

PRODUCT DATA SHEET

Sika® ViscoCrete® SKY 8703

(formerly MasterGlenium® SKY 8703)

New generation superplasticising admixture for extended slump retention

DESCRIPTION

Sika® ViscoCrete® SKY 8703 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 Sika® ViscoCrete® SKY 8703 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.

Sika® ViscoCrete® SKY 8703 is free of chloride and complies with BS EN934-2 : 2009, 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. Sika® ViscoCrete® SKY 8703 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.

USES

- 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

CHARACTERISTICS / ADVANTAGES

- 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.

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PRODUCT INFORMATION

Packaging	<ul style="list-style-type: none">▪ 1000 L IBC tank▪ Bulk delivery
Shelf Life	12 months from date of production
Storage Conditions	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.

APPLICATION INFORMATION

Recommended Dosage	Dosage of Sika® ViscoCrete® SKY 8703 depends on the mix design, ambient conditions and degree of water reduction and workability required. Sika® ViscoCrete® SKY 8703 is dispensed at a rate of 800 ml to 2000 ml 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.
Dispensing	Sika® ViscoCrete® SKY 8703 is a ready-to-use admixture to be added to the concrete mix as a separate component. Optimal mixing water reduction is obtained if Sika® ViscoCrete® SKY 8703 is poured 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.
Compatibility	Sika® ViscoCrete® SKY 8703 can be used in combination with some other Sika admixtures to achieve longer slump retention or other specific working requirements. The dosage employed in such cases may be different from the above recommendation. Trial mixes should be made with job materials to determine the optimum dosage required for a specified job requirement.

BASIS OF PRODUCT DATA

All technical data stated in this Product 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.

LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the performance of this product may vary from country to country. Please consult the local Product Data Sheet for the exact description of the application

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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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