

AQUASEAL® - ADMIX



Hydrophobic Crystalline Waterproofing Admixture For Concrete

Description

AQUASEAL®-ADMIX is a unique chemical treatment for the waterproofing, protection and improvement of concrete.

AQUASEAL®-ADMIX consists of Portland cement and various active, proprietary chemicals. These active chemicals react with the moisture in fresh concrete and with the by-products 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 that permanently seals the concrete and prevents the penetration of water and other liquids from any direction.

Areas of Application

AQUASEAL®-ADMIX is suitable for any type of concrete element that is constantly or temporarily in contact with water, such as

- Basements.
- Foundations.
- Water Tanks.
- Tunnels
- Canals.
- Sewage and Wastewater Treatment Tanks.
- Swimming Pools.
- Precast Components.
- Cooling Towers at Power Station.
- Parking Structure.
- Underground Chambers.
- Bridge Structures.
- Secondary Containment Structures.

Advantages:

- Resist extreme hydrostatic pressure.
- Becomes an integral part of the substrate.
- Highly resistive to aggregates and chemical environments.
- Ability to seal hairline cracks up to 0.4mm wide, even if they appear after the setting of concrete.

- Less costly to apply than most other methods.
- Significant reduction of the capillary absorption of water.
- Permanently active for the life of the structure therefore, it continuously protects the construction from any water penetration.
- Not affecting vapor permeability of the concrete element.
- Protection of the steel of reinforced concrete from corrosion.
- Free of chlorides and other corrosive ingredients.
- Permanent.
- Added to the concrete at the time of batching therefore is not subject to climatic restrains.
- Saving time.
- Compatibility with all kinds of Portland cement.

Certified according to EN 934-2: T9 and classified as a water-resisting concrete admixture.

Dosage Rates

0.8 – 1.0 % of the total Cement Content.

1. The recommended minimum dosage for **AQUASEAL®-ADMIX** is 3.20 kg per m³; the maximum dosage is 6 kg per m³.

2. Trial mixes and appropriate testing should be carried out, under project conditions, to determine the optimum dosage rate for the mix design of the project.

Directions for use:

AQUASEAL®-ADMIX is added to the concrete at the time of batching. It is important to obtain a homogeneous mixture of **AQUASEAL®-ADMIX** within the concrete. Do not add dry Admix powder directly to wet mixed concrete as this could cause clumping and thorough dispersion

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will not occur. The sequence and timing of procedures for addition will vary according to the type of batch plant operation and equipment.

1. ADDITION TO COARSE AGGREGATE BELT

Add AQUASEAL®-ADMIX powder directly to the coarse aggregate conveyor belt manually or through a computer controlled mass batching system. Account for worker health and safety issues with moving belts and wind-blown dust issues.

2. TRUCK ADDITION (AT PLANT)

ADD (AT PLANT) Add AQUASEAL®-ADMIX in bulk powder form to the drum of the ready-mix truck immediately prior to driving the truck under the batch plant and adding the balance of the materials or the premixed concrete in accordance with standard concrete batching practices. Measures to ensure soluble bags are dispersed include adding the bags as far forward in the drum as possible, adding a small amount of batch water with the bags, and spinning the drum prior to adding remaining ingredients. Avoid delays in adding other components and utilize high speed mixing to ensure homogeneity of mix. Where there may be insufficient water for thorough dispersion of the bulk powder, a water slurry can be made with the Admix and added to the truck mixer prior to batching. Account for added water in the mix design and slump.

3. ADDITION TO CENTRAL MIXER

Load the Admix in bulk powder form in bags to the drum of the central mixer prior to adding the other components. Mix as per standard batching practices to ensure thorough dispersal of the Admix resulting in a homogeneous mixture. Account for worker safety issues when accessing the equipment.

| Technical Properties | |
|--|------------------------------------|
| Test Method | Result |
| Form | Powder. |
| Colour | Grey. |
| Density Of Dry Mortar | 0.97 ± 0.1 Kg/L. |
| Maximum Chloride Content | Chloride-Free. |
| Chloride Penetration | Very Low. |
| Water Impermeability <i>Acc. EN 12390-8</i> | |
| - Negative Side | 13 Bars (190 Psi). |
| - Positive Side | 16 Bars (232 Psi). |
| Capillary Absorption | -72% Against Control. |
| pH Value@ 25°C | 7.7. |
| Water Absorption <i>Bs1881: 1983 Pt122.</i> | (@28 Days). |
| Control Mix | 2.53 %. |
| Aquaseal® - Admix | 1.78 %. |
| Compressive Strength Compared To Untreated Concrete | 7 Days : +/- 0%. 28 Days: + 1%. |
| Uae Local Tests <i>(Bs 1881:1983 Pt116 Amd. 6720-91)</i> | |
| Tested For 3 Days <i>C40/20(OPC+GGBS+MS)</i> Treated Concrete | 33 N/Mm ² . |
| Tested For 7 Days <i>C40/20 (OPC+GGBS+MS)</i> Treated Concrete | 37 N/Mm ² . |
| Tested for 28 days <i>C40/20 (OPC+GGBS+MS)</i> Treated Concrete | 58 N/mm ² |
| Self-healing of static cracks | max. 0.4 mm (16 mils) |
| Toxicity | Non Toxic |
| VOC's | No VOC |

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Technical Services

For more instructions, alternative installation methods, or information concerning the compatibility of AQUASEAL®- ADMIX treatment with other products or technologies, contact the Technical Services Department of **Hexa Construction Chemicals UAE** Technical Services Representative.

Safe Handling Information

AQUASEAL- ADMIX is alkaline. As a cementitious powder or mixture, AQUASEAL®-ADMIX may cause significant skin and eye irritation. Directions for treating these problems are clearly detailed on all AQUASEAL®-ADMIX pails and packaging. The Manufacturer also maintains comprehensive and up-to-date Safety Data Sheets on all its products. Each sheet contains health and safety information for the protection of workers and customers. The Manufacturer recommends you contact Hexa Construction Chemicals Technical Services Representative to obtain copies of Safety Data Sheets prior to product storage or use.

Warranty

HEXA CONSTRUCTION CHEMICALS warrants to the purchaser that the products supplied by it shall be free from material defects when mixed with concrete structure for **25 years**.

Packaging

AQUASEAL®- ADMIX is available in 20kg Plastic Pails or Paper Bags.

Shelf-life Storage

12 months from production date if stored in original, unopened packaging in a frost-free and dry place.

Safety

Please observe the actual valid material safety data sheet and follow the described safety measures for handling of the product.



Made In EU.

AQUASEAL-ADMIX

Water Resisting admixture for concrete

EN 934-2: T.9

Corrosive behaviour: contains components only

from EN 934-1:2008, Annex A.1

Dangerous substances: none.



HEXA CONSTRUCTION CHEMICALS

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