BUILDING TRUST

PRODUCT DATA SHEET

Sika® ViscoCrete® ACE 8520

(formerly MasterGlenium® ACE 8520)

ENGINEERED HIGH-RANGE SUPERPLASTICIZER FOR HIGH EARLY STRENGTH CONCRETE

DESCRIPTION

Sika® ViscoCrete® ACE 8520 is an innovative polycarboxylic ether (PCE) based superplasticizer. A specifically formulation active ingredient, designed with Sika® ViscoCrete® ACE 8520 offers excellent dispersion of cement at low water binder ratio and exceptional early strength development. The rapid development of early strength of Sika® ViscoCrete® ACE 8520 allows for zero or minimum application of heating curing processes. The combination of early strength, slump retention and late strength development allows meet demanding Sika® ViscoCrete® ACE 8520 to concreting requirements, often exceeding the performance of conventional superplasticizers.
Sika® ViscoCrete® ACE 8520 is differentiated from conventional superplasticizers in that it is based on a unique polycarboxylate ether polymer with long lateral chains. This greatly improves cement dispersion, conventional superplasticizers 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 stabilizes the cement particles capacity to separate and disperse. This mechanism provides flowable concrete with greatly reduced water demand.

USES

- High early strength concrete
- High performance concrete
- Pre-tensioned concrete
- Post-tensioned concrete
- In-situ casting of structural elements

FEATURES

- High water reduction capacity over conventional superplasticizers.
- Low permeability and high durability concrete.
- Flowability for ease of placement and compaction.
- Optimize curing cycle by shortening curing time or decreasing curing temperature.
- Eliminate energy required for placing, consolidation and curing.
- Improved surface appearance and concrete quality.
- Superior slump retention.
- Fast demolding time.

TECHNICAL INFORMATION

Concreting guidance	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.

PRODUCT INFORMATION

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

APPLICATION INFORMATION

Recommended dosage	0.5 – 2.5 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.
Compatibility	Sika® ViscoCrete® ACE 8520 may be combined with the following products: ▪ Sika® ViscoFlow® ▪ SikaFume® ▪ SikaFiber® Do not use viscocrete or 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.

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.

PT. Sika Indonesia Head Office and Manufacturing
Jl. Raya Cibinong-Bekasi Km.20
Limusnunggal-Cileungsi
Bogor 16820-Indonesia
Tel. +62 21 8230025, Fax +62 21 8230026