



# Conplast RP264

## Retarding water reducing admixture

### Uses

- To improve the effectiveness of the water content of a concrete mix
- To help maintain the workability of ready mixed concrete deliveries in hot weather at usable levels.
- To extend working times of concrete and minimise problems of delay in transportation
- Particularly suitable for use in mixes with low cohesion.

### Advantages

- Water reduction significantly improve compressive strengths at all ages and enhances durability through the production of low permeability concrete
- Controlled retardation extends working life and stiffening in time for ease of construction
- Control of stiffening improve slip forming and assists in preventing the formation of cold joints in large pours.
- Minimised transportation delay problems, maintains place ability and reduces
- Slight air entrapment improves cohesion in mixes with poorly graded sands or a lack of fine material, minimising bleed and segregation.
- Allows specified strengths grades to be met at reduced cement content or increased workability.
- Chloride free, safe for use in pre-stressed and reinforced concrete.

### Standard Compliance

Conplast RP264 complies with BS 5075 Part 1 with ASTM C494 as Type B & Type D.

### Description

Conplast RP264 is a chloride free water reducing admixture base on selected lignosulphonate materials. It is supplied as a brown solution which instantly disperses in water.

Conplast RP264 disperse the fine particles in the concrete mix, enabling the water content of the concrete to perform more effectively. The initial hydration of the cement is also delayed, resulting in a delay in the setting time of the

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 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 RP264 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 0.60 litres / 100kgs 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

<b>Appearance</b>	:	Brown liquid
<b>Specific Gravity</b>	:	Typically 1.20 at 25°C
<b>Chloride Content</b>	:	Nil to BS 5075
<b>Air Entrapment</b>	:	Typically less than 2% additional air is entrained at normal dosages
<b>Alkali Content</b>	:	Typically less than 5.0g Na2O equivalent / litre of admixture. A fact sheet on this is available.

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## Instructions for use

### Retardation

The level of retardation obtained may be varied by altering the dosage of Conplast RP264 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:

- a) Cement placement materials will give greater levels of retardation than those experienced with plain OPC mixes at the same admixture dosage.
- b) High temperatures will require increased dosage to obtain the same change in stiffening time compared to a control mix
- c) Changes in cement content, source or 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 RP264 is compatible 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 RP264 is suitable for use with all types of ordinary Portland cements and cement placement materials such as PFA, GGBFS and silica fume. Further information on such usage is provided elsewhere on this datasheet.

### Dispensing

The correct quantity of Conplast RP264 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 RP264 will result in a significant increase in retardation as compared to that normally obtained at the intended dosage 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.

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 plasticising effect of the admixture. As concrete is normally batched to a target workability, increased plasticising will allow an increased water reduction. This will have the effect of increasing 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 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.



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Typical performance examples from evaluation studies of Conplast RP264, 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 be taken as typical of the performance to be expected. Results quoted in individual

examples should not be taken as necessarily directly comparable with other examples given here or results obtained elsewhere for Conplast RP264 or other products.

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

## Example 1: Laboratory Testing with gravel aggregates for normal read mixed concrete

### a) Cement Source A

Mix	Dosage litre / 100 kg	Cement Content kg/m <sup>3</sup>	W/C Ratio	Air %	Slump mm	Compressive Strength N/mm <sup>2</sup>	
						7 days	28 days
Control	-	310	0.55	1.2	65	27.5	39.5
Conplast RP 264	0.30	310	0.49	2.7	55	33.5	45

### b) Cement Source B

Mix	Dosage litre / 100 kg	Cement Content kg/m <sup>3</sup>	W/C Ratio	Air %	Slump mm	Compressive Strength N/mm <sup>2</sup>	
						7 days	28 days
Control	-	300	0.54	1.8	70	45.5	59
Conplast RP 264	0.25	300	0.48	2.3	65	53.5	64.5

### c) Cement source C. Mixes also contain air entrainer to give increased air content

Mix	Dosage litre / 100 kg	Cement Content kg/m <sup>3</sup>	W/C Ratio	Air %	Slump mm	Compressive Strength N/mm <sup>2</sup>	
						7 days	28 days
Control	-	250	0.82	3.6	155	14.5	18.5
Conplast RP 264	0.26	250	0.76	4.2	150	18	23

## Estimating - packaging

Conplast RP264 is available in drum and bulk supply. For larger users, storage tanks can be supplied. Details of specific packaging volumes are available on request.

## Storage

Conplast RP264 has a minimum shelf life of 12 months provided the temperature is kept within the range of 20°C to 50°C. Should the temperature of the product fall outside this range, then Fosroc Technical Service Department should be contacted for advice.

## Precautions

### Health & Safety

Conplast RP264 does not fall into the hazard classifications of current regulations. However, it should not be 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 Datasheet available for this product.



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## Fire

Conplast RP264 is water based and non- flammable.

## Cleaning and disposal

Spillages of Conplast RP264 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 should be carried out in accordance with local legislation under the guidance of the local waste regulatory authority

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\* See separate datasheet



### Important note

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