



AQUATECH

DESCRIPTION.

Kingfisher AQUATECH is a cement based powder with active hydrophobic ingredients which react with water and free lime to form pore blocking crystals. The action of this product enables it to be used in situations where the Tankit product is not suitable i.e. where there is a hydrostatic pressure of more than 2.5 metres and in all water retaining contracts. **Kingfisher AQUATECH** provides deep seal penetration and permanent protection against fresh and salt water under pressure. It can withstand up to 70 metres hydrostatic pressure of water and has been tested in accordance with BS6920:1988 by the Water Research Council for suitability of use with drinking water.

USES.

Kingfisher AQUATECH was developed for use in extreme water retaining situations, i.e. Swimming pools, potable (drinking) water tanks, lift shafts, service tunnels, water treatment plants, irrigation channels and any other domestic situation more than 2.5 metres below ground level.

PACKAGING.

Kingfisher AQUATECH is supplied in 25 Kg paper sacks.(Polythene outer).

COLOUR.

Grey.

HEALTH and SAFETY.

Kingfisher AQUATECH is classified as an irritant and eye protection, protective gloves and overalls should be worn when handling. Avoid breathing dust particles.

PREPARATION for USE.

1. Old Brick/Block or Stonework

- a) Remove skirtings, timber fixings, cable fixings or steelwork etc, to allow free access to area to be treated.
- b) Remove all plaster, rendering, paint, limewash, bitumen, felting or other coverings, back to a sound substrate. This may require sand/grit blasting, needle gunning, wire brushing or power washing to ensure surface is suitably prepared for application. (Note; - If previous coatings cannot be removed, then the fixing of stainless steel Expanded Metal Lath will be required.)

A VIDEOTAPE OF THIS PROCESS IS AVAILABLE FROM THE KINGFISHER TECHNICAL SERVICES DEPARTMENT.

- c) Rake out the mortar joints to 13mm minimum and remove all loose material by brushing. Repair any unstable masonry using a 3: 1 sand cement mix incorporating 1: 1 clean water and **Kingfisher K-X11**. (Allow to cure for 24 hours).
- d) See render application.

2. New Brick/Blockwork.

- a) The surface must be flat with no voids present. Surface faults can be filled by 'bag rubbing' with 3: 1 sharp sand and sulphate resisting cement. Allow to cure.
- b) Damp down the area thoroughly and allow to dry until the wall is not 'glistening'.
- c) Apply a slurry primer coat of 1 : 1½ neat **Kingfisher K-X11** and sulphate resisting cement. This coat should be brush applied no greater than 0.5mm thick and the **AQUATECH** applied onto it within 15 minutes, whilst the primer is still tacky.
- d) See **Kingfisher AQUATECH** application.

3. Concrete Floors.

In full tank situations, the walls should be treated first and the floor last. Also, in existing concrete, a 25 x 25mm channel should be dug along the length of the wall/floor joint.

- a) Clean all loose material from the floor by vacuuming. Ensure substrate is strong enough ie. >20N/mm². Polished concrete, or new concrete with laitance will need to be acid etched or scabbled to gain an adequate surface key.
- b) Dampen down the floor and apply a primer coat of **Kingfisher K-X11** and sulphate resistant cement as above.
Allow the first primer coat to dry (20-30mins), then apply a second primer coat.
Apply the **Kingfisher AQUATECH** to the surface whilst the primer is still tacky.
- c) See **Kingfisher AQUATECH** application.

4. Render Application.

- a) Apply two coats of **Kingfisher ANTI-SULPHATE SOLUTION** in strict accordance with the relevant data sheet.
- b) Mix the render 1 : 4 fresh sulphate resisting cement and sharp, washed sand incorporating 3 : 1 clean water and **Kingfisher K-X11**.
- c) Apply the render to a thickness of not less than 10mm and wooden float finish. Form a 45° angle fillet into the channel of the wall/floor joint and at the vertical wall/wall joints, using **Kingfisher BARRIER MORTAR**.
NOTE: - If the wall/floor joint has any water seepage, the channel must be filled to flush with **Kingfisher TANKPLUG** prior to rendering.
- d) Allow render to cure overnight prior to **AQUATECH** application.
Do not allow to cure for more than 48 hours.

5. Aquatech Application.

- a) Mix the gauging liquid 3 : 1 clean water and **Kingfisher K-X11** (Usually approx 6 litres of gauging liquid per 25 kg bag and the **AQUATECH** is mixed in ½ bag amounts ie. 3 litres needed.)
- b) Add the powder to the liquid while mixing with a low speed, power driven paddle until a thick batter consistency is reached. Leave to stand for 10 minutes, then remix and adjust consistency with more liquid if necessary. The mixture should be stiff should be stiff enough to support the weight of a fibre application brush.
- c) Using the brush, load the **AQUATECH** to it and apply to the pre wetted, prepared surface. Do not brush out as with paint but **spread** the mixture, maintaining a flowing edge.
- d) The first coat should be applied using vertical strokes and a coverage of 12.5 sq metres per 25 kg bag must be achieved. The first coat should be left to set for minimum 4 hours, maximum 36 hours.
- e) Apply the second coat using horizontal brush strokes and ensure coverage of 16 sq. metres per 25 kg bag. Allow to cure.
Note: - Do not allow **AQUATECH** to cure too rapidly ie. in hot conditions mist spray with water or cover with polythene. Do not use hot air dryers or de humidifiers in initial stages of curing.
- e) When treating wall, extend the treatment 200mm onto the concrete floor. When treating the floor extend the treatment 100mm up the wall. When treating the floor, work towards an exit so that the treatment is not walked upon.

6. Over Plastering.

- a) To gain a key onto the **AQUATECH**, a primer coat can be used as earlier, but use ordinary Portland cement. The next coat must be applied to wet and tacky primer.

Alternatively a spatter dash of 1 : 1 sand and cement can be used onto the 'green' **AQUATECH** then allowed to cure. If the **AQUATECH** is allowed to cure light grey then the **K-X11** and cement primer must be used.

- b) Only cement and lime based renovating plasters can be used onto the Tanking system.(ie Kingfisher Drywall Plaster). Gypsum based backing plasters are **not** suitable. Kingfisher Drywall will gain a 'warmer' surface for the tanked wall and will not show condensation as droplets on the surface.
- c) The best method of providing a decorative surface is to fit a thermal laminated plasterboard system (ie. Gyproc Thermalboard Super). This can be 'dot and dab' fixed direct to the **AQUATECH** surface and will provide an insulated surface with a vapour barrier included. This will provide the best surface to ensure that no condensation occurs, either surface or interstitial. The plasterboard is tapered edge and can be dry-line finished or skimmed.

3. **Protective Screed.**

Where the **AQUATECH** system has been applied to a floor, a protective screed **must** be used. The screed is best applied soon after the initial set of the **AQUATECH** second coat. If the **AQUATECH** is allowed to dry light grey, then the surface must be dampened and primed as above prior to laying screed. In all cases the screed must be a minimum of 50mm thick.

CAUTIONARY NOTES.

- i) **Kingfisher AQUATECH**, spatter coats and screed must be applied shortly after the initial set of the previous coats. Failure to do this will necessitate the use of the primer.
- ii) Protect all coats from frost or accelerate drying. **Do not** apply if frost is expected or if the air temperature is less than 5°C.
- iii) Wash tools thoroughly between applied coats.
- iv) Where work is unable to be completed in one day, ensure joints are provided well clear of any corners. If the first coat is allowed to dry out too long, ie. >36 hours, then the primer coat needs to be applied prior to the second **AQUATECH** coat. (Second coat **AQUATECH** applied to wet primer).
- v) Decorate using Matt Emulsion or Stone Paint. **DO NOT** use impermeable decorative systems.
- vi) If primer coat is allowed to dry by mistake, reapply the primer. **Do not** apply the next coat as it will not adhere to dry primer.
- vii) Formation of water droplets on the surface of the **AQUATECH** during the curing period is normal. This is caused by condensation forming on the cold surface. Provide a dry heat source or better ventilation to alleviate this problem.
- viii) Basement tanking contracts will normally include provision of adequate ventilation. **This must be pointed out in the initial survey.** The damp problem may be a combination of lateral water penetration and condensation. Installation of a tanking membrane cures the lateral water penetration but **not** the condensation

Further Health and Safety information on this product is provided in the MSDS, copies of which are available from the Kingfisher Technical Dept Tel. 01229 869100 or Fax 01229 869101.