



Conplast WP500

Hydrophobic admixture for reducing the water absorption of concrete

Uses

Conplast WP500 drastically reduces water absorption in structural and precast concrete. For use in basements, tunnels, water retaining and water excluding structures, bridge decks, etc where protection from water ingress is required.

Used in conjunction with Fosroc waterstops to produce watertight structures.

Advantages

- Bitumen & ammonia free
- Low dosage - can be added to the concrete mix at the time of batching
- Integral third-generation superplasticiser - excellent slump retention
- Provides integral protection, ensuring reduced permeability throughout the concrete
- Expedites construction schedules by eliminating the need for a separate waterproofing operation
- Part of a comprehensive waterproofing solution available from a single supplier
- Fully compatible with most Fosroc surface coatings and finishes

Description

Conplast WP500 is a chloride free admixture and is supplied as a yellowish Brown liquid which instantly disperses in water.

Conplast WP500 is an organic liquid which reacts with products of the cement hydration process to produce a hydrophobic material which repels external water, reducing absorption into the concrete.

Technical support

Fosroc offers a comprehensive range of high performance, high quality repair, maintenance and construction products. In addition, Fosroc offers a technical support package to specifiers, end users and contractors, as well as on-site technical assistance in locations all over the world.

Typical dosage

The optimum dosage of Conplast WP500 to meet specific requirements should always be determined by trials using the materials and conditions that will be experienced in use. This allows the optimisation of admixture dosage and mix design and provides a complete assessment of the mix. The normal recommended dosage is 1.5 to 2.0 litres per 100 kg of cementitious material. Including PFA, GGBS or microsilica.

Typical Properties

Appearance:	Yellowish Brown
Specific gravity:	Typical 1.02 at 25°C
Chloride content:	Nil to BS 5075
Alkali content:	Typically less than 50g / litre equivalent Na ₂ O
Air entrainment:	Typically less than 2% additional air is entrained at normal dosages

Application instructions

Compatibility

Conplast WP500 is compatible with the Conplast range of retarders and plasticisers when used in the same concrete mix, but should be added to the mix separately and must not be mixed together prior to addition.

Conplast WP500 is compatible with certain Structuro superplasticisers. Contact Fosroc for further advice.

The resultant properties of mixes containing more than one admixture should be assessed by the trial mix procedure recommended on this data sheet.

Conplast WP500 is suitable for use with all types of Portland cements and cement replacement materials such as PFA, GGBFS and microsilica.

Trial mix

Trial mixes shall be conducted for concrete where Conplast WP500 is to be used. Concrete containing Conplast WP500 shall not be used until all specification requirements have been met.

Conplast WP500 shall be used under adequate supervision. Contact your local Fosroc office for advice.

Well graded aggregates must be used and a minimum cement content of 350kg/m³ for all grades of concrete.

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Dispensing

The correct quantity of Conplast WP500 should be measured by means of a recommended dispenser. The admixture should then be added to the concrete with the mixing water to obtain the best results. Contact your local Fosroc office for advice regarding suitable equipment and its installation..

Effects of overdosing

An overdose of double the intended dose of Conplast WP500 may result in increased retardation and workability, hence reducing the short term strength development. Long term strength is unlikely to be affected.

Curing

As with all concrete, good curing practice should be maintained. The application of Concure curing membranes is recommended. Alternatively, wet hessian / polythene, or water spray may be used.

Typical performance example

Conplast WP500 is tested to BS1881:part 122:1983 water absorption to be less than 1.5%.

Many variables in concreting materials and conditions can affect the selection and use of an admixture. Trials should be carried out using relevant materials and conditions in order to determine the optimum mix design and admixture dosage to meet specific requirements.

A typical performance example from evaluation studies of Conplast WP500 is included on this datasheet. The values quoted are representative of results obtained and are provided as illustrations of the performance.

Because of the variability of concreting material, the results should only be taken as typical of the performance to be expected. Results quoted are not necessarily directly comparable with results obtained elsewhere for Conplast WP500.

Example:

Water absorption test in accordance to BS 1881 Part 122, on comparison between concrete for water retaining structure control and concrete with Conplast WP500(Treated).

Concrete grade:	40/20
Cement:	440 kg
Free w/c:	0.39

Mix	Dosage (%)	Absorption (%)
Control:	nil	2.8
Treated:	1.5	<1.5
	2.0	<1.0

* Example Results are for reference only, actual results shall subject to site trial.

Limitations

Where a watertight structure is to be provided, the appropriate Supercast PVC or SW Waterstop must be used at all penetrations (temporary and permanent), construction, contraction and expansion joints. Contact your local Fosroc office for advice on details for waterstops, joint fillers and sealants.

Good concrete practice must be followed at all times. Care should be taken to ensure that concrete is completely compacted and that protection is maintained during the specified curing period.

Conplast WP500 can be used in pumpable concrete, provided that normal good practice is used in designing the concrete mix.

The hydrophobic nature of concrete containing Conplast WP500 may affect the adhesion of waterbased finishes, particularly those that depend on suction. Contact Fosroc for further advice.

Packaging

Conplast WP500 is available in 200 litres drums.

Note: In accordance with Commercial or Health & Safety requirements packaging detail may alter. Please contact your local Fosroc office for detail.

Storage

Conplast WP500 has a shelf life of 12 months if the temperature is kept within the range of 2°C to 50°C. Contact your local Fosroc office for advice should the temperature of the product fall outside this range.



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Precautions

Health and safety

Conplast WP500 is mildly alkaline and should not be swallowed or allowed to come into contact with skin and eyes.

Wear suitable protective gloves and goggles. In case of contact with the skin, wash immediately with soap and water. In case of contact with eyes, rinse immediately with plenty of water and seek medical attention immediately - do not induce vomiting.

For further information see relevant Material Safety Data sheet.

Fire

Conplast WP500 is water based and non flammable.

Cleaning and disposal

Spillages of Conplast WP500 should be absorbed onto sand, earth or vermiculite and transferred to suitable containers. Hose down remnants with large quantities of water.

The disposal of excess or waste material should be carried out in accordance with local legislation under the guidance of the local waste regulatory authority.

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Important note

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