# Hyperplast PC105

High performance concrete superplasticiser



### **DESCRIPTION**

Hyperplast PC105 is a high performance super plasticising admixture based on polycarboxylic 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 allow for use in mass concrete pours and piling.
- » Self compacting concrete.

### **ADVANTAGES**

- » Optimises cement utilization.
- » High density and impermeable concrete through very high water reduction.
- » Improves shrinkage and creep behaviors.
- » 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 PC105 is suitable to use with all types of Portland cement and cement replacement materials. Hyperplast PC105 should not be used in conjunction with other admixtures unless DCP Technical Department approval is obtained.

# **STANDARDS**

Hyperplast PC105 complies with ASTM C494, Type D and G

## **METHOD OF USE**

Hyperplast PC105 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 PC105 to the concrete mix.

# **TECHNICAL PROPERTIES @ 25°C:**

Colour: Brownish liquid

Freezing point: ≈ -1°C

Specific gravity:  $1.03 \pm 0.02$ 

Typically less than 2% additional air is entrained above control mix at normal

dosages

#### **DOSAGE**

Air entrainment:

The recommended dosage of Hyperplast PC105 is 0.9 - 3.0 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 PC105 to meet the performance requirements by using the materials and conditions in actual use.

## **EFFECTS OF OVERDOSAGE**

Overdosage of Hyperplast PC105 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 PC105 with fresh cold water.

# **PACKAGING**

Hyperplast PC105 is available in 25 litre pails, 210 litre drums and 1000 litre bulks supply.



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## **STORAGE**

Hyperplast PC105 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 PC105 is not classified as a hazardous material. Hyperplast PC105 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 PC105 is nonflammable.

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- » 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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