

ADMIX(P)

Crystalline waterproofing admixture for concrete & mortars



Description:

ADMIX (P) crystalline waterproofing powder admixture is an integral crystalline capillary waterproofing admixture for concrete. It consists of Portland cement, very fine treated silica sand and various active, proprietary chemicals. These active chemicals react with the moisture in fresh concrete with the by-products of cement hydration to cause a reaction, which generates an insoluble crystalline deposit throughout the pores and capillary tracts of the concrete. Thus the concrete with ADMIX (P) reduces water Permeability and/or becomes permanently sealed against the penetration of water/liquid from any direction. However, ADMIX (P) treated concrete will still allow the passage of vapour through the structure & the concrete will be able to “breathe”. This product also has a self- healing property under presence of moisture and can heal cracks below 0.5 mm. The concrete is also protected from deterioration due to harsh environmental conditions.

Uses:

- Building Basement and foundations
- Sewage, water treatment plants, Dams, canals, Tunnels, Harbors Tunnel and subway systems
- Water reservoirs, Concrete pipes and Parking structures
- Pre- Cast, Cast-in-situ and Shotcrete applications
- Swimming pools, Retaining walls & sea defense walls

Advantages:

- Reduces penetration of water and other liquids
- Can seal hairline cracks up to 0.5 mm

- Resists positive and negative side hydrostatic pressure
- Protects against sewage and industrial wastes
- Less expensive than traditional methods Added to the concrete at time of batching and therefore is not subject to climatic
- It is compatible with slag and pozzolans such as fly ash, GGBS and silica fume
- Improves durability of concrete

Product Standard Compliance:

- IS 2645:2003
- DIN1048 part 5
- BS EN 12390-3
- BS EN 12390-5
- ASTM C494-S (Specific Performance Admixtures)

Company Standard Compliance:



Technical Information:

Properties	Specification
Appearance	Grey Powder
Bulk Density in g/cm ³	1.350 @25°C
Chloride content	<0.1 %
Alkali Content	<10%
Water Penetration	Reduced more then 90%

Workability	Has little or no effect on workability
Conventional Dry Material Content	>99.5%
Compressive Strength @28 days	≥85 % of control
Air Content in fresh Concrete	≤2% by volume
Capillary Absorption (After 90 day curing)	≤ 60% by mass

Method of Application:

- As a guide, a dosage of 0.8 kg per 100kg of cementitious content is recommended.
- Dosage up to 2kg per 100kg of cementitious content can be used in special requirements.
- Ensure water / cement ratio is less than 0.5
Addition of good superplasticizer from the Redbrawn 600 products range is advised to achieve minimum water/cement ratio.
- ADMIX (P) can be added in T.M. in Plot/site before pouring concrete.
- Place concrete quickly and compact it well. Ensure complete curing with a REDICURE curing compound.

Trial

OPC	Flyash	W/C	Water	20mm	10mm
370	120	0.34	166.5	530	530

Sand	Admixture	Admix(P)
780	1.0 to 1.2 % of cement	1% of cement

Specification	Results
Water Permeability coefficient (DIN1048 Part5)	1.3x10 ¹³ m/s
Water Penetration depth - Below 15mm (DIN1048 part 5)	13.65 mm

• Ready Mix Plant - Dry Batch Operation:

Add ADMIX(P) in powder form to the ready-mix truck. Drive the truck under the batch plant and add the required amount of water, along with aggregates. Mix the material for 2-3 minutes to ensure the ADMIX(P) is distributed evenly throughout the mix water. Add the balance of materials to the ready-mix truck in accordance with standard batching practices.

• Ready Mix Plant - Central Mix Operation:

Mix ADMIX (P) with water to form a very thin

slurry. 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 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 ADMIX (P) throughout the concrete.

• Precast Batch Plant:

Add ADMIX (P) in powder form, to the rock and sand, then mix thoroughly for 2-3 minutes before adding the cement and water. The total concrete mass should be blended using standard practices.

• Note:

It is important to obtain a homogeneous mixture of ADMIX(P) with the concrete. Therefore, do not add dry ADMIX (P) powder directly to wet concrete as this may cause clumping and through dispersion will not occur. For further information regarding the proper use of ADMIX (P) for a specific project, consult with Redwop technical representative.

• Setting Time and Strength:

The setting time of concrete is affected by the chemical and physical composition of ingredients, temperature of the concrete and climatic conditions. Retardation of set may occur when using ADMIX(P). The amount of retardation will depend upon the concrete mix design and the dosage rate of ADMIX(P). However, under normal conditions, ADMIX(P) will provide a normal set concrete. Concrete containing ADMIX(P) may develop higher ultimate strengths than plain concrete. Trial mixes should be carried out under project conditions to determine setting time and strength of the concrete. Concrete treated with ADMIX(P) should be placed and finished in accordance with good concrete practices. ACI guidelines and recommendations should be observed.

Special Considerations:

When incorporating ADMIX(P), the temperature of the concrete mix should be above 4°C.

Curing:

It is strongly recommended that concrete should be properly cured.

Packaging:

ADMIX (P) is supplied in 20 kg bags.





Storage & Shelf-life:




Minimum of 12 months shelf-life if kept under room temperature (i.e. 27°C).

Health & Safety:

ADMIX (P) is alkaline. As a cementitious powder, liquid or mixture, ADMIX (P) may cause significant skin and eye irritation. Redwop Chemicals Pvt. Ltd. also maintains comprehensive and up-to-date Safety Data Sheets on all its products. Each sheet contains health and safety information for the protection of your employees

and customers. KEEP OUT OF REACH OF CHILDREN.
 Contact Redwop Chemicals Pvt. Ltd. or your local Redwop representative to obtain copies of Safety Data Sheets prior to product storage or use.

 <p>Indian Green Building Council</p>	<p>It is the practice of increasing efficiency with which buildings use resources- energy, water and materials-while reducing building impacts on human health and the environment.</p>
	<p>ISO 45001 is the world's international standard for occupational health and safety, issued to protect employees and visitors from work-related accidents and diseases.</p>
	<p>ISO 9001:2015 is a globally recognized standard for quality management systems (QMS). It helps organizations of all sizes and sectors to: Improve performance, Meet customer expectations, Demonstrate commitment to quality, and Identify and improve processes that lack consistency.</p>
	<p>ISO 14001 is the internationally recognized standard for environmental management systems (EMS). It provides a framework for organizations to design and implement an EMS, and continually improve their environmental performance</p>

	<p>This symbol is used to identify Redwop products which give off a low level of volatile organic compounds (VOC) as certified by GEV (Gemeinschaft Emissionskontrollierte Verlegewerkstoffe, Klebstoffe und Bauprodukte e.V.), an international organisation for controlling the level of emissions from products used for floors.</p>
	<p>Our Commitment To The Environment Redwop products assist Project Designers and Contractors create innovative LEED (The Leadership in Energy and Environmental Design) certified projects, in compliance with the U.S. Green Building Council.</p>
	<p>ISO/IEC 17025 enables laboratories to demonstrate that they operate competently and generate valid results, thereby promoting confidence in their work both nationally and around the world.</p>