

Conplast WP400

Hydrophobic pore-blocking waterproofing admixture

Uses

Conplast WP400 will drastically reduce water absorption in structural and precast concrete. It is suitable for use in below ground structures, reinforced concrete in marine areas, piles, water retaining structures, manholes, waste water treatment and desalination plants.

Advantages

- Bitumen ammonia free system
- Provides integral protection, ensuring reduced permeability throughout the concrete
- Integral protection is maintained even if surface damage occurs, unlike applied surface films or coatings
- Lower water:cement ratio improves compressive strength at same workability
- Fully compatible with certain Fosroc surface coatings and finishes

Description

Conplast WP400 chloride free admixture is supplied as a turbid liquid which instantly disperses in water.

Conplast WP400 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.

Dosage

The optimum dosage of Conplast WP400 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 cement.

Effects of overdosing

An overdose of double the intended dose of Conplast WP400 may result in increased retardation and workability, hence reduce the short term strength development. Long term strength is unlikely to be affected.

Use at other dosages

Dosages other than those given on this sheet may be used to meet particular mix requirements provided that adequate supervision is available. Compliance with requirements must be assessed through trial mixes. Contact the Fosroc Technical Department for advice in these cases.

Properties

Appearance	: Turbid solution
Specific gravity	: Typically 1.05 at 20°C
Chloride content	: Nil to BS 5075

Instructions for use

Compatibility

Conplast WP400 is compatible with Conplast SP432MS*† 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 WP400 is suitable for use with all types of Portland cements, SRC cements and cement replacement materials such as PFA, GGBFS and microsilica.

Dispensing

The correct quantity of Conplast WP400 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 the Fosroc Technical Department for advice regarding suitable equipment and its installation.

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.

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Typical performance example

Conplast WP400 meets the water absorption requirements of the European Standard BSEN934-2.

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 WP400 is included on this data sheet. The values quoted are representative of results obtained and are provided as illustrations of the 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 necessarily directly comparable with results obtained elsewhere for Conplast WP400 or other products.

Example: Concrete grade 45/20, 400 kg cement, 0.38 free w/c.

Mix	Dosage	Absorption	
	WP400	SP432MS	
	%	%	%
Control	nil	1	2.8
With Conplast	1	1	1.2
WP400	2	1	0.6

Limitations

The use of Conplast WP400 will not make poor quality concrete waterproof. Good concrete practice must be followed at all times. Well graded aggregates must be used and a minimum cement content of 300 kg/m³ is recommended. Consult the fact sheet available on the use of Conplast plasticisers in water retaining structures for further information. Adequate water bars must be provided between lifts of concrete and floor bays.

Conplast WP400 combined with Conplast SP432MS produce high performance, low absorption results.

Estimating

Supply

Conplast WP400 : 5, 20 & 210 litre drums

Storage

Conplast WP400 has a minimum shelf life of 12 months if the temperature is kept within the range of 10°C to 50°C. Should the temperature of the product fall outside this range contact Fosroc office for advice.

Precautions

Health and safety

Conplast WP400 is 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 WP400 is water based and non-flammable.

Cleaning and disposal

Spillages of Conplast WP400 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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