



Technical Data Sheet

BETOCRETE®-G3000

Art.-No. 4 06660

High performance retarding, high-range water-reducing Superplasticizer concrete admixture suitable for use with Pozzolanic materials

Product Description:

BETOCRETE-G3000 is a retarding and high-range water-reducing concrete admixture with workability retention. BETOCRETE-G3000 is formulated to produce high quality concrete in hot climates with excellent flowing properties and to improve early & ultimate concrete strengths with set retarding effect enabling long transportation of concrete as well as to enable the use of pozzolanic materials such as silica fume, fly ash and blast furnace slag. It effectively reduces the concrete mixing water, so it improves all physical and mechanical properties of the concrete. Once incorporated in the mix BETOCRETE-G3000 is adsorbed on cement particles introducing a powerful deflocculating behavior which helps in reduction of the mixing water and allowing increasing both early and ultimate strengths. BETOCRETE-G3000 is based on a selected synthetic polymers & retarder and manufactured under controlled conditions assuring consistent quality.

Primary Uses:

BETOCRETE-G3000 is typically used in hot climates to produce:

- Precast concrete
- Ready mixed concrete
- Slabs, basements and foundations
- Walls, columns and piers
- Bridges and related structures
- Easy finish concrete slabs
- Mass concrete
- When pozzolanic materials such as silica fume, fly ash and blast furnace slag will be used

Advantages:

- Reduces effectively the mixing water.
- Improves workability, placing and pumping properties.
- Easier placing of concrete, compaction and reduces the time of vibration & cost.
- Can be used to save cement.
- Enable long transportation times.
- Improves physical and mechanical properties.
- Improves surface finishes.

- Eliminates the risk of segregation, shrinkage, bleeding and creep.
- Provides high dense concrete which improves the waterproofing properties protection of reinforcement steel against detrimental water-borne ion attack.
- Water-based, non-flammable, non-toxic, chloride-free and non-corrosive.
- Formulated to be suitable for the Middle East conditions.

Standards:

BETOCRETE-G3000 is formulated to comply with all requirements of both ASTM C-494 Type G and EN 934 Part: Tables 1, 11.1 and 11.2

Technical Properties:

Appearance:	Dark brown liquid
Specific Gravity:	1.20 ± 0.005 @ 20°C
Air entrainment:	0.5 % additional air will be entrained
Chloride content:	Nil
Setting times:	Initial and final setting time are extended, compared to the control and based on dosage, cement type, mix design, ambient temperature and RH.
Permeability:	Reduces concrete porosity, improves waterproofing and durability.
Water reduction:	25 % of mixing water can be reduced. Durability will be improved.
Compatibility:	Compatible with all types of Portland cement including Sulfate Resisting Cement (SRC). Compatible with other SCHOMBURG admixtures when dispensed separately.
Cohesion:	Cohesion of the matrix will be increased.
Mechanical Properties:	All mechanical properties (such as Compressive strength) will be improved.

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Dosage range:

Dosage is influenced by cement type, mix design, quality of used materials, ambient temperatures and other specific requirements, so site trials should be carried out for determination of suitable dosage. Dosage: typically 0.50 – 3.0% by the weight of total cementitious content.
(0.42 - 2.50 Litre for each 100 kg of cement)

Dispensing:

BETOCRETE-G3000 should be added with the last third of mixing water or immediately after complete mixing water addition. Do not add directly to the dry mix or cement. For proper administration an automatic dispenser shall be used.

Overdosing:

An overdose of BETOCRETE-G3000 may result - depending on dosage - in an increase of workability and extension of setting time. Overdosed concrete must be protected against direct sun light & water evaporation.

Curing:

Concrete should be cured in accordance to applicable European Norms or ACI recommendations. Alternatively use any of the SCHOMBURG curing agents range; REMICURE.

Cleaning:

Dispensers, hoses, equipment and tools can be easily cleaned with water. Spills must be contained and removed to industrial waste in accordance with local environmental laws. Please always consult local legislative authorities.

Packaging:

BETOCRETE-G3000 is supplied in 20 liters, 210 liters and 1000 liters upon request.

Storage & Shelf-life:

BETOCRETE-G3000 has a shelf-life of 12 months when original, unopened containers are stored in a dry and frost-free environment above 5° C.

Health and Safety:

- BETOCRETE-G3000 is water-based, non-flammable, non-toxic, and does not contain any harmful ingredients.
- Any contamination of skin can be removed with normal water.
- For disposal follow the local regulations.
- For any details for safety requirements, please refer to Product's MSDS.