



SURFACE APPLIED AND REPAIR

*CONCRETE WATERPROOFING
AND PROTECTION*





SUSTAINABLE WATERPROOFING SOLUTIONS

Xypex Crystalline Technology: Xypex products use the natural porosity of concrete and chemical diffusion to penetrate its pores and capillaries. Inside the concrete, Xypex chemicals react with unhydrated cement particles and the byproducts of cement hydration to form a non-soluble crystalline structure deep within the substrate. In this condition, the concrete becomes impermeable, preventing the penetration of liquids and chemicals from any direction even under extreme hydrostatic pressure. The chemical resistant properties of the crystalline structure will mitigate the attack of sulphates and chlorides that may be present in subsoils and waters.

Xypex surface-applied waterproofing products are ideal for both new and existing concrete structures, whether below or above grade. They are effective for new builds, repairs, resurfacing, and rehabilitation, providing enhanced durability, resilience, and permanent protection..

Xypex products are designed to resist extreme hydrostatic pressure and become an integral part of the substrate, effectively sealing static hairline cracks up to 0.5 mm. They can be applied to both the positive and negative sides of the concrete surface, allowing the concrete to breathe while being highly resistant to aggressive chemicals. Unlike traditional waterproofing methods, Xypex waterproofing cannot be punctured and eliminates the need for costly surface priming, leveling, and the sealing, lapping, and finishing of seams at corners and edges that are typically associated with membrane applications. Xypex is less costly to apply than most other methods, is not subject to deterioration, and provides permanent protection.

Xypex's products extend the lifespan of concrete structures, demonstrating a commitment to sustainable construction and infrastructure maintenance. Our surface applied technology achieves about 65% less embodied carbon than rubberized asphalt and 60% less than HDPE membrane sheeting over its lifecycle, making it the sustainable choice for your projects.





Xypex Concentrate

SURFACE APPLIED WATERPROOFING, JOINT AND CRACK REPAIR

Xypex Concentrate consists of cement, finely graded sand, and active proprietary chemicals; it is applied as a cementitious slurry to the pre-saturated surface of existing above and below-grade structures. The active chemicals diffuse into the substrate and react with moisture and the byproducts of cement hydration to cause a catalytic reaction.

This reaction generates a non-soluble crystalline formation throughout the pores and capillary tracts of the concrete, as well as cracks, permanently sealing the concrete and preventing the penetration of water and other liquids from any direction, even under high hydrostatic pressure. Xypex Concentrate is also mixed in a Dry-Pac form for construction joints, or for the repairing of leaking cracks and other defects.



Advantages

- Becomes an integral part of the substrate
- Resists extreme hydrostatic pressure
- Can seal static hairline cracks up to 0.5 mm
- Highly resistant to aggressive chemicals
- Can be applied to the positive or the negative side of the concrete surface
- Does not require a dry surface
- Non-toxic / no VOCs
- Is permanent
- Less costly to apply than most other methods
- Extends the service life of concrete
- No costly surface priming or leveling prior to application
- Does not require sealing, lapping and finishing of seams at corners, edges or between membranes
- Does not require protection during backfilling or other site works
- Cannot puncture, tear or come apart at the seams
- Allows concrete to breathe



Recommended for

- Reservoirs
- Sewage and Water Treatment Plants
- Secondary Containment Structures
- Tunnels and Subway Systems
- Underground Vaults
- Foundations
- Parking Structures
- Swimming Pools
- Precast Components



Xypex Modified

CHEMICALLY REINFORCES CONCENTRATE

Xypex Modified can be applied as a second coat to reinforce Xypex Concentrate, or applied by itself to damp-proof the exterior of foundation walls. Applied as a second coat, Xypex Modified chemically reinforces Xypex Concentrate where two coats are required and produces a harder finish. Where damp-proofing is required, a single coat of Modified may be used as an alternative to a spray/tar emulsion.



Advantages

- Becomes an integral part of the substrate
- Resists extreme hydrostatic pressure
- Can seal static hairline cracks up to 0.5 mm
- Highly resistant to aggressive chemicals
- Can be applied to the positive or the negative side of the concrete surface
- Does not require a dry surface
- Non-toxic / no VOCs
- Is permanent
- Less costly to apply than most other methods
- Extends the service life of concrete
- No costly surface priming or leveling prior to application
- Does not require sealing, lapping and finishing of seams at corners, edges or between membranes
- Does not require protection during backfilling or other site works
- Cannot puncture, tear or come apart at the seams
- Allows concrete to breathe



Recommended for

Xypex Modified is recommended as a single coat for the damp-proofing of foundations or as a second coat with Xypex Concentrate for the following applications:

- Reservoirs
- Sewage and Water Treatment Plants
- Secondary Containment Structures
- Tunnels and Subway Systems
- Underground Vaults
- Foundations
- Parking Structures
- Swimming Pools
- Precast Components



Xypex Patch'n Plug

FAST-SETTING CEMENT COMPOUND FOR PATCHING AND REPAIR

Xypex Patch'n Plug is a specially designed, fast-setting hydraulic cement compound for concrete patching and repair. It stops flowing water in seconds and is used to seal cracks, tie holes, and other defects in concrete. The high performance characteristics of Patch'n Plug are enhanced by Xypex's unique Crystalline Waterproofing Technology.



Advantages

- Single component (simply add water)
- Very rapid setting
- Contains Xypex's unique crystalline chemistry for self-healing of cracks and other defects
- Quick return to service of water holding structures
- Cement based – compatible with concrete and masonry substrates
- Non-toxic / no VOCs
- NSF 61 certified



Recommended for

- Stopping an active flow of water through cracks and defects in substrate
- Repair of tie holes, honeycombs and rock pockets
- Repair of leaking construction joints
- Sealing around pipe penetrations

Xypex Repairs

Xypex Concentrate Dry-Pac

For many Xypex repair procedures, using Xypex Concentrate in a Dry-Pac form is recommended. This mix, consisting of one part water to six parts Xypex Concentrate powder, creates a dry, powdery material suitable for filling chipped or cut slots. However, it can be challenging to place in hard-to-reach or overhead areas.

Patch'n Plug and Concentrate Mortar Blend

Field experience and lab testing have shown that blending Xypex Concentrate and Xypex Patch'n Plug into a dry powder, then mixing it to a mortar, can replace Xypex Concentrate in Dry-Pac form. This mixture offers a longer pot life and superior workability, enhancing crack healing around the repair area while delivering excellent waterproofing results.

Please review our method statement online at www.xypex.com.



Xypex Megamix I

THIN COATING FOR WATERPROOFING AND RESURFACING

Xypex Megamix I is a thin parge coat for the waterproofing and resurfacing of masonry or concrete surfaces, as a cap coat for Xypex Concentrate, or as an architectural rendering. Megamix I is a unique blend of cement, sand, fibers and proprietary chemicals. It is mixed with Xycrylic Admix to produce enhanced bond. Megamix I is applied by brush or trowel up to a thickness of 3/8 in. (10 mm).



Advantages

- Excellent adhesion and bond to concrete substrates
- Easy to apply
- Fiber reinforced
- Reduces surface absorption
- Provides good surface for painting or as a final finished surface
- NSF 61 certified



Recommended for

- Waterproof coating for vertical concrete block surfaces and cast-inplace concrete walls
- A secondary or cap coat for Xypex Concentrate applications to porous masonry surfaces
- Lining for swimming pools, tunnels and tanks

Xycrylic Admix

Is a water-based, high solids, polymer dispersion specifically designed for fortifying Portland cement compositions. This liquid is milky-white in color and improves curing qualities, enhances bond, imparts excellent water and weather resistance, and reduces shrinkage cracking.



Advantages

- Hardens and toughens cement mortars for improved durability
- Enhances adhesion capabilities to a wide variety of surfaces
- Increases resistance to many industrial chemicals
- Eliminates water curing in most applications
- NSF 61 certified when used with Megamix I



Recommended for

- Thin mortar resurfacing
- Patching and concrete repairs
- Resurfacing floor underlayments
- Spray and fill coats



Xypex Megamix II

REPAIR AND RESURFACING MORTAR

Xypex Megamix II is a thick repair mortar for the patching and resurfacing of deteriorated concrete. Megamix II has been specifically formulated to produce superior bond, low shrinkage, chemical durability and high strength. It is a one component mortar and can be either sprayed or trowel applied at a thickness of 3/8 - 2 in. (10 - 50 mm) per layer. The high performance characteristics of Megamix II are enhanced by Xypex's unique crystalline waterproofing and protection technology.



Advantages

- Excellent adhesion and bond to concrete substrates
- Resistant to chemical attack
- Low shrinkage, fiber reinforced
- Highly resistant to chloride diffusion
- Sulfate resistant (very severe sulfate exposure)
- Ready to use - just add water
- Vertical and overhead concrete repair; sprayable
- Non-toxic / no VOCs
- NSF 61 certified
- CE certified meeting EN 1504-3



Recommended for

Rehabilitation of:

- Water Tanks and Reservoirs
- Water and Wastewater Treatment Plants
- Concrete Water and Sewer Pipes
- Manholes and Vaults
- Marine Structures
- Bridge Structures
- Tunnels and Parking Garages
- Foundations
- Hydro Dams and Thermal Electric Facilities
- Stone and other Masonry Structures



Xypex Megamix II with Bio-San

RESTORATION OF DETERIORATED CONCRETE DUE TO MIC

The variant, Xypex Megamix II with Bio-San, incorporates Bio-San antimicrobial protection into Megamix II repair and resurfacing mortar. This product is specifically designed for the restoration of deteriorated concrete surfaces caused by microbial induced corrosion, abrasion/erosion and chemical attack. It is formulated for ease of application, superior bond, low shrinkage, high strength and resistance to microbial and sulphate attack. Megamix II with Bio-San contains bioactive mineral solids which fix permanently within the repair mortar matrix impairing bio-film formation, thus limiting microbial induced corrosion of the repaired surface in sewer environments.

It significantly extends the life of sewer and waste water infrastructure by inhibiting the growth of acid causing sewer bacteria such as Thiobacillus that cause MIC (microbial induced corrosion). In most applications, such as manhole resurfacing, Megamix II with Bio-San can be used to replace epoxy linings and calcium aluminate repair mortars.



Advantages

- Excellent adhesion and bond to concrete substrates
- Inhibits microbial induced corrosion
- Low shrinkage, fiber reinforced
- Resistant to acid attack
- Very resistant to severe sulphate exposure
- Highly resistant to chloride diffusion
- Ready to use – just add water
- Vertical and overhead concrete repair; sprayable
- Non-toxic / no VOCs
- CE certified meeting EN 1504-3



Recommended for

- Manholes / Sewer Pipes
- Pump and Lift Stations
- Head Works
- Septic Tanks
- Digesters
- Clarifiers
- Industrial Structures

PROJECT EXAMPLES AROUND THE WORLD



Concentrate: Gateway Arch Expansion - USA



Modified: One & Only Resort Pool - South Africa



Patch'n Plug: The Rihand Dam - India



Megamix II with Bio-San: Largo Wastewater Treatment Plant - USA



Megamix I: Ford Australia Head Office - Australia



Megamix II: Mitchell Water Treatment Plant - USA

ABOUT XYPEX

More than 50 years ago, the development of crystalline technology by a team of scientists at Xypex Chemical Corporation revolutionized the way that concrete is protected from intrusive liquids. The key to Xypex concrete waterproofing technology is its innovative approach to treating concrete at the microscopic level.

Through commitment to excellence and ongoing research and testing, Xypex Crystalline Technology has evolved into a family of waterproofing products that stop water ingress in construction and permanently protect concrete structures in challenging environments in all climates across the globe.

Xypex Chemical Corporation

Over 50 years ago, Xypex Chemical Corporation introduced crystalline technology, revolutionizing concrete waterproofing. This innovation treats concrete at the microscopic level, evolving into a suite of products that address water challenges and enhance durability in all climates worldwide.



Beingthere®

Present in Over 100 Countries

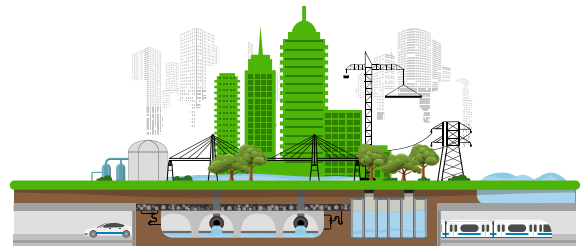
For over 50 years, Xypex crystalline waterproofing technology has served concrete users in over 100 countries. With a robust network of licensees, distributors, technical representatives, and installers, Xypex ensures swift responses to customer needs and project concerns, showcasing its global presence and commitment to excellence.

Environmental Impact

Xypex's crystalline waterproofing technology has low embodied carbon. Comparisons show 65% less than rubberized asphalt and 60% less than HDPE membrane sheeting over its lifecycle. It waterproofs and self-heals concrete, extending structure life and durability and minimizing repairs, thereby avoiding further carbon emissions.

Sustainability Focus

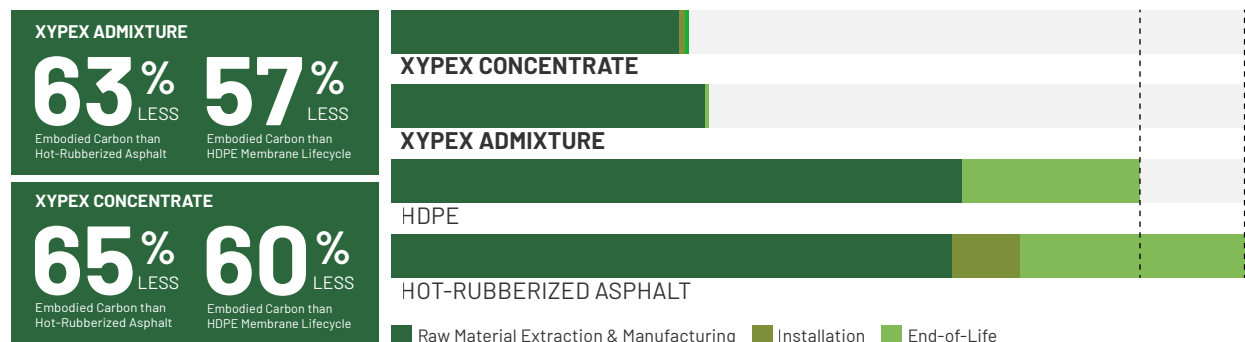
At Xypex, sustainability has been at our core since the beginning. Our technology is supported by Environmental Product Declarations (EPD) and Health Product Declarations (HPD), which ensures that we meet industry standards for environmental responsibility. Moreover, our technology supports LEED and other green building credits. We are fully committed to promoting durable, efficient, and sustainable construction waterproofing practices.



Beingsustainable®

Building Sustainably, Lasting Permanently

Energy efficiency, material selection, minimizing site impact, VOC reduction and extending the service life of the structure are the 'green' benefits that non-toxic Xypex products provide the construction world and the pursuit of environmental sustainability.





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