

MasterGlenium[®] SKY 8320

New generation high range water reducing admixture

DESCRIPTION

MasterGlenium SKY 8320 is a new generation superplasticiser for concrete. 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 8320** 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 8320 is free of chloride and complies with ASTM C494 Types A and F 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 8320** 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.

FIELDS OF APPLICATION

- 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

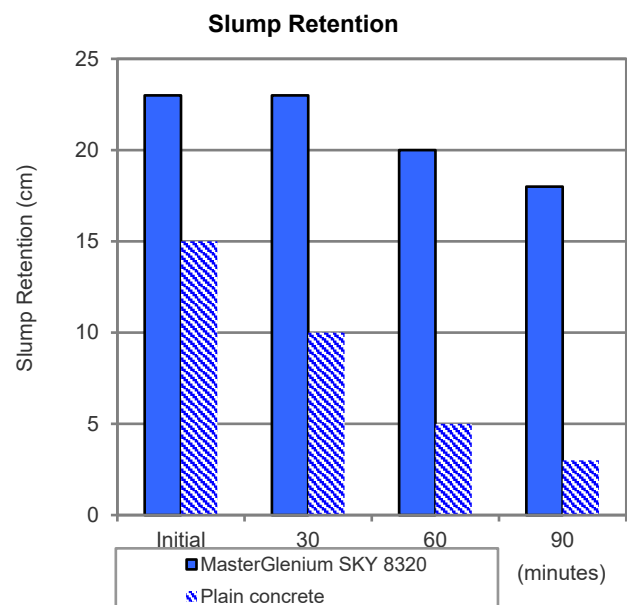
- long distance transport
- pumped concrete
- hot weather concreting

FEATURES AND BENEFITS

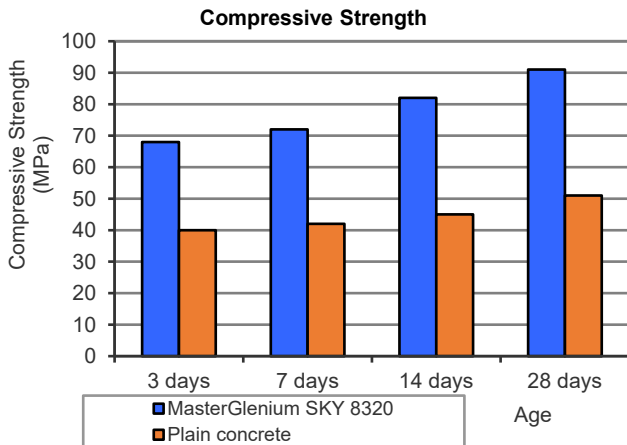
- **High water reduction** - High early and ultimate strengths. Low permeability, high durability concrete
- **High flowability** - Ease of placing and compaction. No segregation.
- **Superior slump retention** - No retempering. Ease of delivery to point of placement.
- **Low shrinkage and creep** - 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.

TYPICAL PERFORMANCE DATA

MasterGlenium SKY 8320 improves early and final strength, slump retention and workability of concrete, more effectively than traditional superplasticisers.



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DOSAGE

Dosage of **MasterGlenium SKY 8320** depends on the mix design, ambient conditions and degree of water reduction and workability required. **MasterGlenium SKY 8320** 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.

PACKAGING

MasterGlenium SKY 8320 is available in bulk and 205L drums.

SHELF LIFE

MasterGlenium SKY 8320 can be stored for 12 months if stored at temperature above 0oC in tightly sealed original drums. If found to be frozen, thaw it and reconstitute by stirring.

PRECAUTIONS

Health: **MasterGlenium SKY 8320** 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

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

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