

# MasterGlenium<sup>®</sup> SKY 8770

New generation polycarboxylic ether hyperplasticiser for high performance concrete

## PRODUCT DESCRIPTION

**MasterGlenium SKY 8770** is a super plasticiser of a new generation based on modified poly carboxylic ether polymers with super retention technology. The excellent dispersion effect makes **MasterGlenium SKY 8770** the ideal admixture for ready mix concrete industry, when superior performance is required, even under difficult conditions. **MasterGlenium SKY 8770** combines exceptional long slump life with normal setting times. Its application is especially beneficial when used in hot climate or with demanding mix designs. **MasterGlenium SKY 8770** does not contain added chloride and conforms to chloride ion limits required by concrete industry standards.

## CHEMISTRY

**MasterGlenium SKY 8770** is universally applicable and provides improved rheological properties for a wide-range of concrete mixes. Performance of **MasterGlenium SKY 8770** in concrete is superior to conventional superplasticisers due to its unique polycarboxylate ether design. Conventional superplasticisers, such as those based on sulphonated melamine and naphthalene formaldehyde condensates, at the same 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. Contrary to conventional superplasticisers the dispersion mechanism of **MasterGlenium SKY 8770** is not only based on electrostatic repulsion but in addition also on steric hindrances. **MasterGlenium SKY 8770** achieves outstanding water reduction and workability retention without retardation of setting time.

## FIELDS OF APPLICATION

- Ready mixed concrete with the highest requirements on durability and quality
- Construction sites which need reliable work ability at elevated temperatures
- Demanding mix designs (e.g. fine sand)
- Pumped concrete
- Concrete mixes at various w/c ratios
- Suitable for a broad range and different types of cement.
- Precast concrete

## FEATURES AND BENEFITS

<b>High water reduction</b>	Low permeability, high durability concrete
<b>High flowability</b>	Extremely strong plasticizing properties, Less vibration required. Ease of placing and compaction. No segregation.
<b>Superior slump retention</b>	Exceptional slump retention without retardation – non retempering. Ease of delivery to point of placement
<b>Low shrinkage and creep</b>	Improve dimensional stability. Reduced risk of cracks.
<b>Excellent cohesiveness</b>	Ease of pumping. No bleeding.
<b>Superior finishing</b>	Fair-face concrete.

## APPLICATION

The excellent dispersion properties of **MasterGlenium SKY 8770** make it the ideal admixture for precast and premixed concrete where low water cement ratios are required. This property allows the production of very high early and high ultimate strength concrete with minimal voids and therefore optimum density. The extended slump life of **MasterGlenium SKY 8770** concrete ideally suited to premix concrete. It allows plant dosing to occur with little or no slump loss between dosing and placement (travel time). As no extended retardation accompanies this extended work life normal finishing times are experienced on site.

**MasterGlenium SKY 8770** is a ready-to-use admixture to be added to the concrete mix as a separate component. Optimal concrete plasticizing effect (and thus maximum water reduction) and slump retention is obtained if **MasterGlenium SKY 8770** is poured into the concrete mix right after the addition of the first 50-70% of

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the mixing water. Thorough mixing is required for complete dispersion throughout the mix. Avoid adding the admixture to the dry aggregate or sand.

**MasterGlenium SKY 8770** is not compatible with admixtures containing melamine or naphthalene sulphonates. Contact your local Master Builders Solutions Technical Representative to obtain the recommended compatible admixtures.

## DOSAGE

Dosage depends upon the mix design, the ambient conditions and the degree of water reduction and workability required. Typical dosage used is 0.4 – 1.6L per 100kg of cementitious materials. Site trials are recommended to determine the actual dosage required. Other dosages may be recommended in special cases according to specific job conditions (consult your local Master Builders Solutions Technical Representative).

## SHELF LIFE

**MasterGlenium SKY 8770** can be stored for 12 months if stored at a temperature above 5°C, in tightly sealed original drums. If found to be frozen, thaw it and reconstitute by stirring.

## PACKAGING

**MasterGlenium SKY 8770** is available in 205L drums or 1000L IBC Tank.

## PRECAUTIONS

Health: **MasterGlenium SKY 8770** 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 in 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

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.

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