

GLENIUM™ 140 SURETEC

High-performance super plasticiser with super slump retention for ready mix concrete

Description

GLENIUM 140 SURETEC is the superplasticiser based on second generation polycarboxylic ether polymers, developed using nano-technology. The product has been primarily developed for applications in high performance ready-mix concrete to facilitate high early strength gains with super slump retention.

GLENIUM 140 SURETEC is free of chloride & low alkali. It is compatible with all types of cements.

Uses

- GLENIUM 140 SURETEC is used for the production of high quality ready-mix concrete.
- GLENIUM 140 SURETEC may be used in combination with GLENIUM STREAM 2 for producing Rheodynamic Concrete, capable of self-compaction, even in the presence of dense reinforcement.
- Concrete containing pozzolans such as microsilica, GGBFS, PFA including high volume fly ash concrete

Advantages

- Marked increase in early & ultimate strengths
- Total control on the slump at the time of placing
- elimination of vibration and reduced labour cost in placing by implementing self compacting concrete
- improved adhesion to reinforcing and stressing steel
- better resistance to carbonation and other aggressive atmospheric conditions
- lower permeability - increased durability
- reduced shrinkage and creep

sureTEC – Super Retention Technology:

sureTEC stands for Super Retention Technology. It is a concrete admixture technology that brings benefits to all concrete producers in terms of slump retention and early strength development. It assures concrete workability at the time of placing. With application of sureTEC, concrete producers gain control over the workability of concrete at the time of placing – far beyond previously known levels. No matter if low workability or high performance self compacting concrete, the placing workability remain unchanged from batch to batch. As a result concrete producers are enabled to provide a specified workability of concrete consistently, even if hot weather or traffic conditions or other factors make it difficult to estimate the time window between batching and placing.

sureTEC also provides value to the end customers. The excellence in terms of quality control of concrete

at the same time assures consistency of workmanship, a decisive prerequisite for a long life-cycle of a concrete structure.

Typical Properties

Aspect	: Light brown liquid
Relative Density	: 1.10 ± 0.01 at 25°C
pH	: ≥ 6
Chloride ion content	: $< 0.2\%$

Standards

- ASTM C494 Types G
- EN 934-2 T11.1/11.2
- IS 9103

Specification Clause

The super-slump retaining hyperplasticiser shall be GLENIUM 140 SURETEC, high range water reducing, Superplasticiser based on polycarboxylic ether formulation. The product shall have specific gravity of 1.10 & solid contents not less than 36% by weight. The product shall comply with ASTM C494 Type G and shall be free of lignosulphonates, naphthalene salts and melamine formaldehyde when subjected to IR Spectra.

Direction for use

GLENIUM 140 SURETEC is a ready-to-use liquid which is dispensed into the concrete together with the mixing water. The plasticising effect and water reduction are higher if the admixture is added to the damp concrete after 50 to 70% of the mixing water has been added. The addition of GLENIUM 140 SURETEC to dry aggregate or cement is not recommended. Automatic dispensers are available.

Thorough mixing is essential and a minimum mixing cycle, after the addition of the GLENIUM 140 SURETEC, of 60 seconds for forced action mixers is recommended.

Dosage

Optimum dosage of GLENIUM 140 SURETEC should be determined with trial mixes. As a guide, a dosage range of 300 ml to 1200ml per 100kg of cementitious material is normally recommended. Because of variations in concrete materials, job site conditions, and/or applications, dosages outside of the recommended range may be required. In such cases, contact your local BASF representative.

For addition information on GLENIUM 140 SURETEC admixture or on its use in developing concrete mixes

with special performance characteristics, contact your local BASF representative.

Effects of over dosage

A severe over-dosage of GLENIUM 140 SURETEC can result in the following:

- Extension of initial and final set
- Bleed/segregation of mix, quick loss of workability
- Increased plastic shrinkage

A slight overdosing may not adversely affect the ultimate strength of the concrete and can achieve higher strengths than normal concrete, provided it is properly compacted and cured. Due allowance should be made for the effect of fluid concrete pressure on form work, and stripping times should be monitored.

In the event of over dosage, consult your local BASF representative immediately.

Compatibility

GLENIUM 140 SURETEC is compatible with most of the POZZOLITH series products including POZZOLITH 55R. Use GLENIUM STREAM 2 as viscosity modifying agent in self compacting concrete. It must not be used in conjunction with any other admixture unless prior approval is received from BASF Technical Services Department.

Corrosivity – Non Corrosive

GLENIUM 140 SURETEC admixture will neither initiate nor promote corrosion of reinforcing steel embedded in concrete, prestressed concrete or concrete placed on galvanized steel floor and roof systems. Neither calcium chloride nor any calcium chloride-based ingredients are used in the manufacture of GLENIUM 140 SURETEC admixture. In all concrete application, GLENIUM 140 SURETEC admixture will conform to the most stringent or minimum chloride ion limits currently suggested by construction industry standards and practices.

Workability

GLENIUM 140 SURETEC ensures that rheoplastic concrete remains workable in excess of 120 minutes at +25°C. Workability loss is dependent on temperature, and on the type of cement, the nature of aggregates, the method of transport and initial workability.

It is strongly recommended that concrete should be properly cured particularly in hot, windy and dry climates.

The use of MASTERKURE 111CF, evaporation reducer to prevent quick moisture loss from the surface of the flat works such as pavements in the dry, windy and hot climates is highly recommended.

Packaging

GLENIUM 140 SURETEC is supplied in 225 kg drums or in bulk on request.

Storage and Shelf life

GLENIUM 140 SURETEC must be stored where temperatures do not drop below +5°C. If product has frozen, thaw at +5°C or above and completely reconstitute using mild mechanical agitation. Do not use pressurized air for agitation. Store under cover, out of direct sunlight and protect from extremes of temperature.

Shelf life is 12 months when stored as above.

Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging. For specific storage advice consult your local BASF representative.

Safety precautions

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs (which can also be tainted with vapour until product fully cured or dried). Treat splashes to eyes and skin immediately. If accidentally ingested, seek immediate medical attention. Keep away from children and animals. Reseal containers after use. Do not reuse containers for storage of consumable item. For further information refer to the material safety data sheet. MSDS available on demand or on BASF construction chemicals web site.

Note

All BASF Technical Data Sheets are updated on regular basis; it is the user's responsibility, to obtain the most recent issue.

Field services where provided, does not constitute supervisory responsibility, for additional information contact your local BASF representative.

Disclaimer

Whilst any information contained herein is true, accurate and represents our best knowledge and experience, no warranty is given or implied with any recommendations made by us, our representatives or distributors, as the conditions of use and the competence of any labour involved in the application are beyond our control.

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