

MasterGlenium[®] SKY 8781

New generation superplasticizing admixture for improved rheology and slump retention

DESCRIPTION

MasterGlenium SKY 8781 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 8781** 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 8781 is free of chloride and complies with BS EN 934-2, 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 8781** 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.
- **Better rheology** – Ease of mixing, placing, compaction and finishing. High flowability.

- **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 8781 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 8781** 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 fee line must be used.

DOSAGE

Dosage of **MasterGlenium SKY 8781** depends on the mix design, ambient conditions and degree of water reduction and workability required. **MasterGlenium SKY 8781** is dispensed at a rate of 800ml to 2,000ml per 100kg of cementitious material. Other dosages may also be used depending on the specific working conditions. **MasterGlenium SKY 8781** can be used in conjunction with other products from the MasterPozzolith and MasterGlenium series resulting in reduced dosages through synergistic effects. Trial mixes should be made with job materials to determine the optimum dosage required for a specified job requirement.

PACKAGING

MasterGlenium SKY 8781 is available in bluk and 1000L IBC.

SHELF LIFE

MasterGlenium SKY 8781 can be stored for 12 months if stored at a temperature above 0°C and in tightly sealed original containers. If frozen, thaw if and completely reconstitute by mild agitation. Do not use compressed air.

PRECAUTIONS

Health : MasterGlenium SKY 8781 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 Healty, Safety and Environmental Recommendations, please consult and follow all instructions on the product Material Safety Date Sheet.

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STATEMENT OF RESPONSIBILITY

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