

PRODUCT DATA SHEET

Sika® ViscoCrete® ACE 8380 TKO

(formerly ACE 8380 / ACE80)

A new generation polycarboxylic ether superplasticiser admixture developed for the precast market

DESCRIPTION

Sika® ViscoCrete® ACE 8380 TKO, an essential component of ZERO ENERGY SYSTEM, is an innovative second generation of polycarboxylic ether polymers superplasticiser. The particular molecular configuration of Sika® ViscoCrete® ACE 8380 TKO accelerates the cement hydration. Rapid absorption of the molecule onto the cement particles, combined with an efficient dispersion effect, exposes increased surface of the cement grains to react with water.

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As a result of this effect, it is possible to obtain earlier development of the heat of hydration, rapid development of the hydration products and, as a consequence, higher strengths at very age.

Sika® ViscoCrete® ACE 8380 TKO is compatible with all Portland cements meeting recognised international standards and is free from chlorides.

ZERO ENERGY SYSTEM is based on a combination of the avant-garde admixture Sika® ViscoCrete® ACE 8380 TKO and the innovative technology of rheodynamic concrete. The ZERO ENERGY SYSTEM has been developed to help the precast concrete producer to rationalise his production process and save on energy costs combined with improved quality of the product and the working conditions.

USES

Sika® ViscoCrete® ACE 8380 TKO is suitable for making precast concrete elements with Rheoplastic concrete having fluid consistence, no segregation and low water cement ratio and, consequently, high early and long term strengths.

Sika® ViscoCrete® ACE 8380 TKO is recommended for use at ambient temperature above 15°C.

Sika® ViscoCrete® ACE 8380 TKO is compatible and re-

commended for use with:

- Sika®Stabilizer® SDC admixtures to produce rheodynamic concrete.
- SikaControl® AER, air entraining admixture, to improve freeze thaw resistance (exposure class XF1 to XF4, EN 206-1)
- SikaFume® MS 610, silica fume, for high performance concrete and increased durability in chemical aggressive environments (exposure class XA1 to XA3, EN 206-1)
- SikaControl® for producing shrinkage compensated concrete
- Sika® Antisol® curing compound for protection of fresh concrete to prevent rapid evaporation of water.

Note : Sika® ViscoCrete® ACE 8380 TKO is not compatible with the Sikament® RB superplasticisers.

CHARACTERISTICS / ADVANTAGES

- Produce rheoplastic and rheodynamic concrete having a low water cement ratio.
- Optimise the curing cycles by reducing curing time or curing temperature.
- Eliminate the heat curing.
- Eliminate the energy required for placing and compaction and curing (ZERO ENERGY).
- Increase productivity.
- Improve surface appearance.
- Produce durable precast concrete elements as per EN 206-1.
- As compared to the traditional superplasticisers, the engineering properties such as early and ultimate compressive and flexural strengths, bond to steel, modulus of elasticity, shrinkage, creep, and impermeability are improved.

APPROVALS / STANDARDS

Comply with BS EN 934

PRODUCT INFORMATION

Packaging	205 litre drum or bulk delivery
Appearance / Colour	Milky White Liquid
Shelf Life	12 months from date of production
Storage Conditions	Store properly in undamaged and unopened original sealed packaging in cool and dry conditions. Protect from direct sunlight and frost.
Specific gravity	1.040 ± 0.02 kg/litre

APPLICATION INFORMATION

Recommended Dosage	The recommended dosage rate is 0.4 to 1.0 litres per 100 kg of the binder and any material (fines or fillers) passing the 0.1 mm sieve used for producing rheodynamic concrete. Other dosages may be used in special cases according to specific job site conditions, please consult local Sika representatives.
Dispensing	Sika® ViscoCrete® ACE 8380 TKO 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. The water content is adjusted to obtain the desired consistence or workability.

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

Sika® ViscoCrete® ACE 8380 TKO 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.

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. It may be necessary to adapt the above disclaimer to specific local laws and regulations. Any changes to this disclaimer may only be implemented with permission of Sika® Corporate Legal in Baar.

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