



The Chemical Company

GLENIUM 270B

New generation polycarboxylic ether hyperplasticiser for high performance concrete

DESCRIPTION

GLENIUM 270B is a super-plasticizer of a new generation based on modified polycarboxylic ether polymers. It is designed for use in high quality ready mixed concrete, when superior performance is required, even under difficult conditions.

GLENIUM 270B combines exceptional long slump life with normal setting times. Its application is especially beneficial when used in hot climate or with demanding mix designs.

GLENIUM 270B does not contain added chloride and conforms to chloride ion limits required by concrete industry standards.

Chemistry

GLENIUM 270B is universally applicable and provides improved rheological properties for a wide-range of concrete mixes. Performance of **GLENIUM 270B** in concrete is superior to conventional superplasticisers due to its unique polycarboxylate ether design.

Conventional superplasticisers, such as those based on sulphonated melamine and naphthalene formaldehyde condensates, at the same time of mixing, become absorbed onto the surface of the cement particles. This absorption takes place at a very early stage in the hydration process. The sulphonic groups of the polymer chains increase the negative charge on the surface of the cement particle and dispersion of the cement occurs by electrostatic repulsion.

Contrary to conventional superplasticisers the dispersion mechanism of **GLENIUM 270B** is not only based on electrostatic repulsion but in addition also on steric hindrances. **GLENIUM 270B** achieves outstanding water reduction and workability retention without retardation of setting time.

RECOMMENDED FOR

- Ready mixed concrete with the highest requirements on durability and quality
- Construction sites which need reliable workability at elevated temperatures
- Demanding mix designs (e.g. fine sand)
- Pumped concrete
- Concrete mixes at various w/c ratios
- Suitable for a broad range and different types of cement.
- Precast concrete

FEATURES AND BENEFITS

- **Exceptional slump retention without retardation – no retempering. Ease of delivery to point of placement. High early strength.**
- **High water reduction – low permeability, high durability concrete**
- **High flowability – extremely strong plasticizing properties. Less vibration required. Ease of placing and compaction. No segregation.**
- **Low shrinkage and creep – improves dimensional stability. Reduces risk of cracks.**
- **Excellent cohesiveness – ease of pumping, no bleeding**
- **Superior finishing – fair-faced concrete**

APPLICATION

The excellent dispersion properties of **GLENIUM 270B** make it the ideal admixture for precast and premixed concrete where low water cement ratios are required. This property allows the production of very high early and high ultimate strength concrete with minimal voids and therefore optimum density.

The extended slump life of **GLENIUM 270B** concrete is ideally suited to premix concrete. It allows plant dosing to occur with little or no slump loss between dosing and placement (travel time). As no extended retardation accompanies this extended work life, normal finishing times are experienced on site.

GLENIUM 270B is a ready-to-use admixture to be added to the concrete mix as a separate component.

Optimal concrete plasticising effect (and thus maximum water reduction) and slump retention is obtained if **GLENIUM 270B** is poured into the concrete mix right after the addition of the first 50-70% of the mixing water. Thorough mixing is required for complete dispersion throughout the mix.

Avoid adding the admixture to the dry aggregate or sand.

GLENIUM 270B is not compatible with admixtures containing melamine or naphthalene sulphonates. Contact your local BASF Technical Sales Representative to obtain the recommended compatible admixtures.

DOSAGE

Dosage depends upon the mix design, the ambient conditions and the degree of water reduction and workability required. Typical dosage used is 0.4 – 1.6 L per 100 kg of cementitious materials.

Site trials are recommended to determine the actual dosage required.

Other dosages may be recommended in special cases according to specific job conditions (consult your local BASF Technical Sales Representative for advice).



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PACKAGING

GLENIUM 270B is available in bulk, 1000 litre pallecons, 205 litre drums and 20 litre cubes.

SHELF LIFE

GLENIUM 270B can be stored for 12 months if stored at temperatures above 5°C, in tightly sealed original drums. If found to be frozen, thaw it and reconstitute by stirring.

PRECAUTIONS

For the full health and safety hazard information and how to safely handle and use this product, please make sure that you obtain a copy of the BASF **Material Safety Data Sheet (MSDS)** from our office or our website.

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STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this **BASF** publication are based on the present state of our best scientific and practical knowledge. As the information herein is of a general nature, no assumption can be made as to a product's suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by law. The user is responsible for checking the suitability of products for their intended use.

NOTE

Field service where provided does not constitute supervisory responsibility. Suggestions made by **BASF** either orally or in writing may be followed, modified or rejected by the owner, engineer or contractor since they, and not **BASF**, are responsible for carrying out procedures appropriate to a specific application.

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