

# Conplast SP423\*



## Workability retention superplasticiser

### Uses

- Gives increased working life to fresh concrete.
- Increases workability without extra water, reducing placing time and costs.
- Improves cohesion, minimising segregation and improving surface finish.
- Aids pumping by improving cohesion and reducing workability loss.
- Allows a reduction in water:cement ratio, enhancing durability by producing low permeability concrete with reduced shrinkage cracking potential.
- Chloride free, safe for use in prestressed and reinforced concrete.
- Can be used with concrete containing microsilica and other cement replacements.

### Standards compliance

Conplast SP423 conforms with BS 5075 Part 3 and ASTM C494 as Type G.

### Description

Conplast SP423 is a chloride free workability retention admixture based on selected synthetic polymers. It is supplied as a brown solution which instantly disperses in water.

Conplast SP423 disperses the fine particles in the concrete mix, enabling the water content of the concrete to perform more effectively. The increased workability, cohesion and retardation minimises loss of workability.

### Technical support

Fosroc provides a technical advisory service for on-site assistance and advice on mix design, admixture selection, evaluation trials and dispensing equipment.

### Dosage

The optimum dosage of Conplast SP423 to meet specific requirements should always be determined by trials using the materials and conditions that will be experienced in use. The normal dosage range is 0.6 to 1.5 litres/100kg of cementitious material, including PFA, GGBFS and microsilica.

### Use at other dosages

Dosages outside the typical range quoted above may be used if necessary and suitable to meet particular mix requirements. Contact Fosroc for advice in these cases.

### Effects of overdosing

An overdose of double the amount of Conplast SP423 will result in a significant increase in retardation as compared to that normally obtained. 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.

Overdosage is also likely to 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.

### Properties

<b>Appearance</b>	: Brown liquid
<b>Specific gravity</b>	: Typically 1.175 at 30°C
<b>Chloride content</b>	: Nil to BS 5075
<b>Alkali content</b>	: Typically less than 50.0 g. Na <sub>2</sub> O equivalent/litre of admixture. A fact sheet on this subject is available.

### Instructions for use

#### Mix design for workability retention

The mix design should be one suitable for use as a pump mix. To obtain the best results for workability retention, the initial workability should be above 150 mm slump. The retardation and improved cohesion provided by Conplast SP423 then act to enhance the workability retention characteristics. Advice on mix design for flowing concrete is available from Fosroc.

In correctly designed flowing concrete, the improved dispersion of the cement particles and the more efficient use of mixing water will improve mix cohesion. The improved cohesion obtained with Conplast SP423 will also help to minimise bleed and segregation. After initial trials, minor modifications to the mix design may be made to optimise performance.



## Compatibility

Conplast SP423 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 premixed together prior to addition. The resultant properties of concrete containing more than one admixture should be assessed by the trial mixes.

Conplast SP423 is suitable for use with all types of Portland cements and cement replacement materials such as PFA, GGBFS, SRC and microsilica.

The use of a combination of admixtures in the same concrete mix and or cement replacements may alter the setting time. Trials should always be conducted to determine such setting times.

## Dispensing

The correct quantity of Conplast SP423 should be measured by means of a recommended dispenser. Normally, the admixture should then be added to the concrete with the mixing water to obtain the best results. Contact Fosroc for advice regarding suitable equipment and its installation.

## Estimating - packaging

Conplast SP423 is available in 210 litre drums and bulk supply. For larger users, storage tanks can be supplied.

## Storage

Conplast SP423 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 contact Fosroc for advice.

**Freezing point:** Approximately -4°C

## Precautions

### Health and safety

Conplast SP423 does not fall into the hazard classifications of current regulations (see notes 1 and 2 below). 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 SP423 is water based and non-flammable.

### Cleaning and disposal

Spillages of Conplast SP423 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.

Note 1: CPL Regulations 1984 Supply - Schedule 1

Note 2: HSE publication Guidance Note EH40

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