

# Expanplast\* SP511

High workability slump retaining water reducing superplasticiser, especially design for ready-mix concrete

## Uses

- To improve the effectiveness of the water content of a concrete mix.
- At higher dosages to provide 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 strength at all ages and enhances durability through the production of low permeability concrete.
- Minimizes 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 pre-stressed and reinforced concrete.
- Allows workability to be increased without adding extra water, suitable for high workability concrete

## Standards compliance

Expanplast\* SP511 conforms with BS 5075 Part 1, ASTM C494 as Type B, D, & G and BSEN 934-2.

## Description

Expanplast\* SP511 is a chloride free and water reducing admixture based on specially selected and blended organic polymers materials. It is supplied as a brown solution which instantly disperses in water.

Expanplast\* SP511 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

Fospak 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 Expanplast\* SP511 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 between 0.50 to 1.75 liters/100 kg of cementitious material.

## Use at other dosages

Dosages outside the normal range quoted above can be used to meet particular mix requirements. Contact Fospak for advice in these cases.

## Effects of overdosing

An overdose of double the intended amount of Expanplast\* SP511 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.

## Properties

<b>Appearance</b>	:	Brown liquid
<b>Specific gravity (BSEN 934-2)</b>	:	1.165 @ 20°C ± 0.01
<b>Water soluble chloride (BSEN 934-2)</b>	:	Nil

## Instructions for use

### Compatibility

Expanplast\* SP511 is compatible with other Fospak 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 performance of concrete containing more than one admixture should be assessed by trial mixes.

Expanplast\* SP511 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 Expanplast\* SP511 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 Fospak for advice regarding suitable equipment and its installation.

### Estimating - packaging

Expanplast\* SP511 is available in 210 liter drums and bulk supply. For larger users, storage tanks can be supplied.

### Storage

Expanplast\* SP511 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 contact Fospak for advice.

**Freezing point:** Approximately -3°C

## Precautions

### Health and safety

Expanplast\* SP511 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

Expanplast\* SP511 is water based and non-flammable.

### Cleaning and disposal

Spillages of Expanplast\* SP511 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.

\* Denotes the trademark registered

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