Water Repellents for Concrete and Masonry

Although concrete is one of the most durable and stable building materials, it suffers extensive damage from moisture and freeze/thaw cycles. Water penetration can lead to corrosion damages from chloride ions present in road salt or marine environments. The best way to protect concrete and masonry structures is to reduce water absorption.

Holderchem water and stain repellents have been specifically designed to penetrate a broad range of vertical and/or horizontal substrates. Vertical applications include precast concrete, exposed aggregates, poured in place concrete, limestone, marble, and brick walls. Horizontal applications include parking and bridge decks, concrete ramps and sidewalks, industrial floors, and brick pavers. When properly applied, the products exhibit a neutral clear uniform appearance, thus do not alter the appearance or texture of the treated surface.

In addition to excellent water repellency, Holderchem products can deeply penetrate the substrates with enhanced durability properties, UV stability, and reduced efflorescence. They do not block the surface’s micro-porosity, hence allowing the facades to breathe. Moisture in the material can therefore evaporate from inside to outside resulting in a regular transfer of water and carbon dioxide.

Products from within this range are either solvent-based or water-based. The former category of products can be used at lower temperatures, as they will not freeze during transport or storage. Water-based products are less harmful to the environment and more user friendly as excess material can be cleaned with water and soap. Furthermore, there is no need for masking tape to protect window and door frames, if promptly cleaned. The Batimix range of water repellents for concrete and masonry includes the following products:

Batimix Water Repellent L-885, an aqueous solution of methyl-siliconate based compound, which is applied on concrete and mortar surfaces to minimize water penetration and efflorescence and reduce cleaning costs. Areas of over-spraying or splashing should be wiped clean with water at once and other precautionary measures listed on the technical datasheet followed.

Batimix Water Repellent 158, a solvent-based product used to treat above ground facades made of brick, concrete, mortar, stucco, natural stone, etc. It is a liquid compound, which penetrates the pores of treated materials providing effective water repellency while reducing deterioration from freeze-thaw cycles. Its penetration in the substrate pores reduces masonry cleaning requirements and costs. One of its many advantages includes keeping water out while allowing dampness to escape. Areas to be treated should be well ventilated. Areas of over-spraying or splashing wiped clean with white spirit at once and other precautionary measures listed on the technical datasheet followed.

The water repellent performance of treated substrates depends on the quantity and method of application. The dilution concentration must take into account the absorption

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capacity of the substrate and its porosity. Generally, the product must be applied until the surface is saturated. For most substrates, one coat is sufficient, albeit for very porous materials a second coat may prove necessary. Consumption normally depends on the type of surface and its porosity. As these materials may leave a wet look on some stones, they should be tried on a small inconspicuous area first.

The surface to be treated must be clean and free from dust particles. Surface deposits, dust, and scale must be thoroughly removed and cracks greater than 3 mm filled with sealants or with rendering before application of the water repellent. Cleaning with strongly acidic or basic detergents should be avoided as this might damage the surface being treated. Product application is normally done with a flat brush for rough and irregular substrates, or with a roller for limited surface areas. Spraying using an air gun with different nozzles can also be used.