Waterproof Coating

Description

The Adawall Waterproof Coating system provides a solution to water leakage, ingress or seepage in concrete structures or any cementitious substrate. The formation and development of insoluble crystals into water bearing capillaries and fissures effectively blocks the further passage of water and ensures permanent water tightness for the life of the structure. The system is designed to function against water penetration in various conditions. Adawall Waterproof Coating is supplied as a powder and when mixed with water, is applied directly to concrete, blockwork masonry or cement renders in areas where general waterproofing is required. Cement Slurry is used in conjunction with Adawall Leak Plug for instant leak plugging.

Areas of Use

Adawall Waterproof Coating can be applied to new or old structurally sound surfaces. It can be applied either to the negative or the positive side and will negate dampness in ground water permeation even under hydrostatic pressure. Cement Slurry can be used for the following applications;

- Retaining Walls and columns in reservoirs
- Swimming Pools prior to tiling or painting
- Concrete drinking water tanks
- Water Treatment and sewerage plants
- Foundation Slabs
- Underground Cellars, basement car parks, garages, etc.
- Pre-stressed and pre-cast concrete units
- Tunnels, silos, irrigation channels
- Bathrooms, kitchens, etc
- Sand - cement render
- Lift Shafts
- Vehicle maintenance pits

Advantages

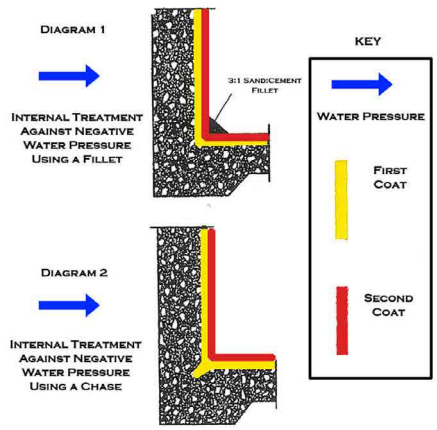
Provides excellent waterproofing properties by becoming an integral part of the structure to which it is applied and is Non toxic, Non tainting, has a dual crystalline and surface action which allows the substrate to breath. The migratory crystalline action is reactivated should future water contact occur, Waterproof Cement Slurry becomes integral to the substrate, thus eliminating potential wear, de-lamination or peeling.

Application Preparation

As with most coating treatments, surfaces preparation is critical and although this can be time consuming it is essential that it be carried out thoroughly. Adawall Waterproof Coating is only fully effective if the capillaries in the brickwork, concrete or mortar are sufficiently absorbent to allow penetration of the crystalline chemicals. All surfaces should be clean and free from paint systems, oil, loose dust, shutter treatments, curing compounds, surface hardeners and other contaminants.

Surface preparation can be best carried out using high pressure water jetting, grit blasting or mechanical scrabbling. Water jetting has the advantage that complete saturation of the substrate is achieved but lack of drainage facilities may in some cases preclude its use. Large cracks and other defects can be repaired using a 3:1 Sand : Cement mortar gauged with SBR. Repaired areas can be coated with Adawall Waterproof Coating Slurry after 24 hours, but large areas of new brickwork, poured concrete or cement renders should be allowed to cure for 3 days before application of Waterproof Coating is considered.

Fillets



It is recommended that a Fillet be used at internal transitions between floors and walls (see diagram 1). If it is impractical to provide a fillet between floor and wall then a saw cut should be made in the floor slab as close to the wall as possible and the subsequent application of allowed to flow into the saw cut (see diagram 2).It must be re-stressed that Adawall Waterproof Coating performs better on thorougly dampened surfaces, only then is its maximum penetration achieved. Dry surfaces should be saturated with clean water, preferably 24 hours before application of the Cement Slurry and then re-wetted just before application.

Plugging

In locations where running water is evident this would suggest some degree of hydrostatic pressure which must be relieved to present a satisfactory damp substrate onto which the Waterproof Coating can be applied. See diagrams for procedures involved in pressure relief and plugging.

Mixing

It is important not to mix more material than can be applied within 30 minutes at 20^{o}C.The recommended mixing ratio is approximately 2.5 to 3 parts Waterproof Coating to one part clean water by volume. It is recommended that the powder is added slowly to the water and mixed to a smooth lump free consistency. N.B. If the mixed material becomes stiff do not re-mix with water, but discard and mix fresh material.

Placement

The problems which exist in the waterproofing of below ground areas are many and varied and all cannot be solved with a simple specification - If in doubt contact technical services.

Normal problems of damp and water ingress can normally be addressed by the application of two coats of Adawall Waterproof Coating over the whole area. The second coat should be applied at right angles to the first coat to ensure complete coverage is achieved. The second coat may be applied as soon as the first becomes 'touch dry'. In all cases the second coat must be applied within 24 hours of the first. In hot, dry climates a fine water mist should be sprayed over the surface of the first coat before application of the second. It is critical that all surfaces being treated with Cement Slurry are clean, and it is essential that all timber battens or fixings are removed before treatment commences. Provision for re-fixing of battens etc, should be made in the wall prior to application of the Cement Slurry. Drilling for fixtures should not be carried out after tanking as the holes would provide a release for and hydrostatic pressure behind with resultant leakage of water. When applying by brush use a medium hard short bristle type. Trowelling of the second coat can be carried out to provide a dense polished finish. N.B. Masonry affected by ground salts. Although it is important that crystalline ground salts which appear on the surface, should be removed prior to coating with Cement Slurry. It is also possible that the migratory action of the chemicals with the product will aggravate the drawing of ground salts to the surface. Where it is suspected that ground salts are present, masonry should be treated with Cement Slurry with equal parts water. The Cement Slurry may be applied to the treated surface after one hour. Ventilation and Curing De-humidifiers should not be used immediately after the application of Cement Slurry as this would arrest the curing system - moist conditions are desirable for a period of at least three days, after which time de-humidifiers may be used to control condensation. It is recommended that wherever possible ventilation is provided, as lack of it may cause small condensation beads to form on the surface of Cement Slurry. Uniform hardening and water tightness can be assured if the product is not allowed to dry out too rapidly. Protect the coating against excessively fast evaporation in hot conditions or drying winds. If these conditions prevail mist spray the surface regularly.

Plastering or Rendering

Remedial plaster systems may be used over Adawall Waterproof Coating provided an intermediate bonding compound is employed. Dilute SBR with an equal volume of water and apply to the cured Cement Slurry and allow to become tacky, but not dry! Plaster may then be applied as normal. Where cement rendering is required use an intermediate bonding slurry mixed at two parts sand: one part cement gauged with a 1:1 SBR : Water mix. Apply the slurry to the Tanking and apply the first render coat before the slurry dries!

Decoration

A period of at least six months should be allowed before permanent decoration is considered. During this period only use permeable emulsion paints.

Coverage

It is important that no less than the minimum amount of product per square meter be applied and it is essential that two coats are used.

By Brush, 1 to 1.5 kilos per m2 per coat

By Trowel 2 to 2.5 kilos per m2 per coat

By Spray 1.5 kilos per m2 per coat N.B. In areas of excessive water pressure the amount of Cement Slurry should be increased to a total of 6 kilos per m2.

Packaging Available in 25kg plastic bucket.

Physical Properties: Nature: Cement like powder

Colour: Grey Density: 1.25kg/litre

Application Temperature: >5^{o}C (Surface Temperature) Health and Safety Treat as cement Protect eyes and skin from direct contact Freshly mixed Cement Slurry is alkaline and the use of suitable gloves and eye protection is recommended

Full Material Safety Data Sheet is available on request.