Conplast RP244*

constructive solutions

Retarding Water Reducing Admixture

Uses

- To improve the effectiveness of water content in the concrete mixes
- It is designed to improve the quality and durability of all types of concrete, and production of economical concrete

Advantages

- Improves workability without loss of strength
- Greatly improves compressive strengths
- Allows high cement savings
- Improves mix cohesion
- Reduces bleeding and segregation
- Improves surface finishes
- Makes concrete denser, more durable
- Chloride free

Standards Compliance

Conplast RP244 complies with BS5075 Part 1, ASTM C494 as Type B & D

Description

Chloride free, water reducing admixture based on lignosulphonate materials. It is supplied as a brown solution which instantly disperses in water. Conplast RP244 disperses the fine particles in the concrete mix enabling the water content of the concrete to perform more effectively. The initial hydration of cement is also delayed, resulting a delay of the setting time concrete with no adverse effect on subsequent stiffening and strength gain.

Technical Support

Fosroc provides a technical advisory service for on-site assistance and advice on admixture and other products for use with fresh and hardened concrete

Typical Dosage

The optimum dosage of Conplast RP244 to meet specific requirements should always be determined by trials using the materials and conditions that will be experienced in use. This allows the optimization of admixture dosage and mix design and provides a complete assessment of the concrete mix. A starting point for such trials is to use a dosage within the normal typical range of 0.30 to 0.60 litres / 100 kg of cementitious material, including PFA, GGBFS or microsilica.

Use at Other Dosage

Dosages outside the typical range quoted above may be used if necessary and suitable to meet particular mix requirements, provided that adequate supervision is available. Compliance with requirements must be assessed through trial mixes. Contact the Fosroc Technical Service Department for advice in these cases.

Properties

Appearance	Brown liquid
Specific Gravity	Typically 1.2 at 24^0C
Chloride content	Nil to BS5075
Air entrainment	Typically less than 2% additional air is entrained art normal dosages

Instruction for Use

Retardation

The level of retardation obtained may be varied by altering the dosage of Conplast RP244 used, which will also alter the level of water reduction obtained. Retardation is also affected by factors other than the admixture, depending on the mix details and conditions involved. Major factors include the following:

- Cement replacement materials will give greater levels of retardation than those experienced with plain OPC mixes at the same admixture dosage.
- High temperatures will require increased dosages to obtain the same change in stiffening time compared to a

control mix.

- Changes in cement content, source of chemistry may lead to variations in the retardation obtained. The amount of tri-calcium aluminate in the cement has been identified as being one of the main contributory factors in this respect, with a lower level leading to greater retardation

Compatibility

Conplast RP244 is compatibility with other Fosroc admixtures used in the same concrete mix. All admixtures should be added to the concrete separately and must not be mixed together prior to addition. The resultant properties of concrete containing more than one admixture should be assessed by the trial mix procedure recommended on this data sheet to ensure that effects such as unwanted retardation do not occur.

Conplast RP244 is suitable for use with all types of Ordinary Portland Cements and cement replacement materials such as PFA, GGBFS and silica fume. Further information on such usage is provided elsewhere on this data sheet

Dispensing

The correct quantity of Conplast RP244 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 Service Department for advice regarding suitable equipment and its installation.

Effect of Overdosing

An overdose of double the intended amount of Conplast RP244 will result in a significant increase in retardation as compared to that normally obtained at the intended dosage.

The ultimate strength of the concrete will not be impaired by increased retardation and will generally be increased. The effects of overdosing will be further increased if sulphate resisting cement or cement replacement materials are used.

Over dosage may also cause increased air entrainment, which will tend to reduce strength. The degree of this effect will depend on the particular mix design and overdose level.

An overdose will tend to increase the plasticizing effect of the admixture. As concrete is normally batched to a target workability, increased plasticizing will allow an increased water reduction.

This will have the effect of increasing ultimate strength and partially or fully offsetting the effect of any increased air entrainment. If no increase in water reduction is taken, and a significant rise in workability is allowed, the chance of tend to extend the working life of the concrete, which will delay finishing and stiffening times to some extent.

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

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

Typical performance examples from evaluation studies of Conplast RP244 are included on this data sheet. The values quoted are representative of results obtained and are provided as illustrations of performance in different situations. Because of the variability of concreting materials, the results should only be taken as typical of the performance to be expected. Results quoted in individual examples should not be taken as necessary directly comparable with other examples given here or results obtained elsewhere for Conplast RP244 or other products.

Unless otherwise specified, all testing was carried out to the relevant parts of application in accordance to the British Standards.

Estimating

Packaging

Conplast 244 is available in 20 litre pails and 210 litre tote drums.

Shelf Life

Conplast RP244 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 Technical Service Department should be contacted for advice.

Precautions

Health and Safety

Conplast RP244 does not fall into the hazard classifications of current regulations. However, it should not be swallowed or allowed to come into contact with skin and eyes.

Suitable protective gloves and goggles should be worn.

Splashes on the skin should be removed with 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.

Fire

Conplast RP244 is water based and non flammable.

Cleaning and Disposal

Spillages of Conplast RP244 should be absorbed onto sand, earth or vermiculite and transferred to suitable containers. Remnants should be hosed down with large quantities of water.

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

Technical Data

Mix	Dosage Ltrs/100kg	Cement Content kg/m^3	W/C Ratio	Slump mm	Air %	Compressive Strength N/mm^2	
						7 days	28 days
Control	0	305	0.07	100	1.2	18.8	26.8
Conplast RP244	0.35	305	0.63	100	2.7	23.3	34.4

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† See separate datasheet

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