

MasterGlenium[®] SKY 8738

New generation superplasticising admixture with superior slump retention properties

DESCRIPTION

MasterGlenium SKY 8738 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 8738** the ideal admixture for the ready-mix concrete industry. The ability to work at different water cement ratio and still obtain good slump retention allows for the manufacture of high quality concrete.

MasterGlenium SKY 8738 complies with BS EN 934-2, and is also compatible with all cements meeting recognized 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 8738** 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 stabilizes the cement particles capacity to separate and disperse.

This mechanism provides flowable concrete with greatly reduced water demand.

MasterGlenium SKY 8738 is not compatible with the **MasterRheobuild** series superplasticisers.

RECOMMENDED USES

- concrete with less water content than with conventional admixtures
- high workability concrete with improved

- rheological properties
- highly durable concrete
- ready-mixed concrete
- mass concrete
- long distance transport
- pumped concrete
- hot weather concreting

FEATURES AND BENEFITS

MasterGlenium SKY 8738 offers the following benefits for the concrete industry:

- **High water reduction** – High early and ultimate strength. 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 8738 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 8738** is dispensed 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 8738** depends on the mix design, ambient conditions and degree of water reduction and workability required. **MasterGlenium SKY 8738** is dispensed at a rate of 600ml to 1000ml per 100kg of cementitious

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material. Other dosages may also be used depending on the specific working conditions. **MasterGlenium SKY 8738** 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 site materials to determine the optimum dosage required for a specific job requirement.

PACKAGING

MasterGlenium SKY 8738 is available in bulk and 1000L IBC.

SHELF LIFE

MasterGlenium SKY 8738 can be stored for 12 months if stored at a temperature above 5°C and in tightly sealed original containers. If found to be frozen, thaw it and reconstitute by stirring. Do not use compressed air.

PRECAUTIONS

Health: **MasterGlenium SKY 8738** 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.

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STATEMENT OF RESPONSIBILITY

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