

## PRODUCT DATA SHEET

# Sika® ViscoCrete® SKY 8770

(formerly MasterGlenium® SKY 8770)

NEW GENERATION POLYCARBOXYLIC ETHER SUPERPLASTICIZER FOR HIGH PERFORMANCE CONCRETE

### DESCRIPTION

Sika® ViscoCrete® SKY 8770 is a superplasticizer of a new generation based on modified polycarboxylic ether polymers with super retention technology. The excellent dispersion effect makes Sika® ViscoCrete® SKY 8770 the ideal admixture for ready mix concrete industry, when superior performance is required, even under difficult conditions.

Sika® ViscoCrete® 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. Sika® ViscoCrete® SKY 8770 does not contain added chloride and conforms to chloride ion limits required by concrete industry standards.

Sika® ViscoCrete® SKY 8770 is universally applicable and provides improved rheological properties for a widerange of concrete mixes. Performance of Sika® ViscoCrete® SKY 8770 in concrete is superior to conventional superplasticizer due to its unique polycarboxylate ether design. Conventional superplasticizers, 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 superplasticizers the dispersion mechanism of Sika® ViscoCrete® SKY 8770 is not only based on electrostatic repulsion but in addition also on steric hindrances. Sika® ViscoCrete® SKY 8770 achieves outstanding water reduction and workability retention without retardation of setting time.

### USES

- Sprayed concrete
- Ready mixed concrete with the highest requirements on durability and quality
- Construction sites which need reliable workability 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

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

#### Product Data Sheet

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## PRODUCT INFORMATION

<b>Composition</b>	Aqueous solution of modified polycarboxylate copolymers
<b>Packaging</b>	205 L drums (non-returnable) 1 000 L IBC (non-returnable) 1 000 L bulk delivery
<b>Shelf life</b>	12 months from date of production if stored properly in undamaged, unopened, original sealed packaging.
<b>Storage conditions</b>	Store in dry conditions at temperatures between +5 °C and +35 °C. Protect from direct sunlight and frost.
<b>Appearance</b>	Liquid

## TECHNICAL INFORMATION

<b>Concreting guidance</b>	The standard rules of good concreting practice, concerning production and placing, are to be followed. Laboratory trials before concreting on site are strongly recommended when using a new mix design or producing new concrete components. Fresh concrete must be cured properly and as early as possible.
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## APPLICATION INFORMATION

<b>Recommended dosage</b>	0.4 - 1.6 L per 100 Kg of cementitious. 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.
<b>Compatibility</b>	Sika® ViscoCrete® SKY 8770 may be combined with the following products: <ul style="list-style-type: none"><li>▪ SikaTard®</li><li>▪ Sika® Sigunit®</li><li>▪ SikaFume®</li><li>▪ SikaFiber®</li></ul> Do not use viscocrete / viscoflow series combined with sikament series. To produce flowing and / or self-compacting concrete, special concrete mix design is required. Pre-trials are recommended and mandatory if combinations with the above products are required. Please consult to our Technical Service Department.

## BASIS OF PRODUCT DATA

All technical data stated in this Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

## ECOLOGY, HEALTH AND SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

## APPLICATION INSTRUCTIONS

### APPLICATION

Sika® ViscoCrete® 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 Sika® ViscoCrete® SKY 8770 is poured into the concrete mix right after the addition of the first 50-70% of the mixing water. Thorough mixing is required for complete dispersion throughout the mix. Avoid adding the admixture to the dry aggregate or sand.

## LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for exact product data and uses.

## LEGAL NOTES

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

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