind the render system. Building tolerances should be within MBIE Guide to tolerances.

2.3 Construction

- Joinery openings shall be formed with rebates.
- Vertical control joints are placed in accordance with the project structural drawings, manufacturer's documentation or refer to NZS 4229 for guidance on placement and detailing.
- Ensure there is no impediment to grout flow to prevent air pockets
- Fill as per the AFS manual and mechanically vibrate to avoid air voids.
- Remove any slurry from wall faces before it sets.
- Drying times vary according to thickness and weather. A minimum 28 days is the standard to allow for settlement and shrinkage. The walls must be dry before commencing.
- Where retaining walls occur around inhabited spaces, a 50 year rated waterproofing or tanking membrane is required. Garden retaining walls must be waterproofed against any back fill to avoid water migration damaging the finished render.

- Always waterproof masonry surfaces before installing any adjacent overlays or items such as concrete / timber staircases, abutting garden walls, soffits, attached porches, posts etc.
- Exposed wall tops must be capped or waterproofed with StoFlexyl meshed waterproofing.

2.4 Insulation

Thermal resistance requirements of the building envelope shall be determined using the Schedule or Calculation methods of NZBC Acceptable Solution H1/AS1 for all housing and buildings up to 300 m^2 and NZBC Acceptable Solution H1/AS2 for housing and buildings greater than 300 m^2, or the Modelling method in H1/VM1. The minimum construction R-value for walls that do not contain embedded heating elements is R2.0, and for heated walls is R2.9.

Foundations: H1/AS2 require –Vertical edge insulation with an R -value of 1.0 m^2 K/W, installed on all exterior vertical faces of the concrete slab / wall footings, extending from the outermost top edge down to bottom of wall footing.

Rasped StoTherm XPS sheets can be used for vertical edge insulation with 30mm providing the required RV 1.0.

Refer to the StoTherm Masonry Foundation Specification for other insulated foundation options.

2.5 Soffits

Soffits are normally fixed before the rendering commences with a 6-8 mm finishing bead of compatible MS Sealant applied after the mesh coat. The main contractor is to ensure any weatherproofing required on the walls behind the soffits or adjacent surfaces is carried out before the soffits are installed.

2.6 Wall Insulation R Values

- **StoTherm Insulation EPS Panels**: 40 mm (R0.98), 50 mm (R1.22), 60 mm (R1.46), 80 mm (R1.95) and 100 mm (R2.43) based on a thermal conductivity (k-value) of 0.041 W/m °C.
- **StoTherm+ Graphite Infused Insulation Panels**: 40 mm (R1.25), 50 mm (R1.56), 60 mm (R1.88), 80 mm (R2.5) and 100 mm (R3.13) based on a thermal conductivity (k-value) of 0.032 W/m °C.
- **StoTherm Mineral Wool non-combustible panels**: 60 mm (R1.5) and 80 mm (R2.0) – above ground use only.

Note: Other EPS insulation panel thicknesses and grades are available.

2.7 Control of External Fire

The specified Sto renders have been tested to EN 13501-1 and have achieved an A2-s1, d0 rating. The StoArmat Render System has been tested to ISO 5660.1 and achieved a peak heat release rate of less than 100 kW/m^2 and total heat released of less than 25 MJ/m^2. The system is therefore suitable for use on buildings at any distance to the relevant boundary. **Note:** Commercial buildings and Multi Unit complex's, contact Stoanz Ltd for more specific information re NZBC C/AS2.

3. STOTHERM PANEL INSTALLATION

3.1 Responsibility

All work in this section shall be the responsibility of the **Sto Contractor**, unless otherwise expressly agreed.

The masonry surfaces must be clean dry and free of any contaminates before any panels are installed.
If others fix the insulation panel, a Sto QA document must be signed off and the Sto Contractor shall satisfy themselves that the panels are acceptable before proceeding. Adequate protection of all dissimilar materials and adjacent surfaces must be undertaken before commencing.

3.2 Aluminium joinery

All joinery shall be fixed over **StoFlexyl waterproofing** prior to render application. Before fixing joinery, fill any holes in the rebates and use **StoFlexyl** mixed correctly (1:1 with fresh cement) and thin to a thick brushing consistency before applying two coats onto the **internal head, jamb and sill rebates** of the blocks including the rebated step. The **exterior head, jamb and sill rebates** are to be coated with trowel applied **StoFlexyl meshed membrane** extending out over the StoTherm panels to the external edge.
Sealing the joinery perimeter with MS Polymer sealant applied over a primer at the head and jambs forms the primary seal, while the sill is left open with a 5 mm drainage gap. To complete the waterproofing process **air seals** are required to be installed around all interior joinery to rebate openings.

Note: StoFlexyl meshed waterproofing has been tested by BRANZ to AS/NZS 4858 as required by **CCANZ CP 01: 2014 and E2/AS1**.

Note: Joinery air seals and sealant (primer required) are the responsibility of the window installer.

Note: On un-insulated block reveals, StoTherm panels are installed before the **StoFlexyl mesh coat** is applied so that the mesh extends out to the external corner of the StoTherm panel covering the block to panel transition.

3.3 Insulated Reveals

To insulate the block reveals with 20 or 30 mm StoTherm panels, the internal rebate must be increased to provide approximately 25 mm of joinery cover by installing one (1) or two (2) fibre cement sheet packers (e.g. JH Axent Trim 89 mm wide x 19 mm thick) adhered with 5 mm of Sto Adhesive Mortar and masonry fixings before the 20-30 mm thick StoTherm EPS insulation panels are installed around the reveal and they are reinforced with StoFlexyl meshed waterproofing.

3.4 Foundations Capillary Break

The foundations should be waterproofed with **StoFlexyl waterproofing** or another proprietary system. StoTherm panels that are to be used in ground as foundation insulation must have a thinned down coat of **StoFlexyl** brushed/rolled onto all faces before being installed with **StoFlexyl** adhesive.

Bituminous products should be sand/grit blinded or have a proprietary water based bituminous adhesive. A **StoFlexyl capillary break** is formed below the interior floor level and generally 150 mm above ground using a continuous **StoFlexyl meshed strip** adhered onto the masonry substrate by approximately 100 mm, extending out over the StoTherm panel previously adhered to the foundation. See the Sto CAD foundation details.

3.5 Parapets, Balustrades and Wall Caps

All rendered horizontal wall surfaces should have a minimum 10º fall and have **StoFlexyl meshed waterproofing** installed over the basecoat render. On parapets, balustrades, and wall caps, **StoFlexyl waterproofing** 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 total film thickness of 1.5 mm. The meshed **StoFlexyl** should extend 75 mm up or down adjacent vertical

surfaces as per Sto CAD details and be left to dry overnight. All **StoFlexyl waterproofing** is to be over coated in **StoArmat Classic meshed** reinforcement render.
StoFlexyl meshed waterproofing has been tested by BRANZ to **AS/NZS 4858** as required by **CCANZ CP 01:**

3.6 Penetrations

Penetrations such as waste pipes, fixing brackets and fixtures shall be installed on Sto EPS high density Power Bloc's. Power Bloc shall be installed at the same time as the insulation panel is installed. Sto EPS Zylinders, Sto EPS Spirals or Sto EPS masonry Iso Darts can be used after the panels are installed if Power Bloc has not been installed. All piping and electrical wiring penetrations through the insulation panels must be weatherproofed as per Sto and/or project specific details. All wiring must be sleeved in PVC conduit and the ends sealed using a compatible MS Polymer Sealant.

3.7 Insulation Panels

Starting from the Sto plinth foundation detail or a starter track, ensure the StoTherm Insulation panel layout is installed true from the base in a brick pattern with no continuous vertical joints, using alternating panels on the external corners. Install Sto uPVC, trays, channels, and flashings as required at termination points.

Use 600 x 1200 mm sized panels to avoid pillowing especially on uneven substrates. All the EPS panels are manufactured from white S-grade or graphite grey polystyrene to AS 1366.3. Ensure the **StoTherm Panel** layout is arranged in a **brick pattern with** no continuous vertical joints. If, after fixing, there are any gaps in the panel joints due to variations, **adhesive foam** shall be used to foam fill the gap before proceeding with the rendering.

Note: The minimum sized insulation for countersunk fixings is 60 mm panel using **StoTherm impact anchors**. Ensure the substrate is suitable, i.e. sound, load bearing and straight as required before installing the insulation panels. Repair any defects.

3.8 Control Joints

All existing control joints in the blocks as designated by the project drawings must be brought through with a 10 mm gap in the panels. Control joints must be installed in the mesh coat using the **Sto uPVC Control Joints** ensuring the mesh coat does not overlay the "V" joint. Once dry, remove the cleaning tab, sealant fill any joints and either apply two coats of the selected paint and leave as a negative detail or fill with a compatible **MS Polymer Sealant** applied in accordance with the manufacturer's Technical Data Sheets and priming requirements.

3.9 Adhering Insulation Panels

The **selected Insulation panels** shall be trued from the base, laid in a horizontal brick pattern, and incorporate a StoTherm insulated foundation detail. **The Insulation Panels** shall be fixed using a 280 mm x 10 mm notched trowel or **StoTherm notched trowel** by applying a full coat of **StoLevell Novo** to the back of the 600 x 1200 mm **insulation panels.** All panels are installed immediately while the adhesive is wet, tight butted and levelled on the **StoLevell Novo. They shall be allowed to set** before being mechanically fixed.

Insulation panel joints shall be tight butted and sheet joints, gaps etc. flush filled with low expansion adhesive polyurethane foam as per the manufacturer's TDS sheets before the panels are rasped once cured to obtain a flat surface.

Note: Always ensure the perimeter of the panel (not sides) is well coated with **StoLevell Novo**. Depending on the substrate the notch size may need to vary to compensate for irregularities in the surface. Always ensure there is enough adhesive applied to bond and bed the panels onto the surface - if required coat both surfaces.

Stoanz Ltd | Authorized Distribution Partner of Sto SE and Co KGaA.
72 Abel Smith Street, Wellington, 6011, New Zealand.
Ph: +64 4 801 7794, fax: +64 4 384 9828, email: info@sto.co.nz

3.10 StoTherm anchors (fix in accordance with Sto details – new work requires 3-4 anchors per m^2)

Insulation panels are mechanically fixed in accordance with the **StoTherm anchor** pattern. Once the adhesive is set, use a rotary impact hammer drill with an 8 mm masonry bit at the designated fixing centres (note drill 5 mm extra). On 600 x 1200 mm panels that have been adhered with **StoLevell Novo**, use two (2) **StoTherm anchor** fixings per panel centred midway through the panel 300 mm in from the ends.

Note: Detailing shall be in accordance with Sto CAD details. Panels at soffits and foundations (above the capillary line) are fixed at 600 mm centres, and external corner panels are staggered and fixed at 600 mm centres.

StoTherm Anchors are placed in the pre-drilled holes and countersunk using the **ST fixing tool** attached to an electric drill with the **ST tool plate** stopping flush to ensure correct panel compression and security. All fixings are then plugged with the **Sto EPS or mineral wool insulation caps** set flush to eliminate thermal bridging.
StoTherm 75 mm or 95 mm Impact Fixings can be used for 40, 50, 60 mm thick panels. They are face fixed flush with the surface or countersunk in 50, 60, 80 mm panels using a **Sto Router tool** to cut the fixing hole. The fixings are then covered with EPS insulation caps.

Sto Ecotwist Anchors are available for StoTherm 100 mm to 400 mm thick insulation panels. The fixings are placed in the pre-drilled hole and, using the Ecotwist MT fixing tool, are drilled below the surface with the 60 mm spiral head stopping on contact with the concrete wall. The small surface hole is plugged with a Sto VE EPS plug.

Note: For design wind pressures above 2.5 kPa refer to Stoanz Limited.

3.11 Architectural Profiles and Banding

Architectural shapes used to create decorative detailing shall be correctly cut to size and fitted using **StoFlexyl adhesive** 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. Joints are butted together using **StoFlexyl** and any control joints must be mirrored through the profile. Profiles shall be pre-meshed or receive a Sto mesh coat and are placed after the wall reinforcement mesh coat with the perimeter edge meshed onto the wall.

4. STOTHERM ARMAT RENDER SYSTEM

4.1 Responsibility

All work in this section shall be the responsibility of the **Sto Contractor** who must assure themselves that the surfaces to be rendered are dry, free of contamination and satisfactory before work commences. Adequate protection of all adjacent surfaces shall be undertaken prior to commencing.

Note: Ensure the surfaces of all wall panels have been cleaned before commencing.

4.2 Selection

The **StoTherm Armat Render System** shall be carried out in stages incorporating: **StoLevell Novo** basecoat render**, Stoplex W sealer, StoFlexyl** waterproofing, **StoArmat Classic** meshed reinforcement render finished in the **selected Stolit K, MP** or **Milano** coloured finishing render coated in the **StoColor** façade paint or sealed with **S-Protect SC stay clean** for **Stolit MP,** or **Milano** render.

4.3 Materials

Stoanz Ltd supplies all the following materials:

Selected Insulation Panels fully adhered with StoLevell Novo render	**StoLevell Novo basecoat render with Stoplex W sealer**
StoTherm uPVC pre meshed corner angles, finishing edges, drip edges etc..	**StoArmat Classic meshed reinforcement render**
Selected Stolit coloured finishing render	**Selected StoColor facade paint or S-Protect SC stay clean on natural finishes**
StoFlexyl waterproofing and Adhesive Foam for EPS insulation	**Sto Power Bloc, Sto Zylinder blocks, Sto Spirals, Iso Darts**

4.4 Detailing

The masonry joinery reveals, wall caps and foundations are to be detailed with **StoFlexyl meshed waterproofing** as per previous Clauses 3.2, 3.3, 3.4 and 3.5. **Sto pre-meshed corners, reveal drip edges, finishing edges and control joints** are lightly embedded in the **StoLevell Novo basecoat render** before being encapsulated in the **StoArmat Classic meshed reinforcement render**.

4.5 Basecoat Render

To clean, dry and sound StoTherm insulation panels that been lightly abraded to open the surface and level the joints, apply **StoLevell Novo** basecoat render by hawk and trowel at approximate thickness of 5-6 mm to leave an even, straight surface free of hollows and deviations. While the render is still wet, lightly embed **Sto uPVC pre meshed corners, drip edges** and **finishing edges** and reinforce any stress points with mesh butterflies. Once set remove any ridging or bumps in the basecoat with a Sto feathered straight edge, Grid Plane or Sto rasp and leave ready for the **StoArmat r**einforcing coat. Application procedures for the **StoLevell Novo** must be in accordance with the Sto Technical Data Sheets.

Note: Ensure the **StoFlexyl meshed waterproofing** over the **wall caps** and around the **joinery openings** is undertaken over the dry basecoat before the **StoArmat** meshed reinforcing coat.

4.6 Sealer

To clean, dry **StoLevell Novo** basecoat render that has been rasped flat, apply one coat of **Stoplex W** primer by brush and roller to seal the surface at approximately 8 m² per litre.

4.7 StoArmat Classic reinforcement render
StoArmat Classic HD with hardener for accelerated drying in cold damp weather are also available.

To clean, dry, base coated surfaces apply an even coat of the selected **StoArmat Classic** render by hawk and trowel at approximately 2 mm thick and while the **StoArmat Classic** is still wet, lightly apply **Sto mesh** ensuring adjacent drops of mesh are overlapped by a minimum 75 mm and float the surface to ensure the mesh has been embedded in and allow to dry. Apply a further coat of **StoArmat Classic** at approximately 1.5 mm (min DFT 2.5 mm) by hawk and trowel to cover the mesh and leave an even surface plane free of voids or deviations.

Once dry, remove any slight ridges etc. with a Sto rasp ready for subsequent render. **StoArmat Classic** must be installed in accordance with the Sto Technical Data Sheets.

Stoanz Ltd | Authorized Distribution Partner of Sto SE and Co KGaA.
72 Abel Smith Street, Wellington, 6011, New Zealand.
Ph: +64 4 801 7794, fax: +64 4 384 9828, email: info@sto.co.nz

Always install **Sto pre-meshed uPVC drip edges** on lintels and joinery heads, **Sto pre-meshed** corner angles on external corners and **Sto pre-meshed finishing edges** as detailed.

4.8 Sealant

All junctions or detailing between the render mesh coat and dissimilar materials shall be sealed with compatible exterior MS Sealant in accordance with the manufacturer's Technical Data Sheets using a primer on **StoFlexyl surfaces** and as required for PVC, porous substrates, and dissimilar materials.

Note: Where sealant is being applied directly over StoFlexyl waterproofing, the StoFlexyl must be primed to promote adhesion in accordance with the sealant manufacturer's instructions. The joinery sills must remain unsealed and open to permit ventilation of the window trim cavity.

4.9 Stolit Float Finish Renders (refer to header for selected finish)
Stolit K texture is available in a flat 1.0, - 1.5, 2.0, 3.0 mm aggregate as selected.

- **Stolit K coloured finishing render as selected**

Apply the selected **Stolit K** coloured finishing render to prepared rendered surfaces with a stainless-steel trowel, gauging to the thickness of the aggregate size. Finish with a plastic float to the requisite pattern and allow to dry (normally overnight). The spreading rate shall be approximately 12 m^2 per pail (1.0 mm), 9 m^2 per pail (1.5 mm), 7 m^2 per pail (2.0 mm) and 4 m^2 per pail (3.0 mm).

- **StoColor Façade Paint**

It is recommended that all **Stolit K** surfaces receive two (2) coats of **StoColor Maxicryl or StoColor Dryonic MX façade paint** tinted to the selected colour and applied by brush and roller at approximately 6-7 m² per litre. One (1) coat is acceptable though it will need recoating more frequently. Refer **Section 6. StoService** for recoating requirements.

Note: Maintain wet edges between cutting in and roll in tight to achieve an even film build.

4.10 Selected Stolit MP Finished Renders (refer to front page for selected finish)
Stolit MP fine coloured finish, MP Natural salt & pepper sand, RMP Sponge coarser salt & pepper sand

- **Selected Stolit MP, MP Natural, and RMP Sponge coloured finishing render**

Stolit MP fine, MP Natural sandy and **RMP Sponge sandy** are coloured finishing renders applied in two (2) coats. A basecoat of the selected **Stolit MP** or alternatively, depending on the finish, **Stolit K 1.0 mm** tinted to the selected colour, is applied, and allowed to dry. The finishing coat of **Stolit MP, MP Natural, or RMP Sponge** is then applied, float finished and randomly lightly sponged. Alternatively, the finish can be float finished, sponged, or smooth finished with a S/S Marmorino trowel to the selected pattern. The spreading rate of the **Stolit MP**, **MP Natural or RMP Sponge** is approximately 12-14 m^2 per pail.

- **S-Protect SC Stay Clean Invisible Silane Sealer (clear sealer)**

To selected **Stolit MP**, apply an even coat of **S-Protect SC stay clean** hydrophobic sealer (clear invisible Silane sealer) in a flood coat using a low-pressure sprayer and Sto block brush to work the product into the Stolit render, avoiding runs and brushing in any lingering drips etc. so they do not show up. Surfaces must be well coated, and it is recommended to work in a pattern preferably out of the sun to ensure that there are no misses as the sealer is invisible once dry.

Note: All joinery, glazing and adjacent surfaces must be masked off to prevent the **S-Protect SC Stay Clean** contaminating the surfaces. Any excess product must be removed after 15 minutes to avoid a surface film forming that can be difficult to remove. **Note:** S-Protect SC requires recoating every seven half years depending on the environment.

- **StoColor façade paint (paint finish if selected)**

If selected it is recommended that all **Stolit K** surfaces receive two (2) coats of **StoColor Maxicryl or StoColor Dryonic MX** façade paint tinted to the selected colour and applied by brush and roller at approximately 6-7 m² per litre. One (1) coat is acceptable though it will need recoating more frequently. Refer **Section 6. StoService** for recoating requirements.

Note: Maintain wet edges between cutting in and roll in tight to achieve an even film build.

4.14 Stolit Smooth Finish Render

- **Stolit Milano coloured finishing render**

Stolit Milano is a smooth pre-coloured finish applied in two (2) or three (3) coats. A basecoat of **Stolit Milano** tinted to the selected colour is applied and allowed to dry before the finishing coats of **Stolit Milano** are applied and steel troweled, floated or lightly randomly sponged to the selected pattern. The spreading rate of the Stolit Milano is approximately 16-18 m^2 per pail.

- **S-Protect SC Stay Clean Invisible Silane Sealer (clear sealer)**

To **Stolit Milano**, apply an even coat of **S-Protect SC stay clean** hydrophobic sealer (clear invisible Silane sealer) in a flood coat using a low-pressure sprayer and Sto block brush to work the product into the Stolit render, avoiding runs and brushing in any lingering drips etc. so they do not show up. Surfaces must be well coated, and it is recommended to work in a pattern preferably out of the sun to ensure that there are no misses as the sealer is invisible once dry.

Note: All joinery, glazing and adjacent surfaces must be masked off to prevent the **S-Protect SC Stay Clean** contaminating the surfaces. Any excess product must be removed after 15 minutes to avoid a surface film forming that can be difficult to remove. Refer **Section 6. StoService** for recoating requirements.

5. GENERAL NOTES

5.1 Colour

As selected by the client or specifier, Stoanz Limited recommends that the selected colour must have a minimum Light Reflectance Value (LRV) of 35%. Where a colour less than 35% LRV but above 25% is selected, the render system is finished with two coats of **StoColor Dryonic MX** - **a Sto iQ coating** with **X-Black technology additive** to avoid thermal stress.

StoColor Dryonic MX façade paint with **Sun blocker** and **fast dry film biomimetics**. is available in the StoColor range, with other colours available depending on formulation.

Note: Where Milano render colours are selected with an LRV of less than 10%, the Milano render should be applied in a minimum three coats.

Stoanz Ltd | Authorized Distribution Partner of Sto SE and Co KGaA.
72 Abel Smith Street, Wellington, 6011, New Zealand.
Ph: +64 4 801 7794, fax: +64 4 384 9828, email: info@sto.co.nz

6. STOSERVICE

6.1 StoService - Refer to StoService Document for a comprehensive guide.

The Sto Render System should be cleaned annually by low pressure washing or hosing down to remove surface contaminants with special attention to sheltered areas (as required, use a proprietary house wash sprayed on first with a low-pressure garden spray in accordance with the manufactures instructions). Note refer to StoService Maintenance Documents online www.sto.co.nz.

After cleaning a visual inspection is to be undertaken by the owner or the person undertaking the maintenance to check for any physical damage or faults in the exterior building elements, to ensure any damage or defects are identified and repaired.

To assist the property owner in establishing a regular maintenance cycle, the property owners email address can be registered with service@sto.co.nz. Stoanz Limited will then provide 2½ yearly reminder notices that the property is due to be serviced within the following six months.

Depending on the prevailing environmental conditions and the service record, recoating of the paint finish is normally required at the 7½ to 9-year period where one coat of paint or S-Protect Silane was applied, or 10 – 12½ -years where two coats were applied to maintain long-term integrity. This is carried out using a **StoColor Coating System** applied in accordance with a Sto specification. Where a colour change is required, Stoanz Limited should be consulted.

7. WARRANTY

7.1 StoTherm Armat Masonry Insulation System 15-year Warranty with StoService Assurance

When the **StoTherm Armat Render System** is applied in accordance with the Sto specification, Sto details a warranty is available for the Sto System for fifteen (15) years from the date of practical completion, provided the maintenance requirements as set out in the StoService documents are followed.

This is to comply with the relevant clauses in the New Zealand Building Code for this type of building element being B2 Durability, E2 External Moisture and F2 Hazardous Building Materials

The warranty is supplied by the Sto Contractor on completion of the project with the warranty issued and backed by Stoanz Limited as to the suitability of the material supplied provided that:

a) All specified work is carried out by a registered Sto Contractor who must complete and sign off the Sto Quality Assurance Schedule and the five-year PS3 Workmanship Warranty.

b) All work is carried out in accordance with this Specification, or any written amendments issued by Stoanz Limited.

c) The warranty does not cover situations where the Render system is subjected to physical disturbance, chemical contamination, or interference.

Stoanz Ltd | Authorized Distribution Partner of Sto SE and Co KGaA.
72 Abel Smith Street, Wellington, 6011, New Zealand.
Ph: +64 4 801 7794, fax: +64 4 384 9828, email: info@sto.co.nz

8. DISCLAIMER

8.1 Disclaimer

The information contained in this specification is based on our findings, experience, testing and certification at the revision date. End users are still responsible for establishing the suitability of the specified products regarding their intended use. No liability is undertaken for use of this information outside of Stoanz Limited parameters or for the substrates, design, construction, and project site conditions that are outside of Stoanz Limited's control. Where a Sto registered contractor applies Stoanz purchased products in accordance with the Sto Specifications, Material Technical Data Sheets and Sto Details, a Sto Material Warranty document is available, but the installation of the materials remains the responsibility of the Sto Contractor who provides the PS3 Warranty. Any warranty is conditional on the system being maintained and serviced in accordance with the StoService documentation. Stoanz reserves the right to alter or update information and formulations at any time without prior notice.

Stoanz Ltd | Authorized Distribution Partner of Sto SE and Co KGaA.
72 Abel Smith Street, Wellington, 6011, New Zealand.
Ph: +64 4 801 7794, fax: +64 4 384 9828, email: info@sto.co.nz