

# CRYS-TECO PWD

*Cementitious waterproofing membrane for concrete and masonry by crystallisation technology*

Crys-teco PWD crystalline capillary waterproofing system contains proprietary blend of portland cement, quartz aggregate and special chemicals. In the presence of moisture, the active chemicals in Crys-teco PWD crystalline waterproofing system penetrate 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, Crys-teco PWD crystalline waterproofing system, in the presence of water, continues producing crystals and lasting imperviousness to water.

## Uses

Crys-teco PWD 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 and office buildings
- Reservoirs, water holding structures etc.

## Benefits

- 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.

## Technical support

The company provides a technical advisory service supported by a team of specialists in the field.

## Properties

Appearance	: Grey Powder
Bulk Density	: 1.55-1.65 gm/cc
Mix Density (w/p=0.25)	: 2.3-2.35 gm/cc
Pot life@30 <sup>o</sup> C	: 30 mins

## Instructions for use

### Surface preparation

#### Old concrete

Surfaces must be clean and sound. Remove all oil, dirt, laitance and other contaminants by water blasting. 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 Crys-teco PWD crystalline waterproofing system 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 of Crys-teco PWD crystalline waterproofing system. Construction joints, cold joints and non-leaking joints greater than 0.25mm wide must be cut in V-groove shape and filled with Crys-teco PWD crystalline waterproofing system in mortar consistency.

### Mixing

For best results, clean, potable water should be added to Crys-teco PWD crystalline waterproofing system concentrate.

### Application

#### Existing concrete

3 parts of powder shall be added to 1 part of clean water and mixed thoroughly with a slow speed drill equipped with a paddle. For larger batches, mixing shall be done with a mortar mixer. Do not mix more material than can be used in 20 minutes @24<sup>o</sup> C, 50% R.H. If mixture thickens, it shall be restirred to reduce consistency. Extra water should not be added.

### Curing and Protecting

Crys-teco PWD crystalline waterproofing system 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 4times daily for the 48 hour period. For warmer climates, more frequent spraying may be required. It is important to keep the Crys-teco PWD crystalline waterproofing system moist to allow the crystal formation to occur. The surfaces shall be protected from foot traffic for 48 hours or heavy traffic for 7 days. Freshly applied Crys-teco PWD crystalline waterproofing system must be protected from extreme

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rain, strong winds, high temperatures and freezing for a period of not less than 48 hours after application. A minimum of 7 days of air curing shall be allowed prior to immersing the surface in water.

## Clean up

Prior to curing, Crys-teco PWD crystalline water proofing system concentrate may be cleaned from tools and other surfaces with water.

## Limitations

Crys-teco PWD should not be used when the temperature is 5°C and falling. Full activation and effectiveness of Crys-teco PWD may require 2-3 weeks following application.

## Health & Safety Instructions

Crys-teco PWD crystalline waterproofing system contains chemicals that may cause irritation to the eyes and skin. Goggles, rubber gloves and long sleeves should be worn when working with these products. Read warnings noted on product package and refer to product material safety datasheet (MSDS) prior to use.

## Storage

Crys-teco PWD crystalline waterproofing system concentrate should be stored in protected, dry areas.

*Shelf life* : 1 year

## Packing

### Supply

Crys-teco PWD : 30 kg bags

Coverage Crys-teco PWD : 0.75 kg/m<sup>2</sup> per application (brush)

Actual coverage rates will depend upon the profile and porosity of the substrate.

## Other segments :

- Concrete Admixtures • Surface Treatments • Grouts & Anchors • Repair & Rehabilitation
- Protective Coatings • Industrial Flooring • Waterproofing • Sealants • Adhesives
- Cement Grinding Aids

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