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Duraguard - CWS

Crystalline capillary waterproofing system for cementitious substrates

Uses

Duraguard CWS crystalline waterproofing system is used for waterproofing against the positive or negative sides of hydrostatic heads of water, for damp proofing, repairing cracks, plugging holes, sealing wall - floor joints and stopping active leaks in a wide variety of conditions including:

- ❖ Sewage treatment and water treatment plants, tanks, foundations, tunnels and manholes.
- ❖ Terrace garden, balconies, sunshades etc.
- ❖ Roof and Sunken slabs
- ❖ Industrial , office buildings and Basements.
- ❖ Reservoirs, water holding structures etc.
- ❖ Concrete walls, floors, Swimming pools ,

Advantages

- ❖ Penetrates concrete, seals capillary tracts
- ❖ Contains no chloride
- ❖ Easy to apply
- ❖ Resists chemical attack of sewage and industrial wastes
- ❖ Suitable for external and internal applications.
- ❖ Duraguard CWS is non -toxic and environment friendly product.

Description

Duraguard CWS crystalline capillary waterproofing system contains proprietary blend of portland cement, quartz aggregate and special chemicals. In the presence of moisture, the active chemicals in Duraguard CWS crystalline waterproofing system penetrates concrete and react chemically with free lime to produce insoluble crystals. This crystalline growth reduces porosity by blocking capillaries and filling hairline non structural cracks (upto 0.25mm wide) caused by shrinkage or expansion. Unlike metallic and membrane types of waterproofing which only form a surface barrier, Duraguard CWS crystalline waterproofing system, in the presence of water, continues producing crystals and lasting imperviousness to water.

Technical Data Sheet

Instructions for use

Surface preparation

Old concrete

Surfaces must be clean and sound. Remove all oil, dirt, laitance and other contaminants by water blasting ortreating the surface with 15% solution of muriatic acid.

Allow acid to react for approximately 30 minutes, then wash surface thoroughly with clean water. Water blasting is preferred for surface preparation because it mechanically cleans and roughens the surface, is environmentally safer and leaves the surface saturated with water. Surface must be damp for application of Duraguard CWS concentrate.

New concrete

After forms are stripped, acid etch or water blast as above to remove form oils and laitance. Surface must be left damp for application on Duraguard CWS

Construction joints, cold joints and non-leaking joints greater than 0.25mm wide must be cut in U-groove shape and filled with Duraguard CWS crystalline waterproofing system in mortar consistency.

Leaking cracks should be routed out as above (25mm wide and 38mm to 51mm deep) to sound concrete. Clean all debris and loose concrete from leaking area.

Saturate routed area with water and leave damp for application of Duraguard CWS

Mixing

For best results, clean, potable water should be added to Duraguard CWS crystalline waterproofing system concentrate.

Duraguard CWS concentrate slurry coat :

Mix 1 part clean potable water to 2 parts powder. Mix thoroughly with a slow speed drill equipped with a paddle. For larger batches, mix with a mortar mixer. Do not mix openings, rough surfaces, joints and routed out areas. Apply second coat, when required, when first coat has taken an initial set (usually within one hour). If first coat has dried out, moisten surface before applying second coat.

Slurry coat for existing concrete

Duraguard CWS concentrate slurry coat may be applied with a brush (synthetic bristle), broom, or plaster sprayer at a rate of 1.1 kg/m². Be sure to work slurry well into



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Dry shake for newly poured concrete :

Use Duraguard CWS concentrate as is, directly from container. Wearing rubber gloves, distribute the powder evenly by hand, over freshly poured concrete 1.22 to 1.35 kg/m² before final floating operation. It is best to distribute the powder at 1/2 the recommended rate in one direction, and the other half at a right angle to the first application. Keep hand as close as possible to the surface to prevent material from blowing away. For larger areas, a rotary type spreader may be used. Float slab and trowel to final finish.

Curing and Protecting

Duraguard CWS application must be kept moist for a minimum of 48 hours. After initial set, moist curing, using continuous water spray is recommended. Treated surfaces shall be fog sprayed 3 to 4 times daily for the 48 hour period. For warmer climates, more frequent spraying may be required. It is important to keep the Duraguard CWS moist to allow the crystal formation to occur. Protect surfaces from foot traffic for 48 hours or heavy traffic for 7 days. Freshly applied Duraguard CWS must be protected from extreme weather conditions such as rain, strong winds, high temperatures and freezing for a period of not less than 48 hours after application.

Clean up

Prior to curing, Duraguard CWS concentrate may be cleaned from tools and other surfaces with water.

ADVANTAGES OVER THE CONVENTIONAL SYSTEMS

1. Duraguard CWS permanently waterproofs concrete by in depth penetration of needle like crystals. The treatment does not require any prior & after protection coating like plaster etc.
2. Duraguard CWS waterproofs minor crack by stopping water movement through them.
3. Duraguard CWS is non -toxic and environment friendly product.
4. Waterproofing increase with time.
5. Reaches well below the surface and are not destroyed by surface wear abrasion as Duraguard CWS treatment becomes the integral part of the concrete structure.

6. Impregnation withstands significant hydrostatic pressure.
7. Duraguard CWS protects concrete against sulphate attack and against other aggressive chemicals.
8. Treatment may be applied either to the inside or outside surface of concrete because Duraguard CWS is a cementitious material and as such, it does not make any film on the surface.
9. Protects reinforcing steel against corrosion.
10. The chemicals in the compound are key to the action of concrete waterproofing treatment system.
11. No ingredients other than water are required for the treatment.
12. It does not require any preparatory plaster neither protection plaster.

Storage

Duraguard CWS concentrate should be stored in protected, dry areas. When left in original unopened Package, Duraguard CWS products will maintain their design performance characteristics for 1 year.

Packaging and coverage

Duraguard CWS is available in 25 kg bags .

Duraguard CWS concentrate - slurry coat 1.35 - 1.60 kg/m² (16 - 18.5m² / bag) for two coat applications.

Precautions

Duraguard CWS products contain chemicals that may cause irritation to the eyes and skin. Goggles, rubber gloves and long sleeves should be worn when working with these products.