



STRUCTURAL WATERPROOFING SYSTEM

SAFEGUARD SWS structural waterproofing system is a highly effective water-proof treatment process of sound stable surfaces normally encountered within building structures. Safeguard SWS Slurry is a pre-mixed formulation of plastic modified hydraulically setting powder. When mixed with water and applied to a masonry substrate, silicate salts form at the interacting faces which enter and fill the pores and capillaries of the substrate and form a monolithic bond thereby blocking the passage of water as well as becoming an integral part of the structure.

SAFEGUARD SWS range is complimented by ancillary products to form a total system which is suitable for use in a wide range of circumstances encountered in commercial and domestic properties old and new. It may be applied on either the positive or negative side and has the ability to bridge hairline cracks, is non toxic, non corrosive and is unaffected by ultra violet light.

This data sheet and 'General Procedures' should be read in conjunction with the 'Code of Practice for Remedial Waterproofing of Structures Below Ground', published by the British Wood Preserving and Damp-proofing Association. Please be advised that this leaflet outlines only General Procedures and is not a specific specification. Each property is unique and therefore individual specifications are always required to take into account the prevailing on-site conditions.

Structural waterproofing (commonly referred to as 'tanking') nearly always falls into two categories - (1) A complete system or (2) A partial system.

Site circumstances and situations obviously dictate the course of remedial action but only a complete system which encompasses walls, floors and often ceilings, may be regarded as true tanking. Anything less than a complete system is Structural Water-proofing. Irrespective of the fact that it is intended to apply a complete or partial system, success is totally dependent upon the preparation of the substrate onto which the system will be applied. Outlined over are the general procedures to be adopted to ensure the system is applied correctly. Variations subject to on-site conditions will naturally occur.

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SAFEGUARD



5.4 Third Coat (Walls Only). Allow a minimum of 24 hours from the application of the final Safeguard SWS Slurry coat. Apply a 10mm render coat made up of 3 parts sharp washed sand (B.S. 822 M Grade) to one part cement incorporating Safeguard SWS Bondaid Plus in the gauging water, diluted at a ratio of 1:4. If this coat is to be left overnight or for a period of time, apply as a splatter coat in order to ensure an adequate key later. Take this coat down to the floor.

5.5 Fourth Coat (Walls Only). Whilst the third coat is still green or provided it has been left adequately keyed, apply a render coat of 3 parts sharp washed sand (B.S. 822 M Grade) to 1 part cement to a depth of 10mm. Take down to floor and scratch finish.

5.6 Finish Coat (Walls Only). Finish using Thistle Multi-finish or similar. Do not over-trowel and stop 25mm above intended finished screed level.

5.7 Floors. Following the final finish coat to the walls, check that the first and second coats applied to the floor have not been damaged. It is suggested that the floors are physically protected following the second coat, whilst the third, fourth and finish coats are applied. Lay a conventional floor screed over entire floor area.

***Special Note:**

- a) Metal angle beads should NOT be used in structural waterproofing situations. All angles should be formed. If angle beads are to be used in the finishing coat then they should be of either stainless steel or plastic type.
- b) All cementitious based systems are susceptible to considerable shrinkage forces as the water employed in the application process evaporates. It is inevitable therefore that some cracking and possible de-bonding will occur to some degree. Refer to the B.W.P.D.A. code of practice for practical guidance.

6. FIXINGS

6.1 Ideally any structurally waterproofed surface should not be punctured, as this creates a point of weakness. Where it is not possible to avoid a fixing, the following procedure should be followed.

- i) Drill a hole twice the thickness and 13mm deeper than the proposed fixing.
- ii) Flush hole with minimal water and ram in a stiff mix of Safeguard SWS Fillet Seal to ensure that no air pockets exist and the hole is completely filled.
- iii) Allow to fully cure, then drill the centre of the SWS Fillet plug with the correct size hole to accommodate the proposed fixing.

***Note:** Where water pressure exists, the structurally waterproofed surface should not be punctured at all.

6.2 Skirting board and services. Any skirting boards to be re-fitted should be fixed using a suitable adhesive. Pipes and electric cable should be concealed in glue fixed surface conduits.

6.3 Door frames, window frames, skirtings, staircases etc. to be re-fitted should have their concealed surfaces thoroughly treated with Safeguard ProBor 20 prior to fixing. If re-fixed whilst treated walls are still damp, protect contact surfaces with a physical DPC material.

7. CONDENSATION

7.1 By virtue of their position within a property, surfaces which require structural waterproofing will nearly always have a cooler surface temperature and as a consequence will be more prone to the effects of condensation. This point

should always be borne in mind when 'designing' a structural waterproofing system and recommendations for the control of atmospheric moisture i.e. humidistat controlled ventilation fans, de-humidifiers, constant dry heat etc. should always be incorporated within specifications.

7.2 As a matter of course, a condensation check should be undertaken at the time of the initial inspection and this is especially relevant during the cooler winter months. This is easily undertaken using a diagnostic hygrometer and surface thermometer and further details are available from the technical department of Safeguard.

8. DECORATION

8.1 Because the substrate behind the structurally waterproofed surface will never dry out, it is very important that any re-decoration must not act as a vapour barrier. Only vapour permeable materials such as Trade Emulsions and ordinary wall papers should be used. Gloss paints, vinyl emulsions, together with vinyl and washable wall papers should be avoided as these will 'trap' moisture behind the decorated surface, allow salts to migrate and cause a blistering and peeling of the decorative surface thereby giving the appearance of a system failure. Any re-decoration within 12 months after the completion of the works should only be regarded as temporary.

8.2 During the initial period following the completion of structural waterproofing it is normal for the surfaces to appear to be 'sweating'. This will eventually reduce as the water used during the works evaporates. This may take some time and is dependent upon ventilation.

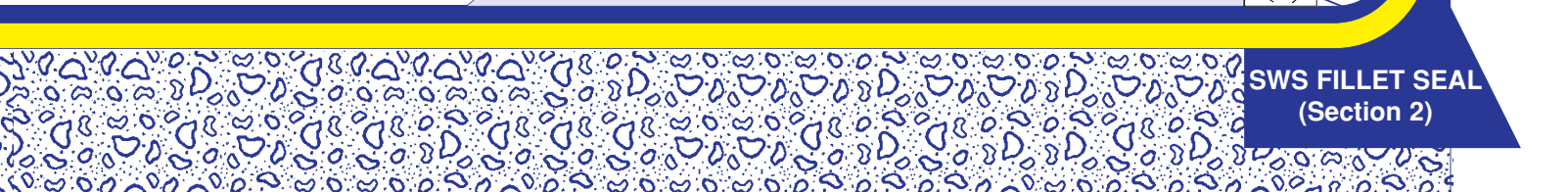
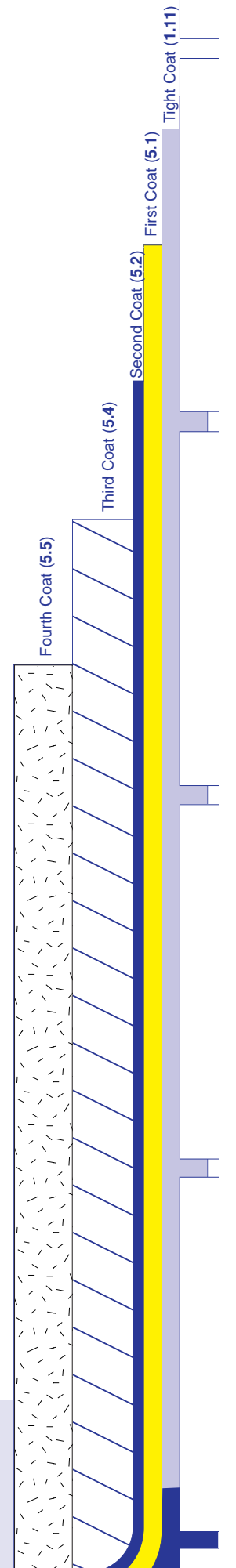
GENERAL NOTES

Dry Rot Irrigation - Chemical Damp-Course Installation

If structural waterproofing is to be carried out over masonry which has been irrigated because of dry rot, or had a chemical damp course installed, 21 days should be allowed before the application of structural waterproofing mixtures on such walls.

Partial System

The application of a partial system may in some circumstances cause the movement of moisture to previously unaffected areas and allowance for this occurrence should be made. This is especially relevant at the floor/wall junction and the preparatory work detailed in section 2.0 should always be undertaken and the subsequent first and second coats (sections 5.1 and 5.2) should always be lapped out onto the floor for a minimum of 200mm. In the event of a physical membrane existing in the floor, then continuity must be maintained by using a flexible waterproof joint.



SLURRY

A cement based, plastic modified hydraulic setting powder. Applied by brush or trowel in a minimum of two coats at a rate of between 3 and 6Kg/m²/coat subject to site conditions and requirements. To be applied only onto a sound, stable well prepared substrate (refer to General Procedures of Safeguard Data Sheet 25). Available in 25kg bags.

FILLET SEAL

A cement based, rapid curing non shrink hydraulic setting powder. Used at points of stress i.e. floor/wall junction and applied normally by trowel. Refer to section 2 of Safeguard Data Sheet 25. Applied at a rate of 15-20 linear metres per 25kg bag subject to site conditions and requirements. Available in 25kg bags or buckets.

CHLORIDE & SULPHATE SALT NEUTRALISER

A low viscosity solvent free heavy metal fluoro-silicate solution which converts water soluble chloride & sulphate salts into insoluble or hardly soluble reactive compounds. Used to prevent the migration of these salts present in the masonry by the gauging water of the slurry/fillet coat. Applied at a rate of 500ml/m². For further information refer to Safeguard Data Sheet 25a. Available in 5kg plastic containers.

NITRATE SALT NEUTRALISER

A low viscosity, salt repellent and solvent free impregnating agent which forms a sealing film over absorbent masonries. This prevents to a large extent the ingress of chemically non-convertible salts (nitrates) into the gauging water of the slurry/fillet seal coat. Applied at a rate of 500ml/m². For further information refer to Safeguard Data Sheet 25a. Available in 5kg plastic containers.

BONDAID PLUS

A styrene butadiene copolymer latex specifically designed for use with cement compositions. It improves the tensile, flexural and compressive strengths of cement mixes and it forms polymer modified systems which exhibit excellent adhesive properties. It considerably decreases the water/cement ratio and may also be used in repair mortars. For further information refer to Safeguard Data Sheet 25b. Available in 5litre and 25litre containers.

RAPID SETTING PLUG

A very rapidly setting cement based material used to seal holes where free water is present. Also suitable for general repair work on concrete or masonry and for the provision of anchorage points. Expands slightly as it sets. For further information refer to Safeguard Data Sheet 25c. Available in 5kg containers.

HEALTH AND SAFETY

Please refer and adhere to all the information on the relevant Health & Data Sheets which are available on request.

SAFEGUARD STRUCTURAL WATERPROOFING SYSTEMS

also includes a very comprehensive range of Cavity Drainage Membranes,

The **CDM** range.

This range includes variety membranes, fixings and sealants and is ideal for fast track dry wall framing systems and floor refurbishment. Please ask for further details.

IMPORTANT

All reasonable care has been taken in compiling the technical data on the company's products. As the conditions of use are beyond the control of the company any recommendations or suggestions regarding the use of such products is without guarantee. The customer should satisfy himself that each product is fit for its intended use and that the actual conditions and substrate are suitable prior to application.

Safeguard Chemicals Limited

Manufacturing & Head Office
Redkiln Close, Redkiln Way,
Horsham, Sussex RH13 5QL.
Telephone: (01403) 210204
Fax: (01403) 217529

