Hyperplast PC930

New generation hyperplasticising admixture for super long slump retention and high stability concrete

DESCRIPTION

Hyperplast PC930 is a new generation hyperplasticising admixture for concrete, based on unique polycarboxylic polymers with long chains specially designed to produce concrete with extensive workability.

This effect can be used to produce low viscosity concrete for mid-to-high scale projects or when pumping concrete over long distances is required.

Hyperplast PC930 is particularly suited for use in concretes that require low water/cement ratios and / or high water reductions, and when used in the right dosages with self-compacting concrete mixes, Hyperplast PC930 achieves a cohesive, low stickiness flowable concrete with no bleeding, that can maintain its flow for more than 9 hours.

APPLICATIONS

- High strength and high performance concrete.
- Ideally suited for use in Self-Compacting Concrete (SCC)
- For high-rise concrete pumping.
- Suitable for long distances due to extremely long slump retention properties.
- Concrete where high flowability, increased stability and durability are needed
- Structures with congested reinforcement.
- Pre-stressed concrete.
- Improved cohesion allows for use in mass concrete pours and piling.

ADVANTAGES

- Improved effectiveness in higher ambient temperatures
- Producing concrete capable of maintaining its flow for more than 9 hours.
- Optimises cement utilisation.
- High density and impermeable concrete through very high water reduction.
- Minimizes segregation and bleeding problems by improving cohesion.
- Increases durability and resistance to aggressive atmospheric conditions through reduced permeability.

COMPATIBILITY

Hyperplast PC930 can be used with all types of Portland cement and cement replacement materials. Hyperplast PC930 is compatible with other DCP admixtures used in the same concrete mix.

TECHNICAL PROPERTIES @ 25°C:

Colour:	Brownish to dark brown liquid
Specific gravity:	1.12 ± 0.02
pH:	5 - 7
Chloride content: EN 934-2	Nil
Air Entrainment:	Typically less than 2% additional air is entrained above control mix at normal dosages

Internal studies have proved that in cases of “Triple blend” concrete mixes, where multiple types of cement replacement materials are used, the type of cement replacement, in addition to its fineness and composition can have a significant effect on the stickiness, setting time and retention of concrete.

Therefore it is recommended to conduct concrete trials to confirm the most suitable cement replacement combination. Consult DCP Technical Department for further details and recommendations.

If more than one type of admixture will be used in the concrete mix, they must be dispensed to the concrete separately.

STANDARDS

Hyperplast PC930 complies with ASTM C494, Type F and G, depending on used dosage.

METHOD OF USE

Hyperplast PC930 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 PC930 to the concrete mix.

DOSAGE

The recommended dosage of Hyperplast PC930 is 0.50 - 3.00 litre per 100 kg of cementitious materials in the mix, including GGBFS, PFA or microsilica.

Representative trials should be conducted to determine the optimum dosage of Hyperplast PC930 to meet the performance requirements by using the materials and conditions in actual use.

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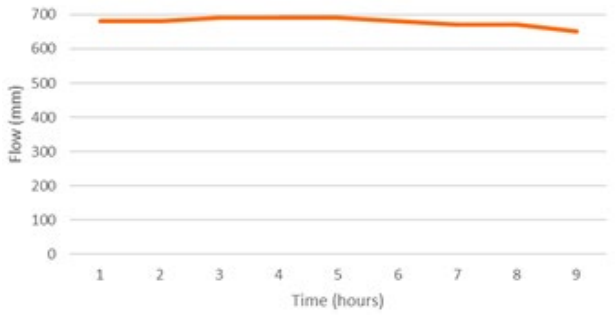
PERFORMANCE CHARECTERISTICS

Figure 1 represents the slump retention properties achievable through the use of Hyperplast PC930 admixture. This mixture had concrete temperature of 25°C, and contained 350 kg/m³ of cement, 110 kg/m³ of fly ash, and 40 kg/m³ of Microsilica, with a W/C of 0.26.

Figure 1



EFFECTS OF OVER DOSAGE

Overdosage of Hyperplast PC930 will cause the following:

- Significant increase in retardation.
- Increase in workability.

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

CLEANING

Clean Hyperplast PC930 with fresh cold water.

PACKAGING

Hyperplast PC930 is available in 25 litre jerrycan, 210 litre drums and 1000 litre bulk supply.

STORAGE

Hyperplast PC930 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 PC930 is not classified as a hazardous material. Hyperplast PC930 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 PC930 is nonflammable.

MORE FROM DON CONSTRUCTION PRODUCTS

A wide range of construction chemical products are manufactured by DCP which include:

- Concrete admixtures.
- Surface treatments
- Grouts and anchors.
- Concrete repair.
- Flooring systems.
- Protective coatings.
- Sealants.
- Waterproofing.
- Adhesives.
- Tile adhesives and grouts.
- Building products.
- Structural strengthening.

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