

Spec Data: Description

1. PRODUCT NAME

XYPEX Concrete Waterproofing by Crystallization™

2. MANUFACTURER

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3. PRODUCT DESCRIPTION

BASIC USE

Xypex is a unique chemical treatment for the waterproofing and protection of concrete. Among its many uses, Xypex is suitable for waterproofing reservoirs, sewage and water treatment tanks, tunnels, manholes, underground vaults, foundation walls and parking decks. It can be used on either poured-in-place concrete or concrete block and can be applied to either the interior or exterior surface with equal results.

CHARACTERISTICS

Xypex waterproofs underground structures from the inside against hydrostatic pressure. By the process of diffusion and because the chemicals in Xypex have an affinity with water, the crystalline formation migrates throughout the pores and capillary tracts of concrete even against strong hydrostatic pressure.

Xypex protects concrete and reinforcing steel. The Xypex treatment is highly resistant to most aggressive substances, pH 3 - 11 constant contact, pH 2 - 12 periodic contact. By preventing the intrusion of chemicals, salt water, sewage and other harmful materials, Xypex protects concrete and reinforcing steel from deterioration and oxidation. The concrete is also protected against spalling, efflorescence, popouts and other damages caused by weathering, bleeding of the salts and internal expansion and contraction during the freeze/thaw cycle.

Xypex permits concrete to breathe. The Xypex crystalline formation has fixed-size air spaces so small that water cannot pass through. It does allow the passage of air and vapor, thus the concrete is able to breathe and become thoroughly dry, preventing moisture vapor build-up.

Xypex products are nontoxic. They have been approved by NSF International, US Environmental Protection Agency, Agriculture Canada and many other government health agencies throughout the world for use on concrete structures that hold potable water or are in contact with foodstuffs.

ADVANTAGES

- Not just a surface coating - Not dependent upon continuity of membrane for waterproofing action
- Seals hairline cracks up to 1/64 in. (0.4 mm)
- No surface priming or leveling required
- Cannot puncture, tear or come apart at the seams
- Does not require protection during back-filling or during placement of steel, wire mesh or other materials
- Can be applied to moist or green concrete
- Less costly to apply than most other waterproofing methods

COMPOSITION & MATERIALS

Xypex is manufactured in the form of a dry powder compound consisting of portland cement, very fine treated silica sand and various active proprietary chemicals.

When mixed with water and applied as a cementitious coating, the active chemicals in Xypex cause a

catalytic reaction which generates a nonsoluble crystalline formation of dendritic fibers within the pores and capillary tracts of concrete. Thus, the concrete itself becomes permanently sealed against the penetration of water or liquids from any direction.

TYPES

Xypex crystalline waterproofing technology is available in three forms:

- As a coating - for new or existing structures
- As an admixture - included in the concrete mix at the time of batching
- As a dry shake material - for new horizontal surfaces

XYPEX CONCENTRATE

Used as a single coating on above or below-grade concrete, or as the first of a 2 coat application where two coats are required. See Xypex Specification Manual. Also used as a Dry-Pac for sealing construction joints and for repair of cracks, faulty 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 and as a single coat for exterior damp-proofing.

XYPEX ADMIX C-1000 AND C-2000

Used as an integral waterproofing admixture which is included in the concrete mix at the time of batching.

XYPEX CONCENTRATE DS-1 AND DS-2

Dry shake formulations designed for application on fresh horizontal concrete prior to finishing operations.

XYPEX PATCH 'N PLUG

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

XYPEX FCM

Xypex FCM is specifically designed for repairing cracks subject to movement, sealing construction joints, restoring deteriorated concrete, and waterproofing concrete structures. FCM has exceptional adhesive and elongation characteristics and is often used in conjunction with the Xypex Crystalline Concrete Waterproofing and Protection System. FCM is a two component product consisting of a specialized liquid polymer dispersion and a cementitious powder. These ingredients are mixed just prior to application.

XYCRYLIC-ADMIX

An acrylic polymer formulation specifically designed for use as an admix to fortify portland cement mixes. Xycrylic-Admix increases hardness, durability, bonding capability and chemical resistance.

XYPEX GAMMA CURE

Can be used as an alternative to water curing for certain Xypex applications. Contact the manufacturer for further information.

LIMITATIONS

Xypex products must be stored dry at a minimum temperature of 45°F (7°C). The shelf life is one year when stored under proper conditions.

Xypex is not designed for use in expansion joints or chronically moving cracks.