

MasterGlenium[®] SKY 8703

New generation superplasticising admixture for extended slump retention

DESCRIPTION

MasterGlenium SKY 8703 is a new generation superplasticiser with super retention technology. 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 **MasterGlenium SKY 8703** 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.

MasterGlenium SKY 8703 is free of chloride and complies with BS EN934: Part 3: 1985, 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. **MasterGlenium SKY 8703** 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.

RECOMMENDED USES

- 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.

APPLICATION

Dispensing

MasterGlenium SKY 8703 is a ready-to-use admixture to be added to the concrete mix as a separate component. Optimal mixing water reduction is obtained if **MasterGlenium SKY 8703** 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 **MasterGlenium SKY 8703** depends on the mix design, ambient conditions and degree of water reduction and workability required. **MasterGlenium SKY 8703** 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.

MasterGlenium[®] SKY 8703

MasterGlenium SKY 8703 can be used in combination with other MasterGlenium admixtures to achieve longer slump retention or other specific working requirements. The dosage employed in such cases may be different from the above recommendation. Trial mixes should be made with job materials to determine the optimum dosage required for a specified job requirement.

MasterGlenium SKY 8703 is not compatible with MasterRheobuild admixtures.

PACKAGING

MasterGlenium SKY 8703 is available in bulk and 205L drums.

SHELF LIFE

MasterGlenium SKY 8703 can be stored for 12 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.

PRECAUTIONS

Health: MasterGlenium SKY 8703 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 on the product Material Safety Data Sheet.

STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this Master Builders Solutions 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 Master Builders Solutions either orally or in writing may be followed, modified, or rejected by the owner, engineer or contractor since they, and not Master Builders Solutions, are responsible for carrying out procedures appropriate to a specific application.

MB Solutions Singapore Pte Ltd

1 Harbourfront Avenue #07-07/08
Keppel Bay Tower, Singapore 098632
Tel : +65 6232 4888