DESCRIPTION

Xypex is a unique chemical treatment for the waterproofing, protection and repair of concrete. XYPEX CONCENTRATE is the most chemically active product within the Xypex Crystaline Waterproofing System. When mixed with water, this light grey powder is applied as a cementitious slurry coat to above-grade or below-grade concrete, either as a single coat or as the first of a two-coat application. It is also mixed in Dry-Pack form for sealing strips at construction joints, or for the repairing of cracks, faulty construction joints and honeycombs. Xypex presents the penetration of water and other liquids from any direction by causing a catalytic reaction that produces a non-soluble crystalline formation within the pores and capillary tracts of concrete and cement-based materials.

RECOMMENDED FOR:

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

ADVANTAGES

- Resists extreme hydrostatic pressure
- Becomes an integral part of the substrate
- Can seal hairline cracks up to 0.4 mm
- Allows concrete to breathe
- Highly resistant to aggressive chemicals
- Non-toxic
- Does not require a dry surface
- Cannot puncture, tear or come apart at the seams
- No costly surface priming or leveling prior to application
- Does not require sealing, taping and finishing of seams at corners, edges or between membranes
- Can be applied to the positive or the negative side of the concrete surface

PACKAGING

Xypex Concentrate is available in 20 lb. (9.1 kg) pails, 60 lb. (27.2 kg) pails and 50 lb. (22.7 kg) bags.

STORAGE

Xypex products must be stored dry at a minimum temperature of 45ºF (7ºC). Shelf life is one year when stored under proper conditions.

COVERAGE

For normal surface conditions, the coverage rate for each Xypex coat is 6 to 7.2 sq. ft./lb. (1.25 - 1.5 lb./sq. yd. or 0.65 - 0.8 kg/m²).

TEST DATA

PERMEABILITY

U.S. Army Corps of Engineers (USACE) CRD-48-73
“Permeability of Concrete” Pacific Testing Labs, Seattle, USA

Two inch (51 mm) thick, 2000 psi (13.8 MPa) Xypex-treated concrete samples were pressure tested up to a 405 ft. (124 m) water head (175 psi/1.2 MPa), the limit of the testing apparatus. While untreated samples showed marked leakage, the Xypex-treated samples (as a result of the crystallization process) became totally sealed and exhibited no measurable leakage.

DIN 1048 “Water Impermeability of Concrete” Bautest – Corporation for Research & Testing of Building Materials, Augsburg, Germany

Twenty cm thick, Xypex-treated concrete samples were pressure tested up to 7 bars (230 ft./70 m water head) for 24 hours to determine water permeability. While reference specimens measured water penetration up to a depth of 52 mm, Xypex-treated samples measured water penetration of zero to an average of 4 mm.
The Xypex treatment revealed no ill effects or damages. Exposure testing of potable water in contact with Xypex-treated samples indicated no harmful effects.

For Brush Application

For Spray Application

For Construction Materials, Tokyo, Japan

For concrete structures that hold liquids (e.g., reservoirs, swimming pools, tanks, etc.), Xypex should be cured for three days and allowed to set for 12 days before filling the structure with liquid.

TECHNICAL SERVICES

For more instructions, alternative application methods, or information concerning the compatibility of the Xypex treatment with other products or technologies, contact the Technical Department of Xypex Chemical Corporation or your local Xypex representative.

SAFE HANDLING INFORMATION

Xypex is alkaline. As a cementitious powder or mixture, Xypex may cause significant skin and eye irritation. Directions for using Xypex are detailed on all Xypex labels and packaging. The Manufacturer also maintains comprehensive and up-to-date Material Safety Data Sheets on all its products. Each sheet contains detailed health and safety information for the protection of workers and customers. The Manufacturer recommends you contact Xypex Chemical Corporation or your local Xypex representative.

WARRANTY

The Manufacturer warrants that the products manufactured by it shall be free from material defects and will be consistent with its normal high quality. Should any of the products be proven defective, the liability to the Manufacturer shall be limited to replacement of the product or, at the Manufacturer’s option, payment, whichever shall be determined in good faith to be the lesser. This warranty is in lieu of all other warranties expressed or implied. The Manufacturer hereby disclaims all rights and liability in connection therewith.
660c

PANTONE

BLK

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

J. A. 6204 “Concrete Freeze/Thaw” Japan Testing Center For Construction Materials, Tokyo, Japan

The resonating frequency of both untreated and Xypex-treated concrete samples were measured. At 204 cycles, the Xypex-treated samples showed 99% relative durability compared to 98% in the untreated samples. At 435 cycles, the Xypex-treated samples measured 91% relative durability compared to 78% in the untreated reference samples.

POTABLE WATER EXPOSURE

NSF 61 “Drinking Water System Components—Health Effects”

Exposure testing of potable water in contact with Xypex-treated samples indicated no harmful effects.

RADIATION RESISTANCE

U.S.A. Standard No. N96 “Protective Coatings for the Nuclear Industry” Pacific Testing Labs, Seattle, USA

After exposure to 5.75 x 10^7 rads of gamma radiation, the Xypex treatment revealed no ill effects or damages.

APPLICATION PROCEDURES

1. SURFACE PREPARATION

Concrete surfaces to be treated must be clean and free of laitance, dirt, film, paint, coating or other foreign matter. Surfaces must also have an open capillary system to provide “tooth and suction” for the Xypex treatment. If surfaces is too smooth (e.g. where trowel marks are prominent) or coated with excess form oil or other foreign matter, the concrete should be lightly sandblasted, waterblasted, or etched with muriatic (HCL) acid.

2. STRUCTURAL REPAIR

Rout out cracks, faulty construction joints and other structural defects to a depth of 1.5 inches (37 mm) and a width of one inch (25 mm). Apply a brush coat of Xypex Concentrate as described in steps 5 & 6 and allow to dry for 10 minutes. Fill cavity by tightly compressing Xypex into the groove with pneumatic or other foreign matter, the concrete should be lightly sand-blasted, waterblasted, or etched with muriatic (HCL) acid.

3. WETTING CONCRETE

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For construction materials, Tokyo, Japan

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ADVANTAGES

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- Becomes an integral part of the substrate
- Can seal hairline cracks up to 0.4 mm
- Allows concrete to breathe
- Highly resistant to aggressive chemicals
- Non-toxic
- Does not require a dry surface
- Cannot puncture, tear or come apart at the seams
- No costly surface priming or leveling prior to application
- Does not require sealing, lapping and finishing of seams at corners, edges or between membranes
- Can be applied to the positive or the negative side of the concrete surface
- Does not require protection during backfilling or during placement of steel, wire mesh or other materials
- Lasts costly to apply than most other methods
- Not subject to deterioration
- Permanent

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