

GLENIUM® SP8S

New generation superplasticising admixture

DESCRIPTION

GLENIUM SP8S is a new generation superplasticiser for concrete. It contains polycarboxylate ether polymers and is specially formulated to give exceptionally high water reduction and significantly reduced slump loss.

GLENIUM SP8S is free of chloride and has been formulated to comply with the requirements of ASTM C 494 for Type A and F admixtures. It is 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 SP8S** 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, generate a steric hindrance that 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
- high strength concrete
- ready-mixed concrete
- self compacting concrete
- mass concrete
- long distance transportation
- pumped concrete

Compatibility

Do not use other water-reducers and/or superplasticisers in the mix with **GLENIUM SP8S**.

GLENIUM SP8S is compatible with selected BASF Construction Chemicals air-entraining agents. Consult your local BASF Construction Chemicals representatives for advice.

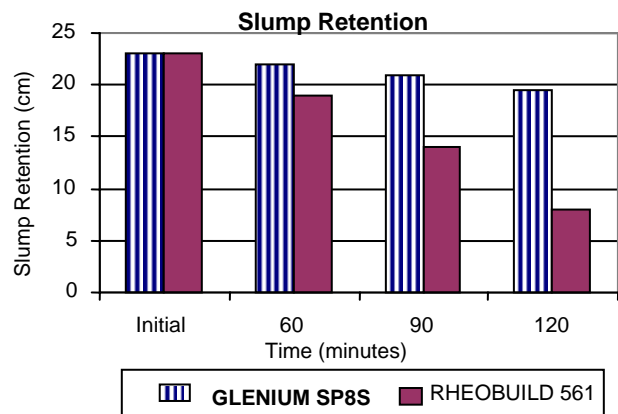
FEATURES AND BENEFITS

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

TYPICAL PERFORMANCE DATA

GLENIUM SP8S improves early and final strengths. It also improves slump retention and workability of the concrete more than traditional superplasticisers.

Example of test results achieved with **GLENIUM SP8S**



BASF Construction Chemicals offices in ASEAN

Singapore Tel :+65-6861-6766 Fax :+65-6861-3186	Malaysia Tel :+60-3-5628-3388 Fax :+60-3-7847-6781	Indonesia Tel :+62-21-893-4339 Fax :+62-21-893-4342
--	---	--

Thailand Tel :+66-2204-9427 Fax :+66-2664-9267

Vietnam Tel :+84-650-743-100 Fax :+84-650-743-200
--

Philippines Tel : +63-2-889-4321 Fax : +63-2-889-4361
--



The Chemical Company

GLENIUM[®] SP8S

Mix Design

Cement	405kg/m ³
PFA	105kg/m ³
Coarse aggregate 20mm	680kg/m ³
Coarse aggregate 10mm	355kg/m ³
Sand	615kg/m ³
Water	177kg/m ³
Water/Cement ratio	0.34

APPLICATION

Dispensing

GLENIUM SP8S can be added into the mixing water, or can be added to the wet concrete after the mixing water has been added. The addition of **GLENIUM SP8S** to a dry concrete mix is not recommended. A separate dispenser and feed line must be used.

DOSAGE

Dosage of **GLENIUM SP8S** depends on the mix design, ambient conditions and degree of water reduction and workability required. Typical dosage is 1000 ml/100kg of cementitious material. Other dosages with a range of 800 to 2000ml/100kg of cementitious material may be recommended in special cases according to specific job site conditions. Trial concrete mixes must be carried out to determine the appropriate dosage.

PACKAGING

GLENIUM SP8S is available in 205L drums or bulk delivery.

SHELF LIFE

GLENIUM SP8S can be stored for 6 months if kept as recommended in the unopened original packaging at temperatures above 0°C. If frozen, thaw it and completely reconstitute by mild agitation. Do not use compressed air. Other admixtures, rain water, or any contamination must not penetrate into a container of **GLENIUM SP8S** during storage.

PRECAUTIONS

Health : **GLENIUM SP8S** 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.

2-1-2-0108

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

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