

# CWC®SMART SEAL

## Crystalline Cementitious Waterproofing System

### Description

**CWC®SMART SEAL** is a general purpose cementitious waterproofing system which protects and waterproofs concrete structures by crystallization. The active chemicals react with moisture in the concrete resulting in crystalline formation within the pores and capillary tracts of concrete thus waterproofing the structure against penetration of water and other liquids from any direction.

**CWC®SMART SEAL** gives a strong and lasting waterproofing protection against dampness and ground water hydrostatic pressure.

### Indicative Characteristics

Hard dry	24 hours
Permeability to water (as per IS 2645)	Nil
Chloride Content (as per BS 5075, part I)	Nil
Resistance to hydrostatic Pressure at 16 Bar, DIN 1048 Part 5	No leakage, Passes test
Mixed Density, kg/ l	1.8 ± 0.2

### Domains of Application

**CWC®SMART SEAL** is used to waterproof underground concrete structures affected by water infiltration such as internal or external foundations, basements, lift shafts, underground garages and store rooms. **CWC®SMART SEAL** is ideal for waterproofing internal and external concrete walls of: tanks, cisterns containing drinking water or mildly aggressive liquids and to water proof the new or degraded concrete of: reservoirs, drainages systems, tunnels.

### Method of Application

#### Surface Preparation

The concrete surface must be clean and free from laitance, oils, grease, curing agents or other foreign particles, sand blast or acid etch surface before treatment. Concrete surface must be sound. Rout out visible cracks exceeding 0.4 mm wide, honeycombed pockets to depth about of about 40 mm and width of 25 mm.

Mix three parts of **CWC®SMART SEAL** to one part water by weight, until stiff mortar consistency is achieved. Prime concrete surface with one slurry coat of **CWC®SMART SEAL** before applying the mortar mix onto area to be patched, tightly sealing cavity. **CWC®SMART SEAL** must be applied on damp substrate only to ensure maximum chemical penetration. Pre-wet substrate until damp prior to application of **CWC®SMART SEAL**.

Mix 7-8 litre of water to 20 kg.

Always mix the powder to the clean water by using a mechanical stirrer. Mix for two minutes until a smooth lump free consistency is achieved.

### Application

Apply a minimum of 2 coats in perpendicular directions, using block brush or roller. The second coat must be applied while the first coat is still green but is sufficiently set so that it is not drawn off while applying the second coat. The mixed material must not be applied at temperature below 5 degree Celsius or on frozen surface.

### Dry Shake Method (Negative Waterproofing)

Sprinkle **CWC®SMART SEAL** powder directly from the packaging after allowing concrete to achieve initial set. Sprinkle **CWC®SMART SEAL** at the rate of 3-3.5 Kg/m<sup>2</sup> evenly and trowel to required finish or powder float.

### Dry Shake Method (Positive Waterproofing)

Sprinkle **CWC®SMART SEAL** powder directly from the packaging at the rate of 2 Kg/m<sup>2</sup> evenly onto the lean concrete substrate just before pouring on the concrete.

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#### Advantages

- Self healing property with sealing cracks or voids up to 0.5mm by crystal formation
- Integral part of concrete therefore no chance of peeling off.
- Withstands negative hydrostatic pressure beyond 16 Bar.
- Crystals are insoluble in water therefore voids are sealed permanently.
- Excellent performance when used in negative side waterproofing.
- Non-toxic and non-hazardous for drinking water and aquatic /marine life.

#### Curing

After **CWC®SMART SEAL** coating has hardened, cure the treated surface with a light mist of clean water at regular intervals three times a day, for the initial two or three days. In extremely hot water curing period may have to be extended to several period.

#### Coverage

For slurry coat/brush application method, apply at the rate of 1-1.5 Kg/m<sup>2</sup> in two coats depending on the area of application.

#### Shelf Life & Storage

12 months from the date of manufacturing when stored in un-opened, original sealed and dry condition at a temperature range from +5°C to 40°C

#### Packing

20 Kg bag.

#### Precautions

Protection of **CWC®SMART SEAL** is not obligatory. However, if used on external areas, subjected to heavy rain, harsh sunlight or frost, the finished application should be protected for at least 24 hours.

#### Safety

- Wear hand gloves, safety shoes and safety goggles while using and handling the product.
- In case eyes or mouth are affected wash with plenty of clean water and seek medical treatment immediately.

Before use, refer to the Material Safety Data Sheet. The MSDS is available on [www.cwcchemical.in](http://www.cwcchemical.in)

#### Regional Offices :

##### Mumbai :

Office No - 616/617, J K Chambers  
Sec-17, Vashi, Navi Mumbai-400703  
Maharashtra, INDIA.  
091 9920791030

##### Chennai :

Plot No.3/86-E, Ground Floor  
AIEMA Road, Ambattur Industrial Estate  
Chennai – 600058 Tamil Nadu, India  
091 8939820144

[www.cwcchemicals.com](http://www.cwcchemicals.com),

[info@cwchemicals.com](mailto:info@cwchemicals.com)