Crystalline Water Proofing

Delta Super 200

A capillary action crystalline self sealing waterproofing system

Description

DELTA SUPER 200 is a unique chemical treatment for the waterproofing, protection and repair of concrete. DELTA SUPER 200 is the most chemically active product within our range of Crystalline Waterproofing System. When mixed with water, this light grey powder is applied as a cementitious slurry coat to above ground or below ground concrete, either as a single coat or as the first of a two-coat application. It is also mixed in Dry-Pac form for sealing strips at construction joints, or for the repairing of cracks, faulty construction joints, and honeycombs. DELTA SUPER 200 prevents the penetration of water and other liquids from any direction by causing a catalytic reaction that produces a non-soluble crystalline formation within the pores and capillary tracts of the concrete and cement-based materials.

Recommended For

- Reservoirs
- Sewage and Water Treatment Plants
- Underground Vaults
- Secondary Containment Structures
- Foundations
- Tunnels and Subway Systems
- Swimming Pools
- Parking Structures
- Roof Decks

Advantages

- Resists extreme hydrostatic pressure
- Becomes an integral part of the substrate
- Can seal hairline cracks up to 0.4mm
- Allows concrete to breathe
- Highly resistant to aggressive chemicals
- Non-toxic
- Does not require a dry surface
- Cannot puncture, tear or come apart at the seams
- No costly surface priming or leveling prior to application
- Does not require sealing, lapping and finishing of seams at corners edges or between membranes
- Can be applied to the positive or the negative side of the concrete surface
- Does not require protection during backfilling or during placement of steel, wire mesh or other materials
- Less costly to apply than most other methods
- Not subject to deterioration
- Permanent

Packaging

22.7 kg.

Storage

DELTA SUPER 200 must be stored dry at a minimum temperature of 7^{O}C. Shelf life is one year when stored under proper conditions.

Coverage

For normal surface conditions, the coverage rate for DELTA SUPER 200 is 0.75 - 0.90kg/m^2

Application Procedures

DRY SHAKE METHOD

- ROOFS AND FLOOR SLABS: When placing concrete for roofs & floor slabs for a new structure, shake or spread a layer of dry DELTA SUPER 200 powder @ 0.75kg to 0.90kg/m^2 on to the setting concrete and troweled into surface.
- CONSTRUCTION JOINTS BETWEEN POURS: Dry shake DELTA SUPER 200 on the construction joints between pours @1.5kg / m^2.
- NEW TO OLD CONCRETE: Apply one coat of DELTA SUPER 200 slurry @ 1kg/m^2 to hardened concrete before pouring new concrete.

SLURRY METHOD

- SURFACE PREPARATION Concrete surfaces to be treated must be clean and free of laitance, dirt, film, paint, coating or other foreign matter. Surfaces must also have an open capillary system to provide "tooth and suction" for the DELTA SUPER 200 treatment. If surface is too smooth (e.g. where steel forms are used) or covered with excess form oil or other foreign matter, the concrete should be lightly sandblasted, water blasted, or etched with muriatic (HCL) acid.
- STRUCTURAL REPAIR Rout out cracks, faulty construction joints and other structural defects to a depth of 37mm and a width of 25mm. Apply a brush coat of DELTA SUPER 200 as described in steps 5 & 6 and allow to dry for 10 minutes. Fill cavity by tightly compressing Dry-Pac into the groove with pneumatic packing tool or with hammer and wood block. Dry-Pac is prepared by mixing six parts DELTA SUPER 200 powder with one part water to a dry, lumpy consistency.

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Application Notes

1. Against a direct flow of water (leakage) or where there is excess moisture due to seepage, use DELTA PATCH 'n PLUG followed by a brush coat of DELTA SUPER 200.
2. For expansion joints or chronic moving cracks, flexible materials such as expansion joints sealant should be used.
3. WETTING CONCRETE DELTA SUPER 200 requires a saturated substrate and a damp surface. Concrete surfaces must be thoroughly saturated with clean water prior to the application so as to aid the proper curing of the treatment and to ensure the growth of the crystalline formation deep within the pores of the concrete.
Remove excess surface water before the application. If concrete surface dries out before application, it must be re-wetted.

4. MIXING FOR SLURRY COAT Mechanically mix 2.5 parts DELTA SUPER 200 powder with 1 part clean water to a creamy consistency using a low speed drill (400 -600 rpm) , mixing puddle or mortar mixer. The mixing time is up to 3 minutes .Avoid over mixing as this will entrain air. Do not mix more DELTA SUPER 200 material than can be applied in 20 minutes .Allow to breathe for 1 minute. This will improve workability and open time. Add little extra water if needed. Do not add water once mix starts to harden. Agitate the mixture frequently during application. Protect hands with rubber gloves.

5. APPLYING DELTA SUPER 200 Apply with a semi-stiff nylon bristle brush, push broom (for large horizontal surfaces) or specialized spray equipment. The coating must be uniformly applied and should be just under 1.25 mm. When a second coat is required, it should be applied after the first coat has reached an initial set but while it is still "green" (less than 48 hours). Light pre-watering between coats may be required due to drying. The DELTA SUPER 200 treatment must not be applied under rainy conditions or when ambient temperature is below 4°C. For recommended equipment, contact our nearest distributor.

6. CURING A spray of clean water must be used for curing the DELTA SUPER 200 treatment. Curing should begin as soon as the DELTA SUPER 200 has set to the point where it will day for two to three days. In hot or arid climates, spraying may be required more frequently. During the curing period, the coating must be protected form rainfall, frost, wind, the puddling of water and temperatures below 2°C for a period of not less than 48 hours after application. If plastic sheeting is used as protection, it must be raised off the DELTA SUPER 200 to allow the coating to breathe.

Note: For concrete structures that hold liquids (e.g. reservoirs, swimming pools, tanks, etc.), DELTA SUPER 200 should be cured for three days and allowed to set for 10 days before filling the structure with liquid.

Technical Services

For more instructions, alternative application methods, or information concerning the compatibility of the DELTA SUPER 200 treatment with other products or technologies, contact our Technical Department

Delta Coatings & Sealants