

MasterGlenium[®] SKY 8333

Modified polycarboxylate ether superplasticising admixture

DESCRIPTION

MasterGlenium SKY 8333 is a new generation superplasticiser for concrete containing polycarboxylate ether polymers, designed for optimal use in regular grades of concrete in ready-mix industry. The ability to work with low water cement ratio and still obtain slump retention allows for the manufacture of high quality concrete.

MasterGlenium SKY 8333 is free of chloride and has been formulated to comply with the requirements of ASTM C494 for Types A and F admixtures. **MasterGlenium SKY 8333** is compatible with all cements meeting recognised international standards.

Chemistry and Mechanism of Action

MasterGlenium SKY 8333 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. 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.

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, which stabilises the cement particles capacity to separate and disperse. This mechanism provides flowable concrete with greatly reduced water demand.

RECOMMENDED USES

MasterGlenium SKY 8333 is suitable to work with normal to low water/cement ratios. The high water reduction, slump retention and non-retardation make **MasterGlenium SKY 8333** the ideal admixture for normal grade of concrete in ready-mix application. It can also be used in combination with other Master Builders Solutions admixtures for specific working requirements. Consult your local Master Builders Solutions sales representative for assistance.

FEATURES AND BENEFITS

- **High water reduction** - High early and ultimate strengths. May be possible to eliminate steam curing. Low permeability, high durability concrete.
- **High flowability** - Ease of placing and compaction. Less vibration required even in case of steel reinforcement congestion. Less workmanship required.
- **Superior workability** - Improves concrete finish. Excellent surface appearance and texture.
- **Reduced slump loss** - No retempering. Ease of delivery to point of placement.
- **Low shrinkage and creep** - Improved dimensional stability. Reduced risk of cracks
- **Superior cohesion** - Ease of pumping
- **High elastic modulus** - Superior load bearing capacity.
- **Minimal bleed water** - Improved surface quality.

TYPICAL PERFORMANCE DATA

MasterGlenium SKY 8333 improves early and final strength considerably. **MasterGlenium SKY 8333** also improves slump retention and workability of concrete more than traditional superplasticisers.

APPLICATION

Dispensing

MasterGlenium SKY 8333 is a ready-to-use that is added to the concrete at the time of batching.

The maximum effect is achieved when **Master Glenium SKY 8333** added after the additional of 50 to 70% of water. **MasterGlenium SKY 8333** must not be added to the dry materials. A separate dispenser and feed line must be used.

DOSAGE

The normal dosage of **MasterGlenium SKY 8333** is between 500 and 1500 ml per 100 kg of cementitious materials. 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.

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PACKAGING

MasterGlenium SKY 8333 is available in bulk and 205L drums.

SHELF LIFE

MasterGlenium SKY 8333 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 8333 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 MBCC Group 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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