

S-Protect Specification New Zealand

SS920 S-Protect SC on BHN Silane Concrete Protection System

S-Protect SC on BHN primer Silane Protection System
on exterior solid concrete surfaces.



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

1. PROJECT DETAILS

Specifier:

Project & Address

Project Owner:

Sto Warranty:

S-Protect SC – BHN Silane System 7½-year Warranty with S-Protect Service

S-Protect SC on BHN Silane Protection System for solid concrete substrates.

This specification details the application of the **S-Protect Silane Protection System**, for masonry and stone surfaces to achieve an invisible protection barrier using **S-Protect BHN Silane impregnation primer, sealed with S-Protect SC stay clean silane treatment** for the protection of mineral surfaces against the ingress of water, water soluble salts (chlorides) and surface contaminants.

Suitable substrates

Instiu Concrete
Precast Concrete
Concrete Floors
Brick work (test first)

S-Protect BHN silane primer – impregnation primers for bare masonry surfaces that reacts with interfaces of the pores and capillaries of the masonry surface to form an invisible water-repellent interfacial compound to stop the uptake of water and soluble salts into the masonry concrete substrate.

S-Protect WS 410 primer / SC sealer can be used on Veneer Block or Brick Veneer Construction, but solid Concrete Block construction requires the **Sto Protect Coating System** to provide a durable weathertight coating solution in accordance with CCANZ CP 01:2014.

Registration Number:
(Stoanz Use Only)

i.e. 23.01_StoReg tec_sales_SS920SC_project address

Project Notes:

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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 relationship to the application of the S-Protect System, or for defects in the design, construction, or condition of the building, either as built or in relation to the works or site conditions.

The Main Contractor is to ensure that they are fully conversant with legislation requirements, the project specifications, and details, current S-Protect SC specification and details and any specific 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, manufactures instructions and details i.e. items such as joinery openings, lights and security fittings, fire equipment, electrical wiring, flashings, deck membranes, dissimilar junctions etc. that abut, flash or penetrate the system. The Main Contractor shall also ensure that all exterior work is undertaken by a registered S-Protect Contractor and LBP registered contractors and the window and door joinery is installed in accordance with the project drawings, manufactures details and S-Protect details. Surfaces should be within MBIE guide to tolerances.

A S-Protect Service Quality Assurance Document is to be filled out as a record of the work undertaken by the S- Protect Contracting Company and Substrate installer.

2.2 Surfaces Preparation

All concrete surfaces to be treated must be clean, sound and load bearing, as necessary check all; dissimilar material junctions, sealant joints, joinery connections and all concrete work is sound and load bearing. Make sure any repairs required to damaged concrete surfaces, elements or cracks has been completed and ensure any adhesion impairing agents such as curing compound etc. have been removed.

Where the surface has been previously coated or sealed with a clear coating consult your S-Protect technical representative before proceeding.

2.3 Limitations

The S-Protect Silane System is an impregnation treatment system for concrete surfaces that works by repelling liquid water while providing good vapour permeability. The system is not suitable for waterproofing porous concrete surfaces such as concrete blocks that require a waterproof coating or horizontal decks or sloping roof surfaces that require a waterproof membrane.

2.4 Existing Concrete Surfaces

Any existing surface to be refurbished shall be treated with a chemical solution to remove any fungal activity and other contaminates present ensuring the stipulated treatment times are observed before removing. All existing surfaces to be treated shall be cleaned to remove all contaminates and debris supplemented by physically or chemically removing contaminates to establish a clean sound substrate.

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Note: When cleaning due care must be taken to avoid the surface, other building elements or adjacent surfaces being damaged from aggressive chemical use, water pressure or water ingress.

The cleaning is undertaken to remove all contaminants and any fungal activity. **Avoid any aggressive cleaning** as any streaking or cleaning marks on the surface will show up in the finished surface.

2.5 Control of External Fire

The exterior surface finish requirements of NZBC Acceptable Solution C/AS1 Table 5.1 and C/AS2 Paragraph 5.8.1 do not apply as the S-Protect treatment applied directly to the concrete penetrates the surface with no film build.

3. DETAILING & SURFACE PREPARATION

3.1 Responsibility

All work in this section shall be the responsibility of the **Main Contractor** or his sub-contractors with the **S-Protect Contractor** responsible for the S-Protect detailing unless otherwise expressly agreed.

3.2 New Aluminium joinery

All joinery should be fixed over sealed concrete rebates allowing for a 5.0 mm offset and finished with a 5.0 mm gap at the sill prior to **S-Protect SC** application. Before fixing joinery fill any holes in the rebates and use **S-Protect BHN** ensuring the product does not run down the exterior surface which can lead to streaking. Sealing the joinery perimeter with MS sealant at the head and jambs then forms the primary seal while the **sill** is left open with a 5.0 mm drainage gap. To complete the waterproofing process **air seals** are required to be installed around all interior joinery to rebate openings.

Note: Air seals and sealant work is the responsibility of the window installer.

3.3 Sealant

All sealant junctions between the concrete and adjacent surfaces or dissimilar materials shall be jointed with compatible **MS Sealant** applied in accordance with the manufacturer's TDS sheets Note **StoFlexyl waterproofing** must be coated with sealant primer before proceeding check compatibility with other dissimilar material.

3.4 Detailing

All details must be in accordance with the project drawings or S-Protect details

3.5 Penetrations

Penetrations such as waste pipes and fixtures shall be adequately flashed and waterproofed prior to the installation.

Note: All penetrations through the surface must be adequately sealed with MS Sealant applied as a minimum 6.0 mm sealant bead using PEF backing rod or Sto joint seal tape. Any electrical wiring that penetrates the render shall be in cased in appropriately sized uPVC conduit installed at a minimum 5° downwards rake.

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4. S-PROTECT SILANE TREATMENT

4.1 Responsibility

All work in this section is the responsibility of the **S-Protect Contractor** who shall ensure that the surfaces are acceptable before commencing and that adequate protection of all dissimilar materials and adjacent surfaces has been undertaken.

4.2 General

All work in this section shall be the responsibility of the **S-Protect Contractor**. Ensure dissimilar materials and all glazing elements are well masked off with plastic when applying S-Protect treatment to avoid contaminating the glazing or adjacent surfaces.

Note: All existing concrete surfaces should have a test sample before commencing to check the surface finish and establish the porosity of the surface being treated to ensure the spreading rates are defined.

4.3 Selection

S-Protect BHN silane impregnation primer
S-Protect SC stay clean silane sealer

4.4 S-Protect BHN hydrophobic silane impregnation primer.

To clean dry surfaces, apply one double wet flood coat of **S-Protect BHN silane treatment** at 3-6 m² per litre (minimum 150ml per m²) depending on porosity of the surface (sample required to check spreading rate of substrate being treated) before applying in a wet flowing film (3-5 seconds) by Silane pump or low-pressure sprayer.

Note: The finished **S-Protect BHN** treated surfaces must be **left five (5) days to fully catalyse** before proceeding with the **S-Protect SC stay clean treatment**. The **S-Protect BHN** must be applied in accordance with the Technical Data Sheets.

Note: An airless sprayer can be used but atomisation at the tip must be avoided. Ensure you block brush any surplus material into the substrate as you go to avoid it congealing on the surface.

4.5 S-Protect SC Stay Clean Silane Sealer

To clean, dry, prepared surfaces, apply an even wet impregnation coat of **S-Protect SC stay clean** at 4-6 m² per litre (depending on the substrate porosity) with HVLP or low-pressure sprayer, or brush and roller for small areas, working from the ground up in one continuous and uninterrupted application using a block brush to dispel any lingering droplets all in accordance with the Technical Data Sheets. Once dry, if necessary, apply a second sprayed impregnation coat using a block brush to disperse any droplets.

Note: **S-Protect SC** can leave a residue if left to pool on the surface. **Prevent the product running down the surface by using a block brush to disperse as runs may leave streaking**, and ensure any residue is polished into the surface after 20 minutes.

All exposed and adjacent surfaces including glass must be masked off to avoid any contamination.

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5. GENERAL NOTES

5.1 Colour

S-Protect SC is an invisible clear silane treatment that seals the surface. Consequently, the area to be treated must be clean and visually acceptable before commencing.

6. S-PROTECT SERVICE ASSURANCE

6.1 S-Protect Service

The S-Protect Coating System should be cleaned annually by low pressure washing or hosing down with clean water 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 manufacturer's instructions). 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 faults are identified and repaired.

Depending on the prevailing environmental conditions and the service record, recoating of the clear finish is normally required at the 5-10 year period to maintain long-term integrity. This is carried out using an **S-Protect SC System** applied in accordance with a Sto specification over a clean surface.

7. WARRANTY

7.1 S-Protect SC Stay Clean Silane 7½ year Warranty.

When the **S-Protect BHN / SC Stay Clean treatment** is applied in accordance with the specification, details and S-Protect PS3 Quality Assurance schedule, a warranty is available for the S-Protect System for 7½ 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 provided maintenance requirements as set out in the StoService documents are followed.

The 7½ year warranty is supplied by the S-Protect 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 S-Protect 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 S-Protect system is subjected to physical disturbance, chemical contamination, structural movement, or interference.

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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 Specifications, Material Technical Data Sheets and Details, a Stoanz Material Warranty document is available, but the installation of the materials remains the responsibility of the Contractor who provides the PS3 Warranty. Any warranty is conditional on the system being maintained and serviced in accordance with the Service documentation. Stoanz reserves the right to alter or update information and formulations at any time without prior notice.