

## **MONOCAST 180 HR**

### **High performance concrete superplasticizer**

#### **Description**

**MONOCAST 180 HR** is a high performance super plasticising 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 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 reduced conditions thorough atmospheric permeability.

#### **Compatibility**

**MONOCAST 180 HR** can be used with all types of Portland cement and cement replacement materials. **MONOCAST 180 HR** should not be used in conjunction with other admixtures unless STARKE technical department approval is obtained.

#### **Standards**

**MONOCAST 180 HR** complies with IS 9103:1999 and ASTM C494, Type A and G.

#### **Technical Properties @ 25°C:**

**Colour:** Pale yellowish to brownish liquid

**Freezing point:**  $\approx -1^{\circ}\text{C}$

**Specific gravity:**  $1.06 \pm 0.02$

**Air entrainment:** Typically less than 2% additional air is entrained above control mix at normal dosages

An automatic dispenser should be used to dispense the correct quantity of **MONOCAST 180 HR** to the concrete mix.

#### **Dosage**

The guidance dosage of **MONOCAST 180 HR** is 0.4 - 2.2 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 **MONOCAST 180 HR** to meet the performance requirements by using the materials and conditions in actual use.

#### **Effects of Over Dosage**

Over dosing of **MONOCAST 180 HR** 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

**MONOCAST 180 HR** can be washed with fresh cold water.

## Packaging

**MONOCAST 180 HR** is available in 20 kg pails, 225 kg drums and 1000 litre bulks supply.

## Storage

**MONOCAST 180 HR** 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, STARKE Technical Department should be contacted for advice.

## Cautions

### Health and Safety

**MONOCAST 180 HR** is not classified as hazardous material.

**MONOCAST 180 HR** should not come into contact with skin and eyes.

In case of contact with eyes wash immediately with plenty of water and seek medical advice promptly. For further information refer to the Material Safety Data Sheet.

## Fire

**MONOCAST 180 HR** is nonflammable.

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