

Hyperplast PC190-Plus R

High performance early strength concrete hyperplasticiser



Description

Hyperplast PC190-Plus R is a high performance early strength concrete hyperplasticising admixture based on polycarboxylic ether polymers with long chains specially designed to enable the water content of the concrete to perform more effectively.

This effect can be used in high strength concrete and flowable concrete mixes, to achieve highest concrete durability and performance.

Applications

- ▲ High strength and high performance concrete.
- ▲ Structures with congested reinforcement.
- ▲ Pre-cast concrete.
- ▲ Improved cohesion allowing for use in mass concrete pours and piling.
- ▲ Self compacting concrete.

Advantages

- ▲ Optimises cement utilisation.
- ▲ High density and impermeable concrete through extreme water reduction.
- ▲ Improves shrinkage and creep behaviours.
- ▲ Minimises segregation and bleeding problems by improving cohesion.
- ▲ Higher early and ultimate compressive strengths.
- ▲ Increases durability and resistance to aggressive atmospheric conditions thorough reduced permeability.

Compatibility

Hyperplast PC190-Plus R is suitable to use with all types of Portland cement and cement replacement materials. Hyperplast PC190-Plus R should not be used in conjunction with other admixtures unless DCP technical department approval is obtained.

Standards

Hyperplast PC190-Plus R complies with ASTM C494 Type F and EN 934, Part2, Table 3.1 and 3.2, depending on dosage used.

Technical Properties @ 25°C:

Color:	Yellowish to brownish liquid
Freezing point:	≈ -2°C
Specific gravity: ASTM C494/494M	1.045 ± 0.015
Sulphate content as SO ₃ (% by weight): Gravimetry	0.01
Total Alkalies as Na ₂ O equivalent (% by weight): BS EN480-12	0.95
Chloride content:	Nil
Air entrainment:	Typically less than 2% additional air is entrained above control mix at normal dosages

Method of Use

Hyperplast PC190-Plus R should be added to the concrete with the mixing water to achieve optimum performance.

An automatic dispenser should be used to dispense the correct quantity of Hyperplast PC190-Plus R to the concrete mix.

Dosage

The recommended dosage of Hyperplast PC190-Plus R is 0.5 - 3.0 litre per 100 kg of cementitious materials in the mix, including GGBFS, PFA or microsilica.

Trials should be conducted to determine the optimum dosage of Hyperplast PC190-Plus R to meet the performance requirements by using the materials and conditions in actual use.

Effects of Over Dosage

Overdosage of Hyperplast PC190-Plus R will cause the following:

- ▲ Significant increase in retardation.

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Ultimate concrete strength will not be adversely affected and will generally be increased provided that proper concrete curing is maintained.

Cleaning

Clean Hyperplast PC190-Plus R with fresh cold water.

Packaging

Hyperplast PC190-Plus R is available in 25 litre pails, 210 litre drums and 1000 litre bulks supply.

Storage

Hyperplast PC190-Plus R has a shelf life of 12 months from date of manufacture if stored at temperatures between 2°C and 50°C.

If these conditions are exceeded, contact DCP Technical Department for advice.

Cautions

Health and Safety

Hyperplast PC190-Plus R is not classified as a hazardous material. Hyperplast PC190-Plus R should not come into contact with skin and eyes.

In case of contact with eyes, immediately flush with plenty of water and seek medical attention.

For further information, refer to the Material Safety Data sheet.

Fire

Hyperplast PC190-Plus R is nonflammable.

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Note:

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