

# Conplast WP500\*

## Hydrophobic Absorption Water Reducing Admixture

### Uses

Conplast WP500 drastically reduces water absorption in structural and precast concrete.

It is recommended to be in multi-storey basement, tunnel, water retaining / excluding structure, bridge deck, civil and building structure

### Advantages

- Not bitumen based.
- Provides integral protection, ensuring reduced permeability throughout the concrete.
- Integral protection is maintained even if surface damage occurs.
- Lower water: cement ratio improves compressive strength at same workability.
- Fully compatible with certain Fosroc surface coatings and finishes.

### Standards compliance

Conplast SP335 conforms with BS 5075 Part 1, BS:EN934-2:1998, ASTM C494 as Type A and Type G, and ASTM C1017 as Type 1 and Type 2.

### Description

Conplast WP500 chloride free admixture is supplied as a 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 provides a technical advisory service for on-site assistance and advice on admixture selection, evaluation trials and dispensing equipment. Technical data and guidance can be provided for admixtures and other products for use with fresh and hardened concrete.

### 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 1.0 to 1.5 litres per 100 kg cement.

### Properties

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<b>Appearance</b>	:	Brown solution
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<b>Specific Gravity</b>	:	Typically 1.10 at 20°C
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<b>Chloride content:</b>	Nil to BS5075
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### Instruction for Use

#### Compatibility

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

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 recommended for concrete containing retarding admixture conform to ASTM C494 Type D or 5075 Part 1. It is also compatible with Conplast range of superplasticizer or its equivalent conforming to ASTM C494 Type F or BS 5075 Part 3.

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 mix shall be conducted for concrete intended to utilise Conplast WP500, to drastically reduce water absorption in a particular concrete structure. The targeted

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compressive strength of a particular grade of concrete shall be complied with BS 5328:1981, or its latest revision.

Only when a particular concrete mix design (with retarding plasticizer and/or superplasticizer) using Conplast WP 500 has complied with all requirements, shall actual batching of concrete commence.

The use of Conplast WP500 shall be under adequate supervision.

The results of the trial mix should satisfy all requirements of normal concrete properties.

The use of Conplast WP500 at typical dosage will illustrate an excellent result on water absorption, as shown in Typical Performance Example.

## Dispensing

The correct quantity of Conplast WP500 should be measured by means of a recommended dispenser. The admixture should then be best results. Contact Fosroc Technical Service Department 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 reduce the short term strength development. Long terms strength is unlikely to be affected.

Should segregation of concrete occur, due to excessive increase in workability, the concrete shall not be used.

## Curing

As with all structural concrete, good curing practice should be maintained, particularly in situations where an overdose has occurred. Water spray, wet hessian or a Concure spray applied curing membrane should be used.

## Typical Performance Examples

Conplast WP500 meets the water absorption requirements of draft European standard EN 934-2.

A typical performance examples from evaluation studies of Conplast WP500 is included on this data sheet. The values quoted are representative of results obtained and are provided as illustration of performance.

Because of the variability of concreting materials, the results should only be taken as typical of the performance to be expected. Results quoted are not necessary 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	:	45/20	
Cement	:	420kg	
Free w/c	:	0.38	
Mix		Dosage	Absorption %
Control	:	Nil	: 2.8
Treated	:	1.5%	: <1.0

## Waterproofing to concrete joints

Supercast Waterstop must be provided between lifts of concrete and joints in floor bays.

## Limitations

The use of Conplast WP500 will not make poor quality concrete waterproof.

Good concrete practice must be followed at all times. Well graded aggregates must be used and minimum cement content of 350kg/m<sup>3</sup> is recommended for Grade 30 and below.

Concrete with higher grade will require higher cement content.

## Estimating - packaging

Conplast WP500 is available in 210 litre drum, 1000 litre tote tank or bulk supply.

## Storage

Conplast WP500 has a minimum shelf life of 12 months provided the temperature is kept within the range of 2°C to 50°C. Should the temperature of the product fall outside this range then the Fosroc for advice.



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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 advice. If swallowed seek medical attention immediately - do not induce vomiting.

For further information consult the Safety Data Sheet available for this product.

### Fire

Conplast WP500 is water based and non-flammable.

### Spillage 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.

### Additional information

Fosroc provides a wide range of waterproofing system which can be incorporated with Conplast WP500 to provide a complete solution to basement tanking and water retaining/excluding structure.

\* Denotes the trademark of Fosroc International Limited

† See separate datasheet

#### Important note

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