

# PolyCem Crystallization

## Cement-Based Crystallization Waterproofing Slurry

### PRODUCT GROUP : WATERPROOFING SYSTEM

**POLYCEM**



## ADVANTAGES

- Cementitious ensures good bond strength to concrete.
- Easily applied with minimum surface preparation
- Barrier to water and moisture
- Breathable to allow transmission of water
- User friendly and cost effective
- Free from chlorides and non-corrosive
- Non-toxic and environment friendly
- Deep penetration

## DESCRIPTION

**PolyCem Crystallization** is a single component cement-based slurry waterproofing system consisting of special binder, filler and additives. **PolyCem Crystallization** is suitable to be applied onto concrete or other masonry surfaces, preferably in damp condition. **PolyCem Crystallization** enables penetration into the capillary tracts of concrete through the osmosis effect and reacts with the free lime, forming crystals, which would then seal the capillaries and shrinkage cracks to stop water or moisture from seeping through. The chemical reaction and sealing process will be repeated automatically and continuously every time when the moisture presents in concrete. Otherwise, the **PolyCem Crystallization** components will remain dormant.

## AREAS OF APPLICATIONS

- Basement wall and lit pit
- Swimming pool
- Retaining wall
- Planter box
- Bathroom, toilet and kitchen
- Fountain
- Tunnel
- Water tank

## TECHNICAL SPECIFICATION

- |                                 |  |
|---------------------------------|--|
| • Appearance                    | : Greyish light brown                  |
| • Component form                | : Powder                               |
| • Water permeability            | : < 1.9 10 <sup>-14</sup> cm/sec       |
| • Adhesion strength to concrete | : >0.5 N/mm <sup>2</sup>               |
| • Pot life                      | : 1 hours                              |
| • Coverage                      | : 1.5 to 2.0 Kg/m <sup>2</sup> /2coats |
| • Resistance to alkaline / acid | : Good (pH 3 to 11)                    |

## SURFACE PREPARATION

Large cracks and honeycombs shall be patch-repaired with a suitable **PolyCrete** product to allow seamless application of **PolyCem Crystallization**. Concrete substrates should be sound, free of oil, fats, soil, mortar and paint dropping or other contaminants. Excessive laitance shall be removed by high-pressure water jet.

## MIXING

Mix thoroughly a bag of 25kg **PolyCem Crystallization** with 6.25 litres of clean water by using mechanical mixer. Mix carefully to disperse the powder until homogeneous and lump-free slurry is achieved. High speed mixing is strictly not recommended in order to avoid air entrap into the mix.

## APPLICATION

Pre-wet to saturate the substrate with clean water but to remove excess water. **PolyCem Crystallization** applied in two applications. Apply the first coat of **PolyCem Crystallization** with a stiff brush to evenly cover the area. The first coat shall be left for about 3 to 5 hours depending on temperature to become tack free. The second coat may then be applied with a soft brush or roller, preferably in the other direction. The average coverage shall be 0.75 to 1.0kg / coat / application depending on the substrate condition. To determine this exactly, a sample area should be laid and coverage noted.

## CURING

Precautionary measures must be taken that **PolyCem Crystallization** is suitably protected, internally against damage from subsequent trades and externally against rapid loss of water from direct sunlight and wind. Water curing for 3 consecutive days is highly recommended.

## PACKING AND STORAGE

- Packing : 25 kg / bag
- Shelf life : 6 months
- Storage : Keep in cool dry condition

## SAFETY PRECAUTIONS

**PolyCem Crystallization** is non-flammable, non-hazardous and non-toxic. Recommended to avoid any prolong skin and eye contact by wearing suitable protective clothing.