

# Flocrete WP Crystal

Powder waterproofing crystalline admixture



## DESCRIPTION

Flocrete WP Crystal is powder waterproofing admixture formulated from selected organic salts and very fine treated silica specially designed to reduce the permeability in all cement based mortars, screeds and concrete. Flocrete WP Crystal blocks the natural pores in the mix and imparts the hydrophobic properties which reduce moisture permeability.

Unique properties of Flocrete WP Crystal active organic chemicals reacts with the moisture in fresh concrete and generates non soluble crystal and block the pores during active hydration of cement particle. The concrete admixed with Flocrete WP Crystal become permanently sealed against water penetration from all sides, which also increases the ultimate strength of concrete.

The advanced waterproofing properties of Flocrete WP Crystal also protect reinforcement against corrosion, harsh environment and waterborne chemicals like sulfates, acids and chlorides, increasing the durability and life span of concrete.

## APPLICATIONS

Flocrete WP Crystal is a waterproofing admixture for use in all cement based mortars, screeds and concrete.

it is recommended to be used for:

- » Reservoirs.
- » Sewage.
- » Water treatment plants.
- » Underground vaults.
- » Foundations.
- » Swimming pools.
- » Parking structures.
- » Basements.
- » Elevator pits.
- » Traffic tunnels.
- » Below grade pipelines.
- » Bridges.
- » Dams.
- » Highway infrastructure.
- » Precast concrete.
- » Cast-in-Place concrete.
- » Shotcrete.

## TECHNICAL PROPERTIES:

Colour:	White to beige powder
Bulk density:	0.55 ± 0.10 g/cm <sup>3</sup>
Chloride content: EN 934-2	Nil
Air entrainment:	Typically less than 2% additional air is entrained above control mix at normal dosages
Permeability reduction*: IS 2645	At least 70%
VOC:	0 g/ltr

*\* Improvement may vary depending on water-to-cement ratio (W/C) and cement content in the mix.*

## ADVANTAGES

- » Improves durability by minimizing penetration of moisture and water based chemicals.
- » No additional water into dry or semi-dry mixes.
- » Reduces efflorescence and pigment leaching from cement mortars.
- » Chloride free.
- » Added into the concrete at time of batching.
- » Resists hydrostatic pressure from all direction, allow concrete to breathe.
- » Can heal static cracks up to 0.5 mm.
- » Active material for the entire life of concrete.
- » Permanently waterproofs concrete.
- » Protection against corrosion.
- » Non toxic.
- » Zero VOC content.
- » Saves construction time and cost by eliminating the need for external membrane as well as reduced labour number.
- » Enhances performance of concrete by reducing permeability by at least 70%.
- » Enhances concrete hydrophobicity and repellency properties.
- » No special addition precautions.
- » Increases ultimate strength of concrete.





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## COMPATIBILITY

Flocrete WP Crystal can be used with all types of Portland cement and cement replacement materials. Flocrete WP Crystal is compatible with other DCP admixtures used in the same concrete mix.

If more than one type of admixture is to be used in concrete mix, they must be dispensed to the concrete separately.

## METHOD OF USE

Flocrete WP Crystal should be added to the mix at the same time as the cement, sand and other aggregates. Do not pre-dissolve in the mixing water.

For on-site ready-mix trucks usage, add Flocrete WP Crystal in its dry form directly into the truck's drum in the correct dosage. To ensure a uniform distribution of Flocrete WP Crystal in the concrete, allow the mixture to blend for a minimum of 10 minutes.

## DOSAGE

The recommended dosage of Flocrete WP Crystal ranges from 0.8 - 2 kg per 100 kg of cementitious materials in the mix, including GGBFS, PFA or microsilica.

Representative trials should be conducted to determine the optimum dosage of Flocrete WP Crystal to meet the performance requirements by using the materials and conditions on actual use.

## POINTS TO BE CONSIDERED IN WATERPROOF CONCRETE

- i. Lower water to cement ratio gives lower permeability concrete.
- ii. Good concrete placing and compaction are very important to produce waterproof concrete.
- iii. Fresh concrete should be protected against rapid drying and cured properly.
- iv. Cold joints must be avoided.

## CLEANING

Flocrete WP Crystal can be removed immediately by brush. If the spillage is mixed with water, attention should be taken not to leave slippery film.

## PACKAGING

Flocrete WP Crystal is available in 5, 10 and 25 kg bags.

## EFFECTS OF OVER DOSAGE

Flocrete WP Crystal over dosage will increase air entrainment which may cause a reduction in the compressive strength.

## STORAGE

Flocrete WP Crystal has a shelf life of 12 months from date of manufacture if stored at temperatures between 2°C and 50°C.

If these conditions are exceeded, DCP Technical Department should be contacted for advice.

## CAUTIONS

### HEALTH AND SAFETY

Flocrete WP Crystal is not classified as hazardous material. Flocrete WP Crystal should not come into contact with skin and eyes.

In case of contact with eyes wash immediately with plenty of water and seek medical advice promptly.

For further information, refer to the Material Safety Data Sheet.

## FIRE

Flocrete WP Crystal is nonflammable.

## MORE FROM DON CONSTRUCTION PRODUCTS

A wide range of construction chemical products are manufactured by DCP which include:

- » Concrete admixtures.
- » Surface treatments
- » Grouts and anchors.
- » Concrete repair.
- » Flooring systems.
- » Protective coatings.
- » Sealants.
- » Waterproofing.
- » Adhesives.
- » Tile adhesives and grouts.
- » Building products.
- » Structural strengthening.



### Note:

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