

## **S-PROTECT SILANE PROTECTION TREATMENT**

### **S-PROTECT BHN & SC SILANE SYSTEM TO PROTECT PRECAST PANELS**

**Project:****Prepared for:****S-Protect Silane System for Precast Panel Construction**

The specification details the application of the **S-Protect Silane System** to treat precast concrete panel construction incorporating; a Silane Hydrophobation for the exterior treatment of insitu concrete, pre cast panels or tilt slab surfaces to achieve an invisible durable protection barrier using **S-Protect BHN Silane treatment** finished in **S-Protect SC stay clean** that keep the surface clean by preventing the adhesion of contaminates that can be removed by cleaning. **Note: S-Protect SP Anti Graffiti Silane** can be used where graffiti protection is required.

**S-Protect BHN** with a 98% concentration has a history of proven performance as demonstrated world wide on numerous landmark projects; 1991 Sydney Opera House, 2003 Louvre Museum, 1998 Storebelt Bridge Denmark, 1986 Frankfurt Opera House, 1985 Military Museum Vienna, 2008 Hang Zhou Bridge China, 2010 Pipitea House Wellington – St Marys Convent & Conference Centre Wellington, 2011 Novotel Airport Hotel Auckland.

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## **CONSTRUCTION**

**Responsibility**

All new work in this section shall be the responsibility of the Main Contractor.

**New Wall Construction**

The construction including reinforcement and placement is to comply with the relevant New Zealand Building Code & Standards, project specifications, drawings and any manufactures requirements. In particular the walls shall be finished as specified and laid true in both vertical and horizontal planes with all joinery and services cutouts correctly made. Sufficient time shall be allowed after concrete placement as per AS/NZS 2311:2000, for curing and stabilization to take place, before application of the treatment system (**maximum moisture content of 18% before the BHN Silane treatment**). All maximum tolerances should be in strict accordance with NZS 4210: 2001 2.7.1.4 Table 2.2, no more than 3mm surface alignment deviation over a 1200mm radius.

**Surfaces Preparation**

All surfaces must be clean with any concrete splatter, slurry or surface contaminates carefully removed. The contractor shall ensure the walls are clean, dry and free of all surface contaminants before the coating contractor commences and **any areas, details or flashings above or adjacent to the Silane System have been adequately waterproofed to avoid any water migration behind the System.**

All dissimilar junctions are to be secure and waterproof, Control Joints must be formed in accordance with project details and openings and penetrations must be waterproofed.

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.

### Existing Surfaces

Any existing masonry or brick wall surfaces to be treated must be sound and in good condition, as necessary check all pointing and any cold joints, replace sealant joints as necessary, repair damaged elements or cracks and check flashings and joinery junctions. If the surface has been previously coated or sealed with a clear coating consult your technical representative before proceeding.

### Cleaning of Existing Surfaces

The coating system is transparent, therefore it is essential to ensure that the surfaces are clean with no marks or stains all dusts, dirt, pointing, friable material, damage etc must be removed or fixed. Normally this is achieved using a chemical wash or by waterblasting taking care to avoid any substrate, dissimilar materials or adjacent surfaces being damaged.

**Note;** Where the surfaces need specialist cleaning, honing or grinding to achieve the required surface finish this is to be **undertaken and priced separately** to the work specified.

### New Joinery

Such joinery shall be fixed over waterproofed surfaces prior to coating application. Note: The air seals, sealant joints, and waterproofing of the joinery rebates or installation of flashings is the responsibility of the nominated window installer.

### Horizontal Surfaces

S-Protect Silane System is a protection system for masonry surfaces parapet tops, horizontal caps and ledges must have a fall to shed water. The system is not suitable for waterproofing masonry roofs or deck surfaces that require a waterproof membrane system.

**Note: S-Protect Systems** can be used to treat pavers and un glazed tiles to achieve a dry surface that increases slip resistance and

## S-PROTECT SILANE SYSTEM

### Responsibility

All new work in this section shall be the responsibility of the **Sto Applicator** who is to ensure they have adequate protection apparel and meet the requirements of the Health & Safety Act. Ensure dissimilar materials, adjacent surfaces and **all glazing** elements are masked off with plastic before commencing

### Preparation

It is essential to ensure that the surfaces are clean with no marks or stains all dusts, dirt, pointing, damage etc must be removed, fixed or acceptable (in writing) before starting. **Note;** Where the surfaces need specialist cleaning to achieve the required surface finish this is to be **undertaken and priced separately** to the work specified

### S-Protect BHN Silane Treatment

To clean dry surfaces apply two (2) coats of **S-Protect BHN Silane** at 4/8 square metres per litre per coat depending on porosity of the surface being treated applied with a low-pressure garden sprayer and block brush to remove any lingering droplets and leave the first coat to dry for two (2) hours before applying the second coat. **Note:** The finished **S-Protect BHN** sealed surfaces must be **left five (5) days to fully catalyze** before proceeding with the **S-Protect SC stay clean**. All **S-Protect BHN** must be applied in accordance with the TDS Sheet. A low pressure sprayer can be used but a Silane pump is recommended and any atomisation at the tip must be avoided.

### S-Protect SC Stay Clean Sealer

To clean dry catalyzed BHN treated surfaces apply a flood coat of **S-Protect SC Stay Clean Sealer** at 7/10 square metres per litre depending on the porosity of the substrate applied with low-pressure garden sprayer or brush and roller for small areas in one full flood coat using a block brush to dispel any lingering droplets all in accordance with the TDS Sheets.

**Note: Glazing S-Protect SC stay clean** can effect glass **ensure all exposed glass surfaces are completely masked off** to prevent damage.

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**OPTIONAL- S-Protect Anti Graffiti SP where required****Applied to those areas as delineated on the plans as requiring Graffiti Protection.**

To clean dry catalyzed **S-Protect BHN** treated surfaces apply two (2) coats of **S-Protect Anti Graffiti SP** at 6/15 square metres per litre per coat depending on substrate profile and porosity.

Applied with low-pressure garden sprayer or brush and roller in two coats allow the first coat to dry before applying the second coat normally 30 to 60 minutes depending on the weather conditions. The coating is applied as a full coat working from the bottom to the top to prevent run off due to pre impregnation. The second coat may require block brushing or polishing in depending on the density of the substrate being treated so that all the applied product is worked into the substrate. **Note:** do not leave drops or pools that can congeal on the surface and effect the clean ability of the system.

**MAINTENANCE**

The **S-Protect Silane System** should be cleaned annually by low pressure chemical washing to remove all existing surface contaminants with special attention to non-rain washed areas. When recoating is required at the ten – fifteen year period to maintain the surface, this can be carried out using SC stay clean over a cleaned surface. If a system change is required, Stoanz Limited should be consulted for a specific specification.

Annual inspections are to be implemented after completion to clearly identify any defects such as; physical damage, substrate cracks, sealant beads, flashings and any other dissimilar connections. A repair process must be implemented immediately to address any faults discovered so the warranty is not compromised.

**WARRANTY**

The **S-Protect Silane System** described in this specification is warranted for a period of five (5) years from the date of practical completion provided nominal maintenance requirements as set out in this specification are followed.

A five (5) year workmanship warranty is issued by the S-Protect Applicator carrying out the work, and is backed by the Manufacturer as to the suitability for use of the material supplied, provided that

- (a) The approved S-Protect Applicator who must adequately complete the Sto QA Compliance Procedure Form and PS3 Applicator Warranty carries out all specified work.
- (b) All work is carried out in accordance with this Specification or any written amendments thereto issued by Stoanz Limited.
- (c) The warranty does not cover situations where the plaster system is subjected to physical disturbance, chemical spillage or interference



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