



# *Crystal Seal*

## *Permanent Waterproofing for Concrete and Mortar by Crystallization*

### **Description**

Crystal Seal is a capillary waterproofing formulation of proprietary blends of moisture active chemical, quartz, sand and cement. The chemical contained in Crystal Seal formulations required the presence of moisture for the chemical reaction to take place and in combination with “free lime”, the chemical in Crystal Seal form long chain complexes which crystallize in the capillaries.

### **Object**

- For protect concrete and mortar moisture and water proof
- Improve adhesion between topping coating and concrete or mortar
- Recommended for area such as ; water reservoir, water tower, dams, canals, concrete pipes, water treatment plant, sea wall, bridge decks etc.

### **Advantage**

- Ready to use, just mix with water
- Excellent penetration to concrete and mortar
- Good Adhesion to substrate
- The crystallization reaction between Crystal Seal with free lime and calcium hydroxide in cement will form the crystal to fully block the capillary in the concrete and mortar. It gives **permanent** moisture and water proof.
- Non-Corrosive, Non-Toxic
- Can be use both positive and negative size protection
- Economical to use

### **Introduction for use**

- Ensure that all concrete and mortar surface are clean and free from dust, laitance, oil, and grease
- Pre-water on the surface until the surface is saturated
- Remove the excess water (the surface must be damp but not wet)
- Mix Crystal Seal 1 bag, 25 kg. with clean water approximately 7-8 L. For vertical water should be reduce to prevent sagging.
- Mix with low speed (60 rpm) mechanical mixer at lease 3 min. until homogenous
- Can be apply by brush roller or trowel
- 2 coats are recommend
- For the coating application the 1<sup>st</sup> and 2<sup>nd</sup> coat should cross together
- The second coat should be apply when the first coat is dry enough, normally approximately 3-4 hr
- Crystal Seal is a cement based, it will cure and hardener in the same way with concrete. The surface must be damp or cover with polyethylene sheet at lease 5 days
- For New Concrete: Crystal Seal can be applying immediately after the formwork has been removing.  
For Exist Concrete: If there are static crack more than 1 mm. widths, should be repair with Hydratop. If there are moveable crack, should be repair with Hydraflex 150 before apply Crystal Seal.

### **Coverage**

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

### **Characteristic**

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● Appearance	: Grey Powder
● Density (water added)	: 2.02 kg./m <sup>3</sup>
● Initial Setting Time @ 30 °C	: 90 min. (approx.)
● Final Setting Time @ 30 °C	: 120 min. (approx.)
● Bonding Strength @ 7days	: 1.7 N/mm <sup>2</sup>

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### **Cleaning**

Clean tool and equipment with water immediately after use.

### **Storage**

In dry conditions and protected from direct sunlight.

### **Precaution**

Eye-protection and gloves recommended. If material comes in contact with eye, rinse immediately with plenty of clean water without rubbing. If continued irritation, contact medical doctor.

### **Packing**

25 Kgs./ Bag

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