

## PRODUCT DATA SHEET

# Sika® ViscoCrete® ACE 8502

(formerly MasterGlenium® ACE 8502)

### HIGH-RANGE SUPERPLASTICISER FOR PRECAST MANUFACTURING

#### DESCRIPTION

Sika® ViscoCrete® ACE 8502 is an advanced polycarboxylic ether (PCE) based superplasticiser developed to achieve high early strength ideally suited for the precast industry where highest durability and performance are demanded. With specifically tailored constitution of the active material, Sika® ViscoCrete® ACE 8502 shows excellent dispersion of cement and still provides extended slump retention even at low water binder ratio.

The superior development of early strength with Sika® ViscoCrete® ACE 8502 allows for zero or minimum accelerated heat curing processes in precast manufacturing. Sika® ViscoCrete® ACE 8502 is compatible with all Portland cements meeting international standards and is formulated to comply with ASTM C494 for Type F admixtures. Sika® ViscoCrete® ACE 8502 is not to be used with sulphonated polymer-based admixtures.

#### USES

Sika® ViscoCrete® ACE 8502 offers the following benefits for the precast concrete industry:

- Produce rheoplastic and self-consolidating concrete using low w/c ratio
- Optimize curing cycle by shortening curing time or decreasing curing temperature
- Eliminate heat curing processes
- Eliminate energy required for placing, consolidation and curing
- Improve surface appearance and concrete quality
- Produce durable precast concrete elements
- As compared to the traditional super-plasticisers, improve engineering properties such as early and ultimate compressive and flexural strengths

Sika® ViscoCrete® ACE 8502 may also be used for certain ready-mix concrete application, typically in synergy with a retarder.

#### CHARACTERISTICS / ADVANTAGES

Sika® ViscoCrete® ACE 8502 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 adsorbed 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.

## PRODUCT INFORMATION

<b>Packaging</b>	▪ 205 L drum ▪ 1,000 L tank
<b>Shelf Life</b>	12 month shelf life from date of manufacture
<b>Storage Conditions</b>	Must be stored in a place where the temperature is not below 0°C. In case the product freezes, increase the temperature of the product to 30°C and remix.

## APPLICATION INFORMATION

<b>Recommended Dosage</b>	0.8 to 1.5 Ltr /100 kg of binder Other dosages may be used in special cases according to specific job site conditions. In this case please consult our representative.
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## 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

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety-related data.

## APPLICATION INSTRUCTIONS

Sika® ViscoCrete® ACE 8502 is a liquid admixture to be added to the concrete during the mixing process. The best results are obtained when the admixture is added after all the other components are already in the mixer and after the addition of at least 80% of the total water.

## 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 fields.

## 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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