



QUICSEAL 191

Product Name

CRYSTASIL

Description

QUICSEAL 191 Crystasil is a chloride free chemical admixture supplied in the form of a white powder and is added into concrete and mortars to impart self-sealing and waterproof properties.

When added into concrete, the active chemicals reacts with moisture in concrete and the by-products of cement hydration which generates a non-soluble crystalline formation throughout the pores and capillary tracts of the concrete.

These crystals formation fills all the pores and capillaries, resulting in a concrete impermeable to the migration of water or waterborne chemicals. During the curing stage, QUICSEAL 191 enhances the concrete's hydration process by forming massive hydration crystal growth.

QUICSEAL 191 waterproof concrete is unique in its ability to improve over time. The unreacted active ingredients will reactivate whenever the water seeps in, eventually blocking the capillary pores to prevent damage caused by water.

Uses

QUICSEAL 191 is recommended for waterproofing and protection of:

- Raft foundations and retaining wall
- Basement walls and slab
- Ground slab and suspended slabs
- Water tanks, marine and other water containment structures
- Swimming pools, ponds, water features
- Tunnels and pipelines
- Shotcrete
- Precast

Advantages

- Cost saving against waterproofing membranes, liners or coating
- Protects reinforcement steel from corrosion
- Reduces shrinkage and cracking
- Self-seals hairline cracks up to 0.4mm from subsequent shrinkage, settling or shifting
- Integral protection is maintained even if surface damage occurs, unlike surface applied films or coatings.
- Cured treatment within concrete becomes a permanent waterproof system, capable of withstanding high water pressure.
- Facilitates faster backfilling – saving time and money
- Economical – easy to apply and install compared to other systems
- Versatile usage – product can be used as an additive or applied by dry shake.

Mix Design Guidelines

QUICSEAL 191 Crystasil is a dry powder admixture that is added to the concrete mix at the rate of 1% to 2% by weight of the cement content. Adjust the water content depending on slump requirement. Optimum dosage of QUICSEAL 191 to meet with requirements must be assessed throughout the trial mixes.

Batching and Mixing

Add QUICSEAL 191 into the concrete mixer during batching. The correct quantity of QUICSEAL 191 should be measured and then added to the concrete during the mixing process either by hand or mechanical means. Mix the materials for a minimum of 5 minutes to ensure that QUICSEAL 191 has been thoroughly dispersed throughout the concrete.

Joints

Adequate water-stops must be provided between movement and construction joints.

Curing

As with all structural concrete, good curing practice should be maintained. Proper curing by using QUICSEAL 507 Cure-shield WB curing compound, spraying with water, wet hession or other means of preventing drying shrinkage and mass cracking.

Packaging

20kg per bag

Test Data

Compressive *strength*

SS 78: Part A16 –1987

Concrete samples containing QUICSEAL 191 Crystasil Admix were tested against an untreated concrete control sample. Compressive strength test results after 28 Days showed that QUICSEAL 191 Crystasil Admix does not affect the strength of the concrete in the samples incorporating the QUICSEAL 191 Crystasil Admix.

Permeability

DIN 1048:Part 5: 1991

Concrete samples containing QUICSEAL 191 Crystasil were subjected to a pressure of 500 kPa waterhead and showed no water leakage or dampness after 72 hours.

Health & Safety

Gloves and goggles should be worn. Any contact to the skin or eyes should be washed off with clean water. In the event of prolonged irritation, seek medical advice. Powder products should be handled to minimize dust formation. Use a light mask if excessive dusting is unavoidable.

Important Notes

The information set forth herein is furnished in good faith and is based on technical data that QUICSEAL considers to be reliable. This information is intended for used by persons having technical skill and at their own discretion and risk. Information contained in this product sheet conforms to the standard detail recommendations and specifications for the installation of QUICSEAL products as of the date of publication of this document. QUICSEAL makes no other warranties and assumes no liability, expressed or implied, as to the architecture, engineering or workmanship of any project. To ensure that you are using the latest, most complete information, contact QUICSEAL

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