

Product Description

Xypex is a unique chemical treatment for the waterproofing, protection and repair of concrete. 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 constituents of hardened concrete 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 intended for use only by professional applicators.

Recommended for

- Reservoirs
- Sewage and water treatment plants
- Secondary containment structures
- Tunnels and subway systems
- Underground vaults
- Foundations / basements
- Parking structures
- Swimming pools

Advantages

- Resists extreme hydrostatic pressure
- Highly resistant to aggressive chemicals
- Can be applied to the positive or the negative side of the concrete surface
- Non-toxic / no VOCs
- Permanent
- Does not require a dry surface for application
- Allows concrete to breathe
- Heals static cracks up to 0,5 mm

Product Characteristics

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| Appearance and Colour | grey powder |
| VOC of powder | no VOC |
| Bulk Density of loose Powder (EN 1097-3+Z1) | 1100 +/- 50 kg/m ³ |
| Density of Fresh Mortar (EN 1015-3) | 1870 +/- 50 kg/m ³ |
| Adhesive Bond (EN 1542) | ≥ 1,0 MPa |
| Water Penetration Depth of Concrete (EN 12390-8) | test specimen < control |
| Chloride Diffusion of Concrete | test specimen < control |
| Self-healing of Static Cracks | ≤ 0,5 mm |
| Resistance to severe chemical attack, Class II (EN 13529) | 20% NaOH (pH 12) H ₂ SO ₄ (pH 2) |

Surface Preparation

Make any necessary structural repairs (e.g. defective concrete, faulty construction joints, cracks greater than 0,5 mm). Concrete surfaces must be saturated with water, clean and free of laitance, dirt, film, paint, coating or other foreign matter. Surfaces must have an open capillary system, this can be done by sandblasting or waterblasting. A CSP-3 per the International Concrete Repair Institute Guidelines and Surface Profile Chips is recommended. There should be no excess water on surfaces before application.

Mixing and Application Instructions

For slurry coat applications, mix Xypex powder with clean water to a creamy consistency, either manually, or using a mixer, in the following proportions:

| Application Method | Typical Coverage Rate (kg/m ²) | Mix Ratio by Volume |
|--------------------|--|---------------------------------|
| Brush | 0,65 - 0,80 | 5 parts powder to 2 parts water |
| | 1,0 | 3 parts powder to 1 part water |
| Spray | 0,65 - 0,80 | 5 parts powder to 3 parts water |

| Standard Application Coverage | |
|-------------------------------|-----------------------------------|
| Minimum coverage per layer | 0,65 kg/m ² |
| Standard conditions | 1 x 0,65 – 1,00 kg/m ² |
| High hydrostatic pressure | 2 x 0,65 – 0,80 kg/m ² |
| Aggressive chemical exposure | 2 x 0,65 – 0,80 kg/m ² |

Do not mix more Xypex material than can be applied in 20 minutes. As the mixture thickens, stir briefly to ensure the mixture remains fluid, but do not add water.

Apply Xypex with a semi-stiff nylon bristle brush or specialized spray equipment. The coating must be uniformly applied and should be just under 1,25 mm. When a second coat (Xypex Concentrate or Xypex Modified) is required, it should be applied after the first coat has reached an initial set but while it is still “green” (less than 24 hours).

Please consult your local Xypex Representative regarding your project’s use of Xypex Concentrate and for detailed application instructions.

Curing

Generally, a misty fog spray of clean water is used for curing the Xypex treatment. Curing should begin as soon as Xypex has set to the point where it will not be damaged by a fine spray of water. Under normal conditions, it is sufficient to spray Xypex-treated surfaces three times per day for two to three days. In hot or arid climates, spraying may be required more frequently.

Wet burlap and some specialty curing blankets are also effective for curing. During the curing period, the coating must be protected from rainfall, frost, wind, the puddling of water and temperatures below 5°C for a period of not less than 48 hours after application. If plastic sheeting is used as protection, it must be raised off the Xypex to allow the coating to breathe.

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 (18 days for wastewater or corrosive solutions) before filling the structure with liquid.

Packaging

Xypex Concentrate is available in 25 kg pails and paper bags.

Storage

Xypex products must be stored dry at a minimum temperature of 7°C. Shelf life is two years¹ when stored under proper conditions.

¹ The user of this product must check their local health and safety regulations, as cementitious products that contain chromium VI may have a reduced shelf life. For those markets subject to regulations concerning the control of soluble chromium VI, where the limit is set at 2 ppm, this product has a shelf life of 12 months.

Health & Safety

Xypex is alkaline. As a cementitious mixture, Xypex may cause skin and eye irritation. When working, it is therefore necessary to comply with the health and safety regulations. Please refer to the safety data sheet. The disposal of the product must follow local regulations.

Certification

Xypex Concentrate is certified as a coating resistant to chemicals according to EN 1504-2. The certification of the product and regular audits are carried out by Notified Body 1020 TZUS.

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|  1020 | |
| Xypex Germany GmbH. Ludwigsluster Chaussee 5 D-19370 Parchim, Germany 12 | |
| Principle 6 (RC) Resistance to chemicals 6.1 - Coating (C) EN 1504-2 • DOP XEU_Con.01 | |
| Adhesive Bond | ≥ 0,8 MPa |
| Total chloride | < 0,05 % by mass |
| Resistance to severe chemical attack, Class II | no blistering, cracking or peeling |