ADMIX C-1000 NF

TECHNICAL DATA SHEET

Product Description

Xypex is a unique chemical treatment for the waterproofing, protection and improvement of concrete. Xypex Admix C-1000 NF is classified as a “waterproofing admixture for concrete” according to ETA-18/1129 and as a “set retarding admixture” (at equal consistence) according to EN 934-2+A1.

The Xypex Admix C-1000 NF powder is added to the concrete mix at the time of batching. The active proprietary chemicals in Xypex react with the moisture and with the by-products of cement hydration to cause a catalytic reaction that generates a non-soluble crystalline formation throughout the pores and capillary tracts of the concrete. This permanently seals the concrete and prevents the penetration of water and other liquids from any direction.

Recommended for

- Precast, cast-in-place and shotcrete
- Reservoirs and water holding structures
- Sewage and water treatment plants
- Secondary containment structures
- Tunnels and subway systems
- Underground vaults
- Foundations / basements
- Parking structures
- Swimming pools
- Bridge and marine structures

Advantages

- Waterproofs under extreme hydrostatic pressure
- Becomes an integral part of the substrate
- Highly resistant to aggressive and chemical environments
- Allows concrete to breathe
- Non-toxic / No VOCs
- Less costly to install than most other methods
- Permanent
- Added to the concrete at time of batching and therefore is not subject to climatic restraints
- Increases flexibility in construction scheduling

Product Characteristics

Appearance and Colour	light grey powder
Bulk Density of Powder	1100 +/- 50 kg/m^3
VOC of Powder	no VOC
Water Penetration Depth of Concrete	test mix < control mix
Compressive Strength of Concrete 28 d (MPa)	test mix ≥ control mix
Sulphate Resistance of Concrete (expansion)	test mix < control mix
Acid Resistance of Concrete (mass loss)	test mix < control mix
Chloride Diffusion of Concrete	test mix < control mix
Self-healing of Stable Cracks	≤ 0,5 mm

Dosage Rates

The typical dosage rate for waterproofing and increased durability is 0.8 – 1.5% by weight of cementitious content. Minimum dosage rate is 3 kg/m^3.

A dosage rate of 1.5% provides increased crystalline protection and is recommended for aggressive environments. For further information regarding concrete mixes containing enhanced chemical resistance or meeting the specific requirements and conditions of your project, consult with the Local Xypex Representative or Xypex’s Technical Services Department.

Compatibility

Xypex Admix C-1000 NF is compatible with all types of cements according to EN 197-1 and with standard types of admixtures according to EN 934-2+A1. Conduct trial batches as required by EN 206+A1 to assess mix design under project conditions.

Directions for Use

Xypex Admix C-1000 NF is added to the concrete at the time of batching. It is important to obtain a homogeneous mixture of the Admix with the concrete. The sequence of procedures for addition will vary according to the type of batch plant operation and equipment. Consult with a local Xypex Technical Services Representative for more detailed instruction on batching concrete containing the Xypex Admix C-1000 NF.

1. Truck addition (at plant): Where permitted, add Xypex Admix to the drum of the mixer truck immediately prior to adding the balance of the materials in accordance with standard concrete batching practices.

2. Addition to central mixer: Add Xypex Admix along with the other components. Mix as per standard batching practices to ensure thorough dispersal of the Admix, resulting in a homogeneous mixture.

3. Addition to coarse aggregate belt: Add Xypex Admix directly to the coarse aggregate conveyor belt. Although addition on site in powder form is not normally recommended, it may be necessary. In such a case, add Xypex Admix to truck in slurry form (e.g. 3 parts powder to 2 parts water by volume). Mix concrete until thoroughly dispersed. Account for added water in the mix design and slump.

Curing

Follow specified project curing practices compliant with EN 206+A1, EN 13670 and local requirements.

Packaging

Xypex Admix is available in cartons or pails containing either 3 kg or 5 kg soluble bags, and in 20 kg paper bags.

Storage

Xypex products must be stored dry at a minimum temperature of 7ºC. Shelf life is two years[1] 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 product residues disposal must follow local regulations.

Certification

Xypex Admix C-1000 NF is certified as a waterproofing admixture against hydrostatic pressure (ETA-18/1129) and a set retarding admixture (EN 934-2+A1). The certification of the product, and regular audits of the FPC are carried out by Notified Body 1020 TZUS.

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1020

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14

Waterproofing Admixture for Concrete
EAD 260026-00-0301

Set Retarding Admixture
EN 934-2:2009+A1

Chloride content	< 0.10% by mass
Alkali content	< 8.5% by mass
Setting time initial	≥ control + 90 minutes
Setting time final	≤ control + 360 minutes
Compressive strength (7 days)	≥ 80% of control
Compressive strength (28 days)	≥ 90% of control
Air content	≤ 2% by volume above the control mix
Water permeability at 28 days	< control specimen

Manufacturer: Xypex Germany GmbH., Ludwigsluster Chaussee 5, D-19370 Parchim, Germany