AQUA-STOP

Crystalline Concrete Waterproofing

For Commercial & Residential Applications

Professional Grade

Description

Aqua-Stop is a one-component, deep penetrating cement based material, which waterproofs old or new, structurally sound, poured concrete, brick and block walls or concrete floors. It provides a solution to water leakage, ingress or seepage in concrete or cement-bonded structures. 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.

Aqua-Stop is supplied as a powder and when mixed with water, is applied directly to concrete, brickwork, blockwork masonry or cement renders in areas where general waterproofing is required. Live water leaks and water ingress can be stopped with **Super-Stop** for instant leak plugging.

Uses

Aqua-Stop can be used on new or old, structurally sound surfaces. It can be applied either to the negative or the positive side and will prevent dampness caused by ground water permeation even under hydrostatic pressure. **Aqua-Stop** can be used for the following applications:

- Basements, cellars, underground garages, undercrofts etc.
- Foundation slabs
- Retaining walls
- Water treatment and sewerage plants
- Pre-stressed and pre-cast concrete units
- Tunnels, subways, silos, irrigation channels
- Lift Shafts
- Vehicle maintenance pits
- Concrete fish ponds and tanks (fish-safe when fully cured and flushed with clean fresh water)

Advantages

- Ready to use, just mix with water and apply
- Provides excellent waterproofing properties by becoming an integral part of the structure to which it is applied
- Non toxic and non-tainting
- Dual crystalline and surface action

Advantages

- Can be applied to damp and wet surfaces
- Allows the substrate to **breathe**
- The migratory crystalline action is reactivated should future water contact occur
- **Aqua-Stop** becomes integral to the substrate, thus eliminating potential wear, de-lamination or peeling
- Cost effective alternative to expensive construction repairs
- No odour or fumes
- Permanently active for the life of the structure
- Commercial and residential applications
- Utilizes the latest in European technology
- Brush or spray applied
- Protects concrete against fresh water, salt water, waste water & aggressive ground water
- Inorganic - non toxic
- Can be used on water tanks (potable and non-potable), marine aquariums, tunnels, etc.

Surface Preparation

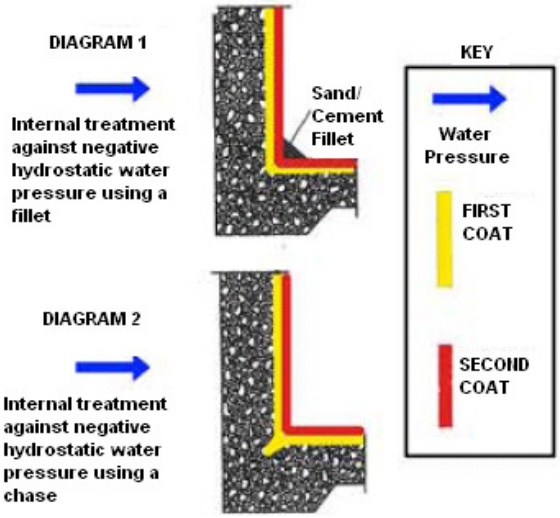
As with most coating treatments, surfaces preparation is critical and although this can be time

consuming it is essential that it be carried out thoroughly. **Aqua-Stop** 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. Manual preparation may be acceptable provided that the aforementioned preparation requirements are fulfilled. Ideally, surface preparation should be carried out using high pressure water jetting, grit blasting or mechanical scabbling. 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 mixed with 1:1 SBR/water. Repaired areas can be coated with **Aqua-Stop** 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 **Aqua-Stop** is considered.

Fillets

It is good practice to install a fillet at the floor/wall joint for extra security. A fillet consisting of 1 part **Aqua-Stop** and 1 part sharp sand should be applied at the floor/wall joint which should be locally primed with **Aqua-Stop**, apply wet-on-wet (see diagram 1 below). Seal the cove with an additional coat of Aqua-Stop. 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 **Aqua-Stop** allowed to flow into the saw cut (see diagram 2). It must be re-stressed that **Aqua-Stop** performs better on thoroughly dampened surfaces, only then is its maximum penetration achieved. Dry surfaces should be saturated with clean water, preferably 24 hours before application of the **Aqua-Stop** and then re-wetted just before application.



Mixing

It is important not to mix more material than can be applied within 30 minutes at 20°C. The recommended mixing ratio is approximately 2.5 to 3 parts **Aqua-Stop** 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.

Application

Normal problems of damp and water ingress can normally be addressed by the application of two coats of **Aqua-Stop** 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 **Aqua-Stop** have been wetted down and are clean of debris, etc. 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 **Aqua-Stop.** 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.

If in doubt*, just ask!*

Salts: Although it is important that crystalline ground


WETTING THE WALL FIRST APPLICATION

salts which appear on the surface, should be removed prior to coating with **Aqua-Stop**, 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 a primer coat of **Aqua-Stop** mixed with equal parts water. Then the **Aqua-Stop** 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 **Aqua-Stop** as this will 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 **Aqua-Stop**. 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 the surface regularly with water.

Plastering or Rendering

Low gypsum content, remedial plaster systems may be used over **Aqua-Stop** provided an intermediate bonding compound is employed. Prepare a slurry consisting of 1 part **Aqua-Stop** to I part sharp sand, gauged with a 1:1 SBR/Water mix. Apply by brush, rough casting (spatter-dash) or Tyrolean machine to create a coarse surface profile, allow to dry prior to applying render.

Decoration

All surfaces coated with Aqua-Stop must be left to cure for 3-4 days. At the end of the curing period, the surface should be thoroughly washed with a solution of 5parts vinegar to 1 part water to neutralize any remaining product on the surface. Wash down with water prior to decorating and allow to dry.

Tile mortars can be applied after 3 days.

Alternatively – If washing down as above is not practical, apply "breathable" vapor permeable coatings for the first six months, after which normal decoration can take place.

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 m^2 per coat
By Trowel: 2 to 2.5 kilos per m^2 per coat
By Spray: 1.5 kilos per m^2 per coat

N.B.: In areas of excessive water pressure the amount of **Aqua-Stop** should be increased to a total of 6 kilos per m^2.

Packaging

Available in a 25kg plastic bucket.

Storage and Shelf Life

Aqua-Stop must be stored in a dry enclosed area off the ground. Shelf life in un-opened container is 12 months, from date of manufacture.

Physical Properties

Nature: Cement like powder
Colour: Grey
Bulk Density: 1.25kg/litre
Application Temperature: >5°C (Surface Temp.)

Safety

- Refer to MSDS for full safety information
- This product contains cement and is highly alkaline. Avoid contact with skin and eyes. The powdered product may irritate so the use of a dust mask is recommended when mixing.
- Wear rubber gloves and protective eyewear during mixing and application.
- After any contact with the skin, wash with plenty of clean water. In case of eye contact, rinse immediately with plenty of clean fresh water for a minimum of 10 minutes, and seek medical advice.
- **KEEP OUT OF REACH OF CHILDREN**

Limited Warranty

It is the responsibility of the customer to determine the suitability of the product for the intended purpose. Factors such as temperature, surface preparation and applicator's skill are beyond the control of the company. Therefore, the manufacturer's liability is limited to the replacement of the defective material only.

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All data are an average of several tests under laboratory conditions. In practice, climatic variations such as temperature, humidity and porosity of substrate may affect these values.