

MasterGlenium SKY 8588 (Formerly known as Glenium SP8S)

New generation superplasticising admixture

DESCRIPTION

MasterGlenium SKY 8588 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.

MasterGlenium SKY 8588 is free of chloride and has been formulated to comply with the requirements of ASTM C 494 for Type A and Type F admixtures. **MasterGlenium SKY 8588** fully meets the requirements of BS5075 : Part 3 : 1985 for high range water reducing admixtures and JIS A6204 "Chemical Admixtures for Concrete". 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. **MasterGlenium SKY 8588** 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.

RECOMMENDED FOR

- 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

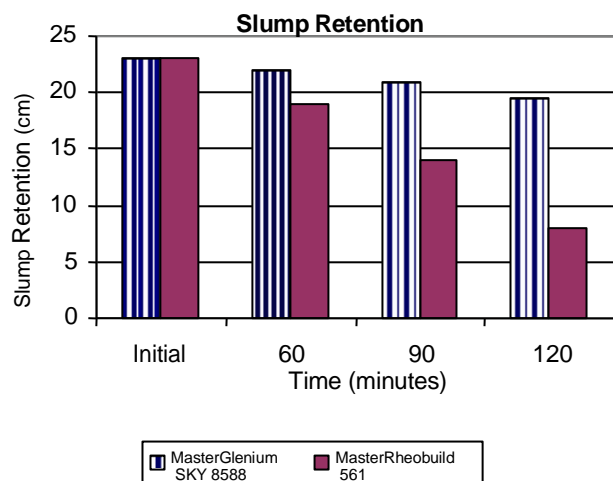
FEATURES AND BENEFITS

- 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 retempering. 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

MasterGlenium SKY 8588 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 **MasterGlenium SKY 8588**



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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

DOSAGE

Dosage of **MasterGlenium SKY 8588** 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 500 to 3000ml/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.

PROPERTIES

Supply form	: Liquid
Colour	: Yellow
Specific Gravity	: 1.04 - 1.08
Alkali content	: 0.7% (typical ion content by analysis)
Chloride content	: <0.01% (typical ion content by analysis)

Compatibility

Do not use **MasterGlenium SKY 8588** admixture with naphthalene-based high-range water-reducing admixtures. Erratic behaviours in slump and pumpability may be experienced. **MasterGlenium SKY 8588** is compatible with selected Master Builders Solutions air-entraining agents. Consult your local Master Builders Solutions representatives for advice.

APPLICATION

Dispensing

MasterGlenium SKY 8588 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 **MasterGlenium SKY 8588** to a dry concrete mix is not recommended. A separate dispenser and feed line must be used.

PACKAGING

MasterGlenium SKY 8588 is available in 205L drums or bulk delivery.

SHELF LIFE

MasterGlenium SKY 8588 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 **MasterGlenium SKY 8588** during storage.

PRECAUTIONS

Health: **MasterGlenium SKY 8588** 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.

MasterGlenium SKY8588 v1. 0813

STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this Master Builders Solutions publication is 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 commonwealth or State legislation. The owner, his representative or the contractor is responsible for checking the suitability of products for their intended use.

NOTE

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