

# Structuro 255

constructive solutions

## Very high early strength new generation superplasticiser for precast application

Structuro 255 has been polymer engineered specifically towards the precast concrete industry to produce the highest possible early age strength gain, with the lowest possible cementitious content, exhibiting low shear thixotropy for reduced surface voidage.

### Uses

- Structuro 255 has been specially formulated to produce Self Compacting Concrete (SCC), for precast application with excellent flow and very high early strength.
- Excellent in normal consistency precast concrete for optimum cementitious utilization because of higher strength gain both at early and later ages.
- Reduced surface voidage due to even controlled thixotropic flow, exhibiting latent energy which maximises spread of flow without exhibiting signs of bleed segregation
- High performance concretes with high early and later age strength. Increased strengths facilitate earlier formwork striking and lifting of precast elements.
- Superworkable flowing concretes can be produced at low, water cement ratios providing ease of mould filling and less workmanship where access or dense reinforcement is a problem.
- Excellent cost in use solution, for Precast Industry concretes.
- Low water cement ratio increases long term durability, impermeability and resistance to sulfate attack.

### Advantages

- Early age compressive strength development improves productivity, earlier transfer of pre-stress and negates the need for accelerating admixtures during cold temperature working.
- In highly workable concretes, better consistency, requires little or no vibration.
- Reduced surface cohesion makes floating and finishing less labour intensive.
- More efficient mould usage.
- Improved rheology concrete provides a blemish free surface finish, requiring less remedial work or 'dressing'.
- Chloride free, ideal for concrete containing embedded steel.
- SCC with higher flow and higher early strength.

### Description

Structuro 255 is a new generation polycarboxylate polymer based superplasticiser/high range water reducer.

Structuro 255 combines the effects of both Steric and Electrostatic repulsion producing a product which

outperforms conventional superplasticisers.

Structuro 255 has been engineered specifically towards the Precast Industry to give excellent performance at low dosage either in the production of low water cement ratio, high strength mixes or high performance flowing concretes.

### Standards compliance

Structuro 255 complies with EN 934-2 Tables 3.1 and 3.2 as a high range water reducing/superplasticising admixture.

### Characteristics

Nature	Liquid
Colour	Uniform straw
Specific gravity	1.07 kg/l at 20°C
pH	7.0
Chloride content	Nil
Na <sub>2</sub> O equivalent	Maximum 2.0%
Freezing point	Sensitive to freezing
Air entrainment	Typically less than 2 % additional air is entrained at normal dosage

### Application

Structuro 255 is supplied ready to use for addition to concrete whilst batching.

### Typical dosage

For each application the optimum dosage of Structuro 255 is best established by trial mixes with the site materials in use, under conditions that will be experienced on site.

The typical dosage range for Structuro 255 is 0.4 to 0.8 litres/100 kg of cementitious material.

For further advice contact the Fosroc Technical Department.

### Dispensing

The correct quantity of Structuro 255 should be measured by means of a suitable dispenser at the time of batching the concrete. The admixture is best added with the latter part of the mixing water.

### Effects of overdosing

Overdosing, above the dosage range may promote segregation and excessive bleeding of the concrete mix. This is relevant when Structuro 255 is used to produce high slump concrete.

In low temperature working, or if cements with low C<sub>3</sub>A levels and/or cement replacements are used an overdose may result in an increase in setting time.

In the event of a suspected overdose please consult the Fosroc Technical Department.

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## Compatibility

### With cements

Structuro 255 is suitable for use with all types of Portland cement and cement replacement materials e.g. GGBS, Flyash and microsilica.

### With other admixtures

Structuro 255 is compatible with other admixtures in the Fosroc range. Admixtures should never be premixed prior to their addition to the concrete mix.

Contact the Fosroc Technical Department for further advice on the effects of various admixtures.

## Supply

Structuro 255 is available in bulk supply or 20 litre drums.

## Storage

Structuro 255 has a minimum shelf life of 12 months provided the temperature is within 2°C to 50°C.

Should the product become frozen, the properties of Structuro 255 can be homogenised by thorough agitation of the completely thawed product.

## Precautions

### Health and safety

For further information refer to appropriate Product Safety Data Sheet.

### Fire

Structuro 255 is water based and non-flammable.



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### Important note

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