

PRODUCT DATA SHEET

Sika® ViscoCrete® ACE 8449

High early strength, high range water reducing/superplasticising, admixture for precast concrete

DESCRIPTION

Sika® ViscoCrete® ACE 8449 is an admixture of a new generation based on second-generation polycarboxylic ether polymer with high early strength gains. Sika® ViscoCrete® ACE 8449 is free of chloride & low alkali. It is compatible with all types of cements.

USES

- Sika® ViscoCrete® ACE 8449 is suitable for making precast concrete elements at all workability's including Rheoplastic or Super workable concrete having fluid consistence, no segregation, a low water binder ratio and, consequently high early and long term strengths
- Sika® ViscoCrete® ACE 8449 may be used in combination with Sika Stabilizer for producing concrete, capable of self-compaction, even in the presence of dense reinforcement without the aid of vibration, for making precast elements.
- Concreting in cold weather

PRODUCT INFORMATION

Packaging	245kg drum
Shelf life	12 months from date of production if stored properly in undamaged unopened, original sealed packaging.
Storage conditions	Sika® ViscoCrete® ACE 8449 must be stored where temperatures do not drop below +5°C. If product has frozen, thaw at +5°C or above and completely reconstitute using mild mechanical agitation. Store under cover, out of direct sunlight and protect from extremes of temperature. Shelf life is 12 months when stored as above. Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging. For specific storage advice, consult your local Sika representative.
Appearance / Colour	Reddish brown liquid
Density	1.12 ± 0.02 at 25°C

CHARACTERISTICS / ADVANTAGES

- Achieve high early strengths
- Produces Rheoplastic and Rheodynamic concretes having a low water cement ratio
- Optimise curing cycles by reducing curing time or curing temperatures
- Eliminate/minimize heat curing
- Eliminate the energy required for placing, compacting & curing (Zero Energy System™)
- Increase productivity/ reduction in cycle time
- Improve surface appearance
- Produce durable precast concrete elements
- Improved engineering properties, compared to traditional superplasticiser such as early and ultimate compressive and flexural strengths, reduced shrinkage and low permeability.

APPROVALS / STANDARDS

IS 9103, ASTM C494 Type F & G

APPLICATION INFORMATION

Recommended Dosage

Optimum dosage of Sika® ViscoCrete® ACE 8449 should be determined in trial mixes. As a guide, a dosage range of 300 ml to 1800ml per 100kg of cementitious material is normally recommended. Because of variations in concrete materials, job site conditions, and/or applications, dosages outside of the recommended range may be required. In such cases, contact your local Sika representative.

Effects of over dosage

A severe over-dosage of Sika® ViscoCrete® ACE 8449 can result in the following:

Air entrainment

Bleed/segregation of mix

Increased plastic shrinkage

A slight overdosing may not adversely affect the ultimate strength of the concrete and can achieve higher strengths than normal concrete, provided it is properly compacted and cured. Due allowance should be made for the effect of fluid concrete pressure on form work, and stripping times should be monitored.

In the event of over dosage consult your local Sika representative immediately.

Dispensing

Sika® ViscoCrete® ACE 8449 is a ready-to-use liquid which is dispensed into the concrete together with the mixing water. The plasticising effect and water reduction are higher if the admixture is added to the damp concrete after 50 to 70% of the mixing water has been added. The addition of Sika® ViscoCrete® ACE 8449 to dry aggregate or cement is not recommended. Thorough mixing is essential and a minimum mixing cycle, after the addition of the Sika® ViscoCrete® ACE 8449, of 60 seconds for forced action mixers is recommended.

Compatibility

Sika® ViscoCrete® ACE 8449 is compatible with most of the Sika products. Use Sika Stabilizer as viscosity modifying agent in self compacting concrete. It must not be used in conjunction with any other admixture unless prior approval is received from Sika Technical Services Department.

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 Material Safety Data Sheet containing 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.

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SikaViscoCreteACE8449-en-IN-(07-2024)-1-1.pdf

Product Data Sheet

Sika® ViscoCrete® ACE 8449
July 2024, Version 01.01
021301011000005358