

CF : CRYSTALSEAL Crystalline Waterproofing

Product Description

CF:CRYSTALSEAL is a cementitious chemical waterproofing system that imparts water tightness to concrete structures by forming insoluble crystalline products within the pores and capillaries in the concrete thus sealing the concrete from penetration of water and liquids.

CF : CRYSTALSEAL consists of a blend of high quality special cements and aggregates and proprietary moisture activated chemicals.

Typical Applications

CF: CRYSTALSEAL can be used in all concrete structures that require waterproofing and can be applied either on the positive or the negative side of water ingress. It is recommended for use in the following applications.

- Water Retaining Structures
- Concrete drains
- Swimming Pools
- Reservoirs
- Dams
- Tanks
- Basements
- Tunnels
- Retaining Walls and Foundations

Technical Data

Water Permeability :Test method CRD-C-48-73
Hydrostatic Pressure : 1.2 Mpa
Coefficient of Permeability K: 7.8×10^{-13} cm/sec

Compressive Strength
Test Method BS 1881 : 116
28 Days : 32 Mpa

Flexural Strength
Test Method BS 1881
28 Days : 4.8 Mpa

Bond Strength
Test Method BS 1881 : 116
28 Days : 1.2 Mpa

Waterproofing Action

Moisture and free lime present in the substrate react with the active chemicals in CF:CRYSTALSEAL to create a barrier of insoluble crystals. These penetrate deep into the capillary structure of the concrete to block the capillaries and micropores as sites for passage of water, while still permitting the transmission of water vapor and allowing the structure to breathe.

The rate of crystal growth depends on the substrate density and porosity. Normally there is enough penetration at the surface after 3-5 days to sufficient provide full water proofing properties.

Mixing

Add water to CF:CRYSTALSEAL powder and stir continuously until the desired slurry consistency is achieved. Typically add 2 parts of powder to 1 part of water by weight. Due to the thixotropic nature of the slurry, the mix should be agitated if it stiffens after mixing to reestablish the workability of the slurry mix.

Application

Apply CF:CRYSTALSEAL slurry by trowel, brush or spray onto the prepared substrate. Apply a minimum of two coats, the second coat applied at right angles to the first. The second coat should be applied over the first coat after it is touch dry usually 2-3 hours after application.

Curing

It is important not to let the CF: CRYSTALSEAL application dry out too quickly. The surface should be kept damp for 3-5 days following application by spraying with water and covering with plastic or burlap sheets. Tanks or other water retaining structures may be filled 24 hours after finishing the CF:CRYSTALSEAL application, the water pressure will accelerate the sealing process.

Coverage

Application of 2 Coats of CF:CRYSTALSEAL requires approximately 1kg/m^2

Packaging

CF:CRYSTALSEAL is packed in 25 kg. bags.