

PRODUCT DATA SHEET

Sika® ViscoCrete®-4100

High Range Water Reducing Admixture

DESCRIPTION

Sika® ViscoCrete®-4100 is a high range water reducer and superplasticizer utilizing Sika's 'ViscoCrete' polycarboxylate polymer technology. Sika® ViscoCrete®-4100 meets the requirements for ASTM C-494 Types A and F and AASHTO M-194 Types A and F.

USES

Sika® ViscoCrete®-4100 is designed for high early strength applications, and may also be used for the production of Self Consolidating Concrete (SCC). Sika® ViscoCrete®-4100 is a high range water reducer that provides excellent plasticity, prolonged workability and extended slump life even if used during the summer months. Sika® ViscoCrete®-4100 can be combined with accelerating or retarding admixtures to achieve required compressive strengths and setting time.

CHARACTERISTICS / ADVANTAGES

Water Reduction: Sika® ViscoCrete®-4100 can be dosed in small amounts to obtain water reduction from 10–15 %, and will achieve water reduction up to 40 % at high dosage rates. Sika® ViscoCrete®-4100 is suitable for all levels of water reduction.

High Plasticity and Cohesion: The special formulation of Sika® ViscoCrete®-4100 helps maintain the plasticity of the concrete and extends its workability time during warmer months when slump loss and fast stiffening of the fresh concrete can be a concern. The superplasticizing action of Sika® ViscoCrete®-4100 provides high slump, flowing concrete that maintains excellent workability, and may be placed with minimal or no vibration even at very low water cement ratios as low as 0.25. Sika® ViscoCrete®-4100 maintains excellent cohesion within the concrete matrix, and eliminates excessive bleeding or segregation. The unique plasticizing effect of Sika® ViscoCrete®-4100 provides excellent

formed surface finish. The combined high range water reduction and superplasticizing action of Sika® ViscoCrete®-4100 provide the following benefits in hardened concrete:

- High early compressive strengths for earlier removal of forms and structural use of concrete.
- High ultimate strengths allow for greater engineering design flexibility and structural economies.
- Reduced water cement ratios produce more durable, dense concrete with reduced permeability.
- Highly effective plasticizer reduces surface defects in concrete elements and improves aesthetic appearance.
- Ideal for the production of Self Consolidating Concrete.

Sika® ViscoCrete®-4100 has been formulated to provide maximum water reduction, increased early strength, improved finishing characteristics, especially when a broom is desired. Sika® ViscoCrete®-4100 does not contain formaldehyde, calcium chloride or any other intentionally added chlorides, and will not initiate or promote the corrosion of steel present in the concrete.

PRODUCT INFORMATION

Packaging	Sika® ViscoCrete®-4100 is available in 55 gallon drums (208 liters), 275 gallon totes (1040 liters) and bulk delivery.
Appearance / Colour	Green Liquid
Shelf Life	Shelf life when stored in dry warehouse conditions between 50 °F and 80 °F (10–27 °C) is one year minimum.
Storage Conditions	Sika® ViscoCrete®-4100 should be stored at above 40 °F (5 °C). If frozen, thaw and agitate thoroughly to return to normal state.
Specific gravity	Approx. 1.08

APPLICATION INFORMATION

Recommended Dosage	Dosage rates will vary according to materials used, ambient conditions and the requirements of a specific project. Sika recommends dosage at 3-8 fl.oz. per 100 lbs. (195–520 ml/100 kg) of cementitious for general concrete applications. If maximum water reduction is required, dosage up to 12 fl.oz./100 lbs (780 ml/100 kg) of cementitious may be used. In this case, delayed setting times may occur. Dosage rates outside the recommended range may be used where specialized materials such as microsilica are specified, extreme ambient conditions are encountered or unusual project conditions require special consideration. Please contact your Sika representative for more information and assistance.
Dispensing	<p>For best superplasticizing results, add Sika® ViscoCrete®-4100 directly to freshly mixed concrete in the concrete mixer at the end of the batching cycle. Sika® ViscoCrete®-4100 may also be dispensed as an integral material during the regular admixture batching cycle, or into freshly mixed concrete in a Ready Mix truck, at the concrete plant or at the job site. To optimize the superplasticizing effect after the addition of Sika® ViscoCrete®-4100, Sika recommends that the combined materials be mixed for 80–100 revolutions either in the concrete mixer or in the Ready Mix truck.</p> <p>Combination with other admixtures: Sika® ViscoCrete®-4100 is highly effective as a single admixture or in combination with other admixtures in the Sika System. If used in combination with certain Sikament® high range water reducers it may affect the plastic properties of fresh concrete. Please contact a Sika representative for further information.</p> <p>Combination with microsilica: Sika® ViscoCrete®-4100 is particularly well suited for use with microsilica because of its water reduction capability.</p>

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.

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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