

## Crystalline Waterproofing Admixture

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### Product Overview

PC Plus is an integrated crystalline admixture powder, created solely to collude with the capillary pore structure of the concrete in order to induce permanent waterproofing property to the concrete. Active chemicals which constitute the PC Plus, combine with lime and moisture present in the capillary tracts, to form crystalline complexes. These crystals created by PC plus block the cracks and crevices and subsequently prevent further water seepage under pressure. It is important to note that water vapor would still pass through the contemporary structure for the concrete to breathe after the application of PC Plus.

### Areas of applications

1. Water and sewage treatment facilities
2. Foundations and Basement structures
3. Marine structures
4. Precast concrete
5. Tunnels, subways, all underground structures
6. Manholes
7. Dams and reservoirs
8. Parking structures
9. Recreational water parks and water containing structures.

### Properties

1. PC Plus reduces water penetration, thereby increasing durability of the concrete.
2. Both Interior and exterior surfaces are waterproofed by PC Plus against high hydrostatic pressure. Hence it can also be used in all types of plastering applications
3. PC Plus has no adverse effects on compressive strength or setting time with portland cement.
4. PC Plus comes as a powdered material which is easy to use. Hence reduces construction scheduling time.
5. Physical and chemical resistances of the concrete is significantly improved with PC Plus.
6. PC Plus is cost efficient as compared to other products.
7. It allows concrete to breathe.
8. PC Plus has Zero VOC (volatile organic compounds) and are safe for use both outdoors and in confined indoor spaces. Hence non toxic.
9. It ensures permanent waterproofing.
10. It can seal hairline and even minor cracks.

### Guidelines for usage

1. PC Plus can be added in powder form to a drum of ready-mix truck. Drive the truck under the batch plant and add 60%-70% of the required water along with 140-230 kg of the aggregate. Mix the materials for 2-3 minutes to ensure that PC Plus is distributed evenly throughout the mix water. Add the balance of materials to the ready mix truck in accordance with standard batching process.
2. PC Plus can be mixed with water to form a thin slurry (e.g. 20 kg of powder mixed with 25.2 lt of water). Pour the required amount of material into the drum of the ready-mix truck. The

aggregate, cement, sand and water should be batched and mixed in the plant in accordance with the standard practices (taking into account the quantity of water that has already been placed in the ready mix truck). Pour the concrete into the truck and mix for at least 5 minutes to ensure even distribution of PC Plus throughout the concrete.

3. PC Plus can also be added to the homogeneous mixture of aggregate and sand and then can be wholly mixed for about 5 mins before adding cement and water. The total concrete mass should be blended using standard practices.

## Dosage and Measures

PC Plus is dosed at 1 to 2% by weight of the cementitious material, depending on the application.

## Important Remarks

1. PC Plus should be added to aggregates while batching.
2. Don't add PC Plus at the end of the batching, it may result in premature hardening of the concrete.
3. It is important to obtain a homogeneous mixture of PC Plus with the concrete. Therefore, do not add dry PC Plus powder

directly to the wet concrete as this may cause lump formation and thorough dispersion will not occur.

4. When incorporating PC Plus, the temperature of the concrete mix should be above 7°C.
5. Concrete treated with PC Plus should be placed and finished with good concrete practices. BIS guidelines and recommendations should be observed.

## Packages available

PC Plus is available in 500gm pouches and 20kg bags.

## Storage and Shelf life

Should be stored in a dry, undamped, unopened, undamaged, with original packaging, at a minimum temperature of 7°C. Its shelf life is 12 months when stored under proper conditions.

## Safety Measures

PC Plus will irritate eyes and skin and may cause skin sensitization. Wear appropriate eye, skin and breathing protection when using this product. Avoid contact with skin and eyes. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

## Technical data

Test type	Method	Parameters	Performance relative to control
Pressurized water penetration	EN 12390-8	1% Dosage	passed
Water Penetration	DIN 1048	5 bar (72 psi) head pressure	40% reduction
Water permeability	CRD C48-92	13.8 bar (200 psi) head pressure	> 70% reduction
Capillary absorption	ASTM C-1585		> 40% reduction
Compressive strength	ASTM C-39		Equal to and up to 8% increase
Resistance to Chloride penetration	ASTM C-1202		10% improvement
Sulphate resistance	ASTM C-1012	6 months	33% improvement
Chloride ion Content	EN 480-10		≤ 0.1 M%
Alkali content	EN 480-12		≤ 10.5 M%
Compressive strength	EN 12390-3		At 7 and 28 days: test mix ≥ 110% of control mix

For further clarifications please contact on below address

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