



The Chemical Company

GLENIUM[®] C320

New generation superplasticising admixture

DESCRIPTION

GLENIUM C320 is a new generation superplasticiser for concrete. It contains polycarboxylate ether polymers and is specially formulated for ready-mix concrete where slump retention, high strength and durability are required in hot climates. The excellent dispersion effect makes **GLENIUM C320** the ideal admixture for the ready-mix concrete industry. The ability to work with low water /cement ratios and still obtain extended slump retention allows for the manufacture of high quality concrete.

GLENIUM C320 is free of chloride and complies with ASTM C494 Types A and F, and is also compatible with all cements meeting recognised international standards.

Chemistry and Mechanism of Action

Conventional superplasticisers, such as those based on sulphonated melamine and naphthalene formaldehyde condensates, at the 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. **GLENIUM C320** is differentiated from conventional superplasticisers in that it is based on a unique polycarboxylate ether polymer with long lateral chains. This greatly improves cement dispersion. At the start of the mixing process the same electrostatic dispersion occurs as described previously, but the presence of the lateral chains, linked to the polymer backbone, generates a steric hindrance which stabilises the cement particles capacity to separate and disperse.

This mechanism provides flowable concrete with greatly reduced water demand.

FIELDS OF APPLICATION

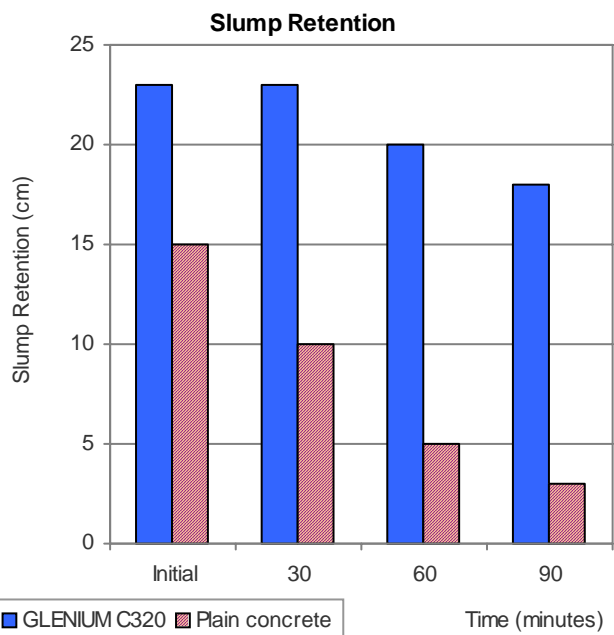
- concrete with less water content than with conventional admixtures
- faster mixing logistics during large jobs
- high flowability concrete
- highly durable concrete
- ready-mixed concrete
- mass concrete
- long distance transport
- pumped concrete
- hot weather concreting

FEATURES AND BENEFITS

High water reduction	High early and ultimate strengths. Low permeability, high durability concrete.
High flowability	Ease of placing and compaction. No segregation.
Superior slump retention	No retempering. Ease of delivery to point of placement.
Low shrinkage and creep	Improve dimensional stability. Reduced risk of cracks.
Good cohesion	Ease of pumping. No bleeding.
Good workability	Excellent surface appearance. Self-compacting concrete.
Minimal bleed water	Excellent concrete quality.
High elastic modulus	Superior load bearing capacity.

TYPICAL PERFORMANCE DATA

GLENIUM C320 improves early and final strength, slump retention and workability of concrete, more effectively than traditional superplasticisers.



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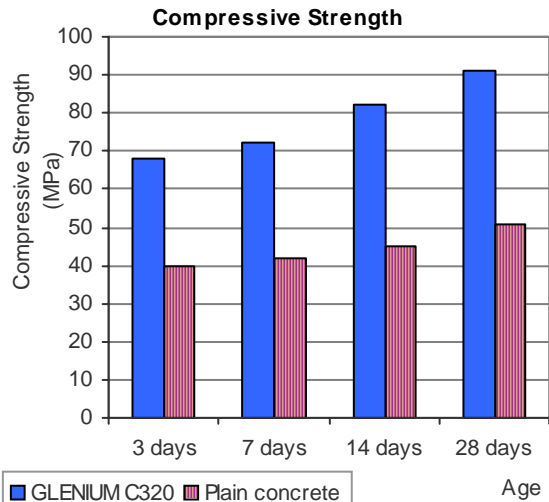
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GLENIUM[®] C320



APPLICATION

Dispensing

GLENIUM C320 is a ready-to-use admixture to be added to the concrete mix as a separate component. Optimal mixing water reduction is obtained if **GLENIUM C320** is poured into the concrete mix right after the addition of the first 50 -70% of the mixing water. Avoid adding the admixture to the dry aggregates. A separate dispenser and feed line must be used.

DOSAGE

Dosage of **GLENIUM C320** depends on the mix design, ambient conditions and degree of water reduction and workability required. **GLENIUM C320** is dispensed at a rate of 800ml to 2,000ml per 100 kg of cementitious material. Other dosages may also be used depending on the specific working conditions. Trial mixes should be made with job materials to determine the optimum dosage required for a specified job requirement.

SHELF LIFE

GLENIUM C320 can be stored for 6 months if stored at a temperature above 0°C and in tightly sealed original containers. If frozen, thaw it and completely reconstitute by mild agitation. Do not use compressed air.

PACKAGING

GLENIUM C320 is available in 205L drums or by bulk delivery.

PRECAUTIONS

Health: **GLENIUM C320** does not contain any hazardous substances requiring labelling.

It is safe for use with standard precautions followed in the construction industry, such as use of hand gloves, safety goggles, etc.

For detailed Health, Safety and Environmental recommendations, please consult and follow all instructions in the product Material Safety Data Sheet.

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STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this **BASF Construction Chemicals** 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

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