

Dr. Fixit Polyplus CP Admix



INTEGRAL CRYSTALLINE WATERPROOFING ADMIXTURE

Description

Dr. Fixit POLYPLUS CP Admix is an integral crystalline waterproofing admixture added to the concrete mix at the time of batching. It consists of Portland cement, very fine treated silica sand and various active chemicals. These active chemicals react with the moisture in fresh concrete with the by-products of cement hydration to cause a catalytic reaction, which generates a non-soluble crystalline formation throughout the pores and capillary tracts of the concrete. Thus the concrete becomes permanently sealed against the penetration of water or liquids from any direction. The concrete is also protected from deterioration due to harsh environmental conditions. The admixture also has the ability to self-seal minor cracks & withstand high level hydrostatic water pressure.

Standard Compliance / Specification

1. ASTM C-39 / C-494
2. ASTM C-267-77 (Chemical Resistance)
3. ASTM C-1202 - 2007
4. ASTM C-231 (Air Content)
5. ASTM C - 341 (Length change) Shrinkage
6. BSEN 12390 - Part 8:2000

Areas of Application

Waterproofing of concrete and sand-cement mortars used in

- Concrete Slabs on grade & below grade
- Water reservoirs & swimming pools
- Tunnels & subways
- Marine structures
- Warehouses & commercial floors
- Basements & pits
- Sewage & water treatment plants
- Foundations & civil substructures
- Parking structures
- Pre-cast concrete, cast-in-situ and shotcreting applications

Features & Benefits

- Resists extreme hydrostatic pressure from either positive/negative surface of the concrete slab
- Becomes an integral part of the concrete
- Can seal hairline cracks up to 0.4 mm
- Non-toxic
- Can be added to concrete at time of batching or just before the pour, and therefore is not subject to climatic restraints
- Freeze Thaw Resistance.

Packing

5 & 30 kg

Method of Application

- Dr. Fixit POLYPLUS CP Admix is a dry powder dosed at 0.8% to 1.2% by weight of the cement and added directly to the mortar during mixing. Maximum 4 kg per cubic meter is allowed.
- For smaller mixes, add prescribed quantity of Dr. Fixit POLYPLUS CP Admix to the sand & coarse aggregates. Mix the components thoroughly for 2-3 minutes before adding the cement & water. The total concrete mass should be blended using standard practices.



- For larger (RMC/Plant) mixes, dispense the prescribed dosage of Dr. Fixit Polyplus CP Admix in 60-70% of pre-batched water. Mix the components thoroughly for 2-3 minutes before adding the batched cement, sand, coarse aggregates & remaining water. Mix for 5-7 minutes. The batching & mixing of total concrete mass to be in accordance to standard practices.
 - RMC - Central Mix Operation - Mix Dr. Fixit CP Admix with water in a ratio of 1:1.5. Water should be added first. The slurry consistency achieved should be poured into the hopper of ready mix truck. The water added for slurry should be kept in account for preparation of RMC. Ready mix concrete once ready should be transferred to hopper of truck & mix for 5-7 minutes to achieve homogenous consistency.
 - Placing & curing of concrete as per standard engineering practice or as instructed by the engineer in charge. In most cases 7 days of water curing is recommended. Curing membranes as per ASTM C-309 or ASTM C-1315 may be used.
- * Please consult technical dept. for finalization of consumption and process

Precautions & Limitations

- Dr. Fixit Polyplus CP Admix is an effective system for rigid structures only and may not reliably seal moving cracks and joints, that experience variable loading or repeated movement
- In case the workability / slump is lower than the desired specification, then one may need to add high range water reducer to achieve the required slump. Addition of additional water on the batch process card must be approved by the QA authority.
- The temperature of the concrete mix should be above 5°C
- Do not exceed the specified water/cement ratio.

Technical Information

PROPERTIES	SPECIFICATION	RESULTS
Nature	Visual	Dry Powder
Appearance	Visual	Grey coloured free flowing crystalline powder
Bulk Density, gm/cc		Approx. 1.4
Workability, Slump		Increase over control, Min 30%
Setting time, Initial & Final		No change as compared to control
Air Content, %		6% max
pH of fresh mixed concrete		12.00
pH of Hardened Concrete		13.00
Chloride (as Cl) %, Water Soluble		0.0048
Sulphate (as SO ₄) %, Water soluble		0.50
Compressive Strength, 28 days	ASTM C-39 IS- 516	Min 6% increase over control
Water permeability, 28 days	BSEN 12390 - Part 8:2000	Nil. No damp patch or water leakage observed
Rapid Chloride Ion Permeability, Coulombs	ASTM C1202 -2007	1300 vs 2340 of control
Drying Shrinkage, 28 days	IS 2185	0.581 vs 0.867 on control Reduced shrinkage by 35%



Dosage

0.8%-1.2% by weight of cement.

Shelf Life & Storage

12 months from the date of manufacturing when stored in a cool & dry place, away from direct sunlight.

Health & Safety

Dr. Fixit Polyplus CP Admix is a dry powder that becomes caustic when mixed with water or human perspiration

- Avoid contact with skin or eyes
- Avoid breathing dust. Wear long sleeves, safety goggles and impervious gloves
- Refer the Material Safety Data Sheet for this product.

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