# **CRYSTAL SEAL**

A PERMANENT WATERPROOFING FOR CONCRETE AND MORTAR BY CRYSTALLIZATION



## **DESCRIPTION**

CRYSTAL SEAL is a capillary waterproofing formulation of a proprietary blend of moisture-active chemical, quartz, sand and cement. The chemicals contained in CRYSTAL SEAL formulations requires the presence of moisture for its chemical reaction to take place and in combination with free lime in the concrete, the chemical in CRYSTAL SEAL then forms long chain crystals complexes which crystallize in the pore capillaries of the concrete.

### USES

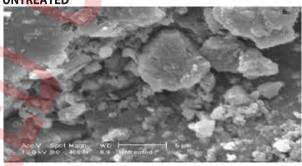
- For waterproofing and mortar protection against moisture.
- Improve adhesion between top coating and concrete mortar.
- Recommended areas such as water tanks, sewage, tank, swimming pools, tunnels, retaining walls, lift pits, balconies, fish ponds, concrete slabs, planter boxes, water treatment structures, wet areas-toilets & bathrooms, underground shafts, foundations, basements and etc.

## **ADVANTAGES**

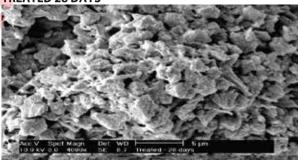
- Prevents surface problems, e.g. fungus growth, cracking, and able to withstand positive and negative water pressure.
- Repair and rehabilitate old and problematic concrete by sealing off hairline cracks.
- Removes moisture in concrete by reacting with it, thus reducing or eliminating corrosion of reinforcing steel in the concrete.
- Easy application and suitable for various construction structures and sites.
- One components & no special protective system is required.
- CRYSTAL SEAL penetrates deeply and seals concrete capillaries tracts or shrinkage cracks up to 1mm, all while still permitting the concrete to breath.
- Can be applied from positive or negative side. It can be applied to moist or concrete that has set but yet to be hardened.
- Increases resistance to frost, weathering, salt water, aggressive ground water and many chemicals.
- · CRYSTAL SEAL in non-toxic, non-flamable, inorganic & environmental friendly.
- Un-reacted chemicals remain active and will react in contact with water providing additional protection against leakage.



UNTREATED



**TREATED 28 DAYS** 



Technical Data :	
No. of components	1
Appearance	Grey Powder
Density water	2.02 kg./m³ added
Initial Setting Time @ 30°C	90 min. (approx.)
Final Setting Time @ 30°C	120 min. (approx.)
Bonding Strength@ 7days	1.7 N/mm²
Grain Size	0 - 0.6 mm
Fresh density	Approx. 2
Mixing water by weight (%)	30
Pot life	60 minutes at 20 °C
Water permeability reduction comparing to untreated specimens according to DIN 1048 at 5 bars (Concrete 30 MPa)	>60%

The information given in this data sheet is to the best of our knowledge true and accurate; but as we have no control over where or how the product is applied, there are no warranties expressed or implied regarding the product's use or performance. Customers are advised to thoroughly test before adapting them to their own use. It is strongly recommended to trial on small area before large scale application.









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# **CRYSTAL SEAL**

PERMANENT WATERPROOFING FOR CONCRETE AND MORTAR BY CRYSTALLIZATION



## **SURFACE PREPARATION**

All surfaces to be treated with CRYSTAL SEAL must be thoroughly inspected. The concrete surface must be cleaned and free from any traces of oil, grease, paint, loose dust, mud and laitance. Horizontal surfaces should not have any curing agents or hardeners applied prior to the application of CRYSTAL SEAL.

Honeycombs should be hacked off to expose the concrete. All chipping and loose particles should be removed & clean the surface with water before applying any coats.

Ensure all concrete surfaces are hosed down with water as moistures must be present in the capillaries prior to the application of CRYSTAL SEAL. New concrete must be at least three days old before it can be treated.

## **APPLICATION METHOD**

Before applying CRYSTAL SEAL onto the treated surface, ensure the substrate is moist but not visibly wet. To ensure that there is sufficient bond to the smooth surface, application must take place shortly. CRYSTAL SEAL can be applied by using brush or broom with fine bristles.

# **APPLY BY BRUSHING METHOD**

- CRYSTAL SEAL when mixed properly would have the texture look of flowable paint and is easy to apply.
- 2 coats at 0.5 Kg/M<sup>2</sup> per coating are normally required. The coats are installed in two passes.
- Apply the 1st coat of CRYSTAL SEAL at a spreading rate of 0.5 kg/m<sup>2</sup> & allow it to dry.
- When the 1st coat is in tacky condition, the 2nd coat is then ready to be applied. The procedure of application for 2nd coat of CRYSTAL SEAL is the same as the 1st coat except the application should be counter cross wised to the 1st application coat.

# **COVERAGE**

1. 1st Coat: Approx. 0.5kg/ m<sup>2</sup> 2. 2nd Coat: Approx. 0.5kg/ m<sup>2</sup>

## **CURING**

Curing is important and should begin as soon as final set has occurred but before surface starts to dry. Conventional moist curing procedures such as water spray, wet burlap or plastic covers may be used. Curing should continue for at least 48 hours. In hot, dry, sunny conditions, consult manufacturer for specific instructions. In lieu of moist curing, concrete sealers and curing compounds meeting AS 3799 may be used.

### COVERAGE

Brushing: 1.0 - 1.5 kgs./m<sup>2</sup>./layer Trowel: 2.0 - 2.5 kgs./m<sup>2</sup>./layer

### CLEANING

Clean tool and equipment with water immediately after use.

### **PACKAGING**

25 Kgs.

## **STORAGE & SHELF LIFE**

Crystal Seal has a shelf life of 24 months when stored in a dry condition and protected from direct sunlight.

# SAFETY PRECAUTIONS

The product contains cement powders which, when mixed with water, release alkalis that could be harmful to the skin. It is preferably to do the application in a well-ventilated area & wear protective gear for hands, eyes as respiratory system and to avoid dust inhaling. Splashes on the skin should be washed away by cleaning with soap and water. In case of contact with eyes, wash thoroughly with clean water. If swallowed, do not induce vomiting. In both cases seek medical attention. This product is non-flammable.

# **FURTHER INFORMATION**

With a wealth of technical and practical experience built up over many years in our pursuit of excellence especially in the protective flooring and concrete technology, make **CEMKRETE** your partner today. Contact our hotline now.

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