Conplast P211



Water Reducing Admixture

Uses

- Improves effectiveness of the concrete mix water content.
- At higher dosages provides a cost effective means of reducing concrete permeability and thereby reducing water penetration.

Advantages

- Allows specified strength grades to be met at reduced cement content or increased workability.
- Water reduction significantly improves compressive strengths at all ages and enhances durability through the production of low permeability concrete.
- Minimises the risk of segregation and bleeding and assists in the production of a dense, close textured surface, improving durability.
- Chloride free, safe for use in prestressed and reinforced concrete.

Standards Compliance

Conplast P211 complies with BS 5075 Part 1 and with ASTM C494 as Type A.

Conplast P211 complies with the requirements of the United Kingdom Water Fittings Bylaws Scheme and is listed in the Directory of Materials as suitable for use in contact with potable water under its previous name of Conplast 211.

Description

Conplast P211 is a chloride free water reducing admixture based on selected sugar-reduced lignosulphonates. It is supplied as a brown solution, which instantly disperses in water.

Conplast P211 disperses the fine particles in the concrete mix, enabling the water content of the concrete to perform more effectively and improving the consistency of the concrete. This produces higher levels of workability for the same water content, allowing benefits such as water reduction and increased strengths to be taken.

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 P211 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 concrete mix. A starting point for such trials is to use a dosage within the normal typical range of 0.28 to 0.42 litres/100 kg of cementitious material, including PFA, GGBFS and microsilica

Use at Other Dosage

Dosages outside the typical ranges quoted above may be used it 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 1.19 at 25ºC
Chloride content Nil to BS5075	
Air entrainment	Typically <2% additional air is entrained at normal dosages
Alkali content	Typically less than 5 grams Na ₂ 0 equivalent/litre admixture

Instructions for Use

Compatibility

Conplast P211 is compatible with other Fosroc admixtures in the same concrete mix. All admixtures should be added to the concrete separately and must not be mixed together prior to addition. The performance 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 P211 is suitable for use with all types of ordinary Portland cements and cement replacement materials such as PFA, GGBFS and silica fume.

Reducing water permeability

One of the most effective means by which the water permeability of a concrete mix can be reduced is to make a large reduction in water/cement ratio. Conplast P211 can be used to provide such a reduction and to produce a concrete with the benefits of low permeability. A separate information sheet on this use of Conplast plasticisers is available and must be read in conjunction with this product data sheet.

Dispensing

The correct quantity of Conplast P211 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.

Effects of overdosing

An overdose of double the intended amount of Conplast P211 will result in an increase in retardation as compared to that normally obtained at the intended dosage. This effect is found with most water reducing admixtures, although the degree may vary. Retardation is affected by factors other than the admixture, depending on the mix details and conditions involved.

Trials to assess the effects in a particular mix are strongly recommended if this aspect is of particular importance. Provided that adequate curing is maintained, 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.

Overdosing 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 segregation may be higher. Increased initial workability will 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.

Estimating

Packaging

Conplast P211 is available in 210 litre drums and 1000 litre tote tanks.

Shelf Life

Conplast P211 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 P211 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.

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

Fire

Conplast P211 is water based and non flammable.

Cleaning and Disposal

Spillages of Conplast P211should 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 excess or waste material should be carried out in accordance with local legislation under the guidance of the local waste regulatory authority.



MATT INDIA CO

G-25, SECTOR -63, GAUTAM BUDDH NAGAR, UP-201307 INDIA

Phone No: 09555666476 09555655544 Emaiil:mattindia1@gmail.com

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