

PRODUCT GUIDE



STRUCTURAL REFURBISHMENT AND RESTORATION



For more than twenty years Clan have provided their clients with a complete service in the field of structural engineering and remedial works to both the public and private sectors. Contracts undertaken have been diverse, from tower blocks and listed buildings to water treatment works and local authority housing estates.

SUCCESS BUILT ON INNOVATION

Since the early 1980's, Clan have been at the forefront of remedial cavity wall tie technology designing new remedial wall ties, the Kontrakt tie, lateral restraint systems, the Clanbolt, and the unique isolation process for treatment of corroding wall ties, the Clansleeve.

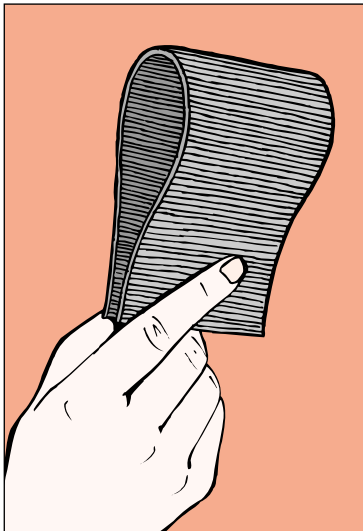
Over the years as we have been confronted with new problems within the refurbishment industry, we have introduced innovative solutions designed in conjunction with our structural engineers, with not just the specifier in mind, but also the contractor. A good product not only overcomes the structural problems but is simple to fix reducing operator error. All of our products are designed in accordance with the basic principles that Clan adhere to; a quick, simple and virtually unobtrusive repair.

In addition to our own range of structural fixings, Clan have brokered relationships with many European companies, exchanging ideas enabling us to introduce new methods of repair, such as Xypex crystalline waterproofing, high strength concrete repair materials and the latest carbon fibre technology for repairing structures.

Our range of services is continuing to grow with our sister company, Thin Joint Technology, which supplies tools, fixings and mortars for construction using thin jointed aerated blockwork. TJT also supply coloured render systems, external wall insulation systems and decorative plasters.

Preventing the ingress of water into structures can be at best problematic and at worst catastrophic.

The following pages provide solutions to the many and varied problems of waterproofing brick and concrete structures, whether it be a retaining wall or an expansion joint in a reservoir.



MAPELASTIC

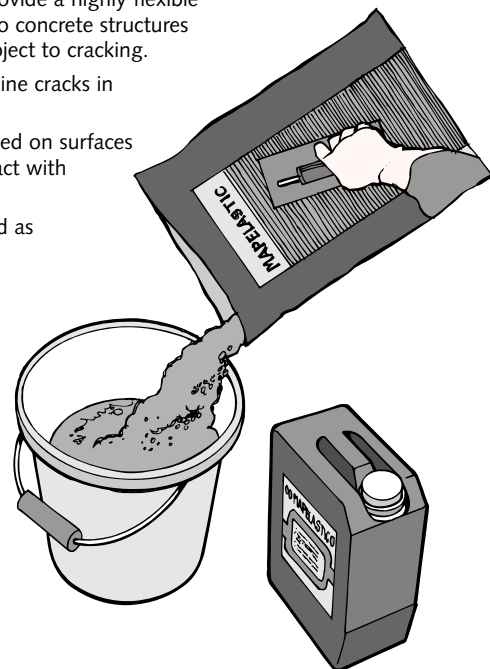
Two-part flexible cement mortar for waterproof protection of concrete swimming-pools and balconies.

Use Mapelastic to provide a highly flexible waterproof coating to concrete structures particularly those subject to cracking.

Mapelastic seals hairline cracks in substrates.

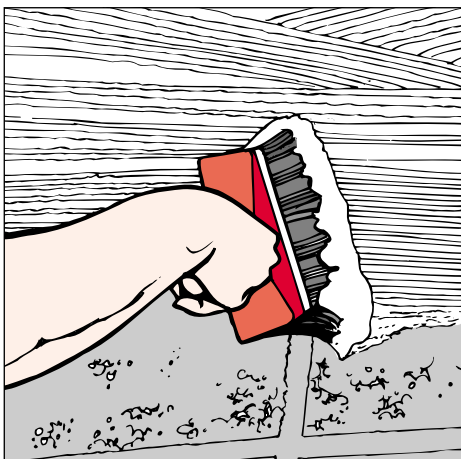
Mapelastic can be used on surfaces permanently in contact with drinking water.

Mapelastic is supplied as two pre-measured components that must be mixed together without the addition of water or other



ingredients. The mortar that is obtained is applied with a trowel onto perfectly clean and solid surfaces that have been previously dampened with water. It is possible to apply layers up to 2mm thick in a single coat.

When applying to surfaces that are particularly stressed or crazed, it is essential to embed a square-grid fibreglass mesh.



IDROSILEX PRONTO

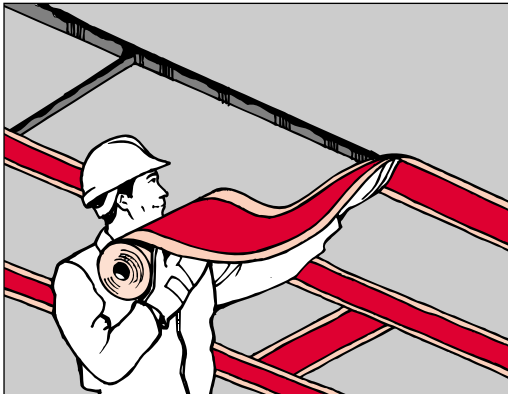
Ready-to-use heavy-duty waterproofing cementitious mortar.

Use Idrosilex Pronto to waterproof foundations, walls, cellars, basements, lift-rooms, swimming pools, canals and reservoirs.

Formulated from cement binders and special waterproofing additives, Idrosilex Pronto is prepared by mixing a 25 kg bag with 6 - 6.25 litres of clean water.

Idrosilex Pronto can be applied with a brush, trowel or spray. For application, apply 2-3 coats to the perfectly cleaned and solid substrate which must be thoroughly soaked with water beforehand. When applying by trowel, reduce the mixing water to 5 - 6 litres for each bag.

FOR SALES AND TECHNICAL ADVICE, PHONE: 0151 422 8000

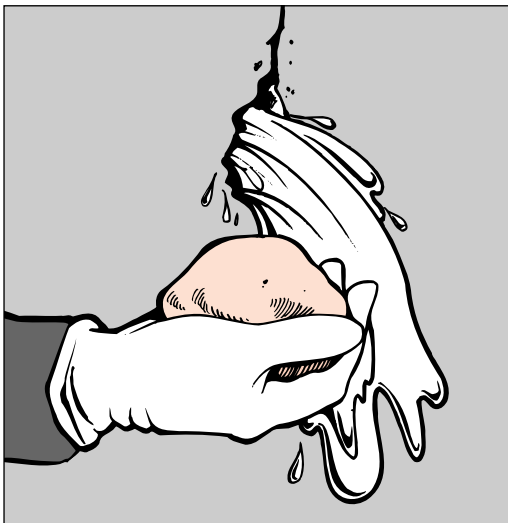
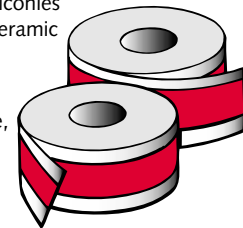


MAPEBAND

Polyester reinforced rubber tape for the flexible sealing and waterproofing of internal and external expansion joints.

For sealing and waterproofing joints to walls and floors of baths, showers, terraces, balconies etc., that are to be tiled with ceramic tiles, marble or natural stones.

Mapeband can be used with any type of substrate: concrete, wood, plasterboard, etc.



LAMPOSILEX

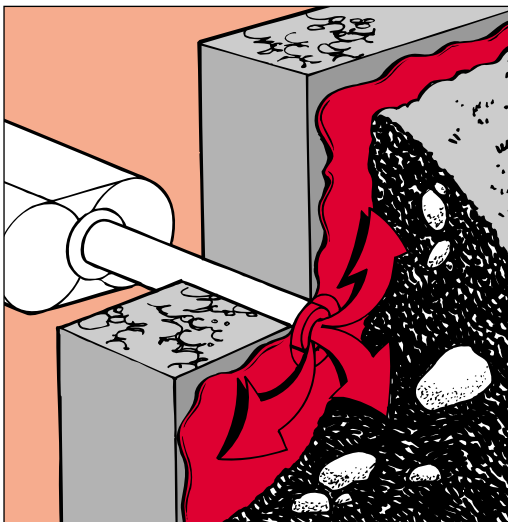
Hydraulic binder with ultra fast setting and drying for plugging water leaks.

Use Lamposilex to plug any source of water, even under pressure, in basements, tunnels, subways etc. and for sealing waterproof rigid joints in hydraulic concrete structures, sewers, tanks and canals. Where seepage is present, Lamposilex must be used before waterproofing with Idrosilex Pronto.

Once mixed with water Lamposilex forms a paste with a plastic consistency that sets in about 2 minutes.

Preparing the mix: pour 1 kg of Lamposilex into a bucket containing 280 grams of water, while mixing very vigorously with a hand trowel until a homogeneous paste is obtained.

For measures by volume, mix 2.5 parts of Lamposilex with 1 part water. Immediately apply the Lamposilex using a gloved hand.



FOAMJET T

High viscosity ultra rapid setting two-component polyurethane resin to be injected for consolidating and waterproofing structures subject to high pressure water ingress.

Use Foamjet T for all waterproofing works of cracked concrete and masonry structures, such as tunnels, shafts, dams, canals, bulkheads, floorings or beds subject to strong water ingress.

Foamjet T is a two-component halogen free resin that must be used with special machinery that is able to measure and mix Part A with Part B in a 1:1 ratio by volume.

Thanks to the high fluidity of Foamjet T, the product can penetrate through fissures of only several hundred microns and seals the cracks even if they are subject to water infiltrations. Once set, Foamjet T becomes perfectly waterproof and ensures an effective consolidation of the treated structure.

SEE NEXT PAGE FOR XYPEX WATERPROOFING SYSTEMS

XYPEX™

CONCRETE WATERPROOFING BY CRYSTALLISATION

Xypex is a unique chemical treatment for waterproofing and protecting concrete.

How does Xypex work?

When mixed with water and applied as a cementitious coating, the active chemicals in Xypex will cause a catalytic reaction, which generates a non-soluble formation of dendritic fibres within the pores and capillary tracts of concrete.

The chemicals in Xypex are activated by water, thereby by the process of osmosis the crystals form throughout the concrete even against strong hydrostatic pressure.

The prism shaped crystallisation formation of Xypex does not allow water molecules to pass, but it does allow the smaller air molecules through, effectively waterproofing the structure whilst allowing it to "breathe". This effect also has the benefit of preventing intrusion of chlorides, salt water, sewage etc, thus protecting concrete and reinforcing steel from deterioration and oxidation.

When applied to new concrete or in conjunction with Mapegrout concrete repair system, the Xypex will work as a corrosion inhibitor.

Xypex Concentrate

Used as a single coating on above or below grade concrete, or as the first of a two coat application where two coats are required. Also used as a Dry-Pac for sealing strips (fillets) at construction joints and honeycombing. Xypex Concentrate is the most chemically potent of the Xypex crystalline waterproofing materials.

Xypex Modified

Used as a second coat to reinforce Xypex Concentrate where two coats are required. Also used as an exterior dampproofing.

Coverage

For normal surface applications coverage per coat is: 0.8 kilograms per square metre (1.5 pounds per square yard). For construction joint surfaces coverage is: 1.0 kilograms per square metre (2.0 pounds per square yard).

Xypex Patch'n Plug

For setting, non-shrink, high bond strength hydraulic cement compound for concrete repairs. Stops flowing water in seconds. Patch'n Plug seals cracks, tie holes etc. and is also used for the general repair or patching of concrete. Patch'n Plug may be used in conjunction with Xycrylic Admix to increase the compressive strength and bond strength to existing concrete.

Xypex Gamma Cure

May be used as an alternative to water curing for certain Xypex applications.

Xypex Admix C-1000 and C-2000

With the Admix C-Series, Xypex's unique crystalline dry powder compound for the waterproofing, protection and improvement of concrete is added to the concrete mix at time of batching. Admix C-1000 and C-2000 have each been specially formulated to meet varying project and temperature conditions.

Independent Test Results

Permeability - U.S. Army Corps of Engineers CRD-C-48-73 "Permeability of Concrete"

Two inch thick, 2000 PSI (13,790 KPa) Xypex-treated concrete samples were pressure tested up to a 123.5m water head (175 PSI-1207 KPa), which was the limit of the testing apparatus. While untreated samples showed marked leakage, the Xypex treated samples, as a result of the crystallisation process, became totally sealed and exhibited no measurable leakage.

Chemical Resistance - A.S.T.M. C267-77 "Chemical Resistance of Mortars"

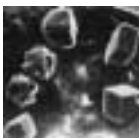
Xypex treated cylinders and untreated cylinders were exposed to such chemicals as hydrochloric acid, caustic soda, toluene, mineral oil, ethylene glycol, pool chlorine and brake fluid. Results of these studies indicated that chemical exposure did not have a detrimental effect on the Xypex coating. Tests following chemical exposure indicated average compressive strength increases of 20% for Xypex-treated specimens over untreated control samples.

Freeze-Thaw and De-icing Chemical Resistance - A.S.T.M. C672-76 "Standard Test Method for Scaling Resistance of Concrete Surfaces Exposed to be De-icing Chemicals"

Xypex-treated samples restricted chloride ion concentration to below the level necessary to promote electrolytic corrosion of reinforcing steel. Visual examination of untreated panels after 50 cycles showed a marked increase in surface deterioration as compared to treated panels.

Radiation Resistance - U.S.A. Standard No. N69-1967 "Protective Coating for the Nuclear Industry"

After exposure to 5.76×10^4 rads of gamma radiation, the Xypex treatment revealed no ill effect or damages.



Concrete Before Xypex



Xypex Crystallisation Begins



Xypex Crystallisation Matures (26 days)

FOR SALES AND TECHNICAL ADVICE, PHONE: 0151 422 8000



Unit 3
Albright Road
Speke Approaches Industrial Estate
WA8 8FY
Liverpool
L6 1AU

Tel: +44 (0)151 422 8000

Fax: +44 (0)151 422 8001

E-mail: sales@clan.co.uk

Web: www.clan.co.uk