



# BETONAC<sup>®</sup> 135

## HIGH RANGE WATER REDUCING SUPERPLASTICIZER FOR READY MIX AND PRECAST CONCRETE

### DESCRIPTION

BETONAC<sup>®</sup> 135 is a new generation of environmentally friendly superplasticizer additive developed for polycarboxylate based, Due to its extremely high-water reduction rate, it greatly increases the plasticity index of fresh concrete, thereby improving the pumping and workability of concrete.

### USES

- Structural and plain concrete (with or without pump)
- Precast and post tensioned concrete
- High performance concrete production
- Production of concrete that can easily set to densely reinforced concrete elements
- Self-compacting concrete production
- Piles applications.

### ADVANTAGES

- Increases fluidity at a high rate
- It reduces the amount of water used in the concrete mixture by more than 40%
- Increases early and final strength with high workability.
- Improves water impermeability
- Reduces cracking and segregation.
- Cement saving by reducing the quantity of cement in the concrete mix while at the same time maintaining the ultimate strength and durability of structures.

### STANDARDS

BETONAC<sup>®</sup> 135 complies with ASTM C 494, Type F.  
(ASTM C 494 requirements: Type F: high range water reducing)

### ADDITION

The correct quantity should be carefully measured. Half dosage of BETONAC<sup>®</sup> 135 should be added at the first mixing sequence with 75% of the mixing water then the second half of the dosage should be added at the final sequence with 25% of the mixing water.

### COMPATIBILITY

BETONAC<sup>®</sup> 135 can be used with all types of Portland cement, and it successfully used in mix designs utilizing silica fume, fly ash and GGBFS.

### DOSAGE

BETONAC<sup>®</sup> 135 is normally added at the rate from 675 ml to 1500 ml for each 100kg of cement, depending on



the retardation or workability required.

Longer setting times or higher temperatures may require higher addition rates. Conversely, the addition rate will be lower for shorter retardation. Trial mixes are recommended.

Overdosing results in more retardation and higher workability. Segregation might occur in some cases, please consult our specialized Lab. Engineer in this case.

**Important Note: If the concrete pouring process is delayed for any reason for a period longer than expected, An additional quantity of BETONAC® 135 should be added to the truck mixer in order to re-plasticize the mixture without effecting the compressive strength and to avoid the concrete initial setting into the mixer.**

#### TECHNICAL DATA

**Appearance:** Light Brown Liquid

**Density:** 1.05 ± 0.02 gm/ml

**Setting time:** Initial and final setting time depends on temperature, cement quantity and dosage used.

**Packaging:** BETONAC® 135 is packed in 20-liter Jerrycans or 1000-liter IBCs

**Storage & Shelf life:** BETONAC® 135 has a minimum shelf life of 1 year if stored in originally sealed packaging. It should not be exposed to direct sunbeam and protected against frost.

#### LIMITATIONS

- The Fresh concrete must be cured properly.
- BETONAC® 135 does not contain chloride or other steel corrosion promoting ingredients, it may therefore be used without any restrictions for reinforced and prestressed concrete construction.
- When BETONAC® 135 added separately to the freshly mixed concrete, further mixing should take place for at least one minute per cubic meter.
- When BETONAC® 135 is used to produce self-compacting concrete, special mix designs are required, please contact our technical support.
- Do not dispose of into water or soil, but according to local regulations.

#### LEGAL NOTES

Whilst information and/or specification contained herein is to the best of our knowledge true and accurate, and is based on many years of experience, we cannot accept any liability either directly or indirectly arising from the use of our products, whether or not in accordance with any advice, specification or recommendation given by us, as we have no direct or continuous control over how or where our products are applied.