

PRODUCT DATA SHEET

Sika® ViscoCrete®-1000

HIGH RANGE WATER REDUCING ADMIXTURE

PRODUCT DESCRIPTION

Sika® ViscoCrete®-1000 is a high range water-reducer utilizing the combination of Sika® ViscoCrete® and Sika® ViscoFlow® Technology. Its unique formulation is based on polycarboxylate technology.

WHERE TO USE

- Sika® ViscoCrete®-1000 is recommended for production of all high strength, concrete products, whenever high plasticity, prolonged slump retention and increased early/ultimate strengths are required.
- Sika® ViscoCrete®-1000 can be used for production of SCC (Self-Consolidating Concrete) as well as for production of conventional slump concrete.

CHARACTERISTICS / ADVANTAGES

The implementation of the latest Sika® ViscoFlow® Technology allows Sika® ViscoCrete®-1000 to extend the slump retention without a negative impact on set time. This is beneficial especially in a hot climate environment when the slump loss of a concrete mixture is more likely to occur. Sika® ViscoCrete®-1000 can be used for the production of SCC as well as for the production of conventional slump concrete.

High-Range Water Reducing Applications: When used as a high range water reducing admixture, water reduction up to 35 % can be obtained. The superplasticizing action allows for the production of high slump flowing concrete with excellent workability and extended slump retention that can be placed with minimum vibration even at a low water/cement ratio. The dispersing action of Sika® ViscoCrete®-1000 maximizes cement hydration efficiency and improves concrete's early and long term

compressive strengths. Extended slump retention does not have negative effect on setting times.

Mid-Range Water Reducing Applications: At a lower dosage, Sika® ViscoCrete®-1000 can be used as a cost effective mid range water reducing admixture or simply as a water reducing admixture for production of conventional slump concrete. When used as a mid range water reducing admixture, water reduction up to 15 % can be obtained. This application is ideal for use with lean, harsh concrete mixes or concrete containing flyash. Sika® ViscoCrete®-1000 will improve workability and finishability.

The combined water reducing and superplasticizing action provide the following benefits:

- Higher early and ultimate strengths for cost effective high strength concrete and earlier structural use of concrete.
- Higher early strengths allow faster demolding and more efficient use of forms to precast producers.
- Improved slump retention will extend workability without negative effect on setting time characteristics of the concrete mixture.
- Increased slump improves workability and reduces labor costs.
- Greater concrete density reduces permeability and increases durability.

Sika® ViscoCrete®-1000 does not contain calcium chloride or any other intentionally added chlorides and will not initiate or contribute to corrosion on steel reinforcement present in the concrete.

ENVIRONMENTAL INFORMATION

- Conformity with LEED®v4 MR Credit (Option 1): Building Product Disclosure and Optimization – Environmental Product Declarations

APPROVALS / CERTIFICATES

- Sika® ViscoCrete®-1000 meets the requirements of ASTM C494 Type A and F admixture.

PRODUCT INFORMATION

CSC MasterFormat®	03 05 00
Packaging	205 L (54 US gal.) drum 1040 L (275 US gal.) IBC Bulk delivery
Appearance / Colour	Liquid / Brown
Shelf Life	1 year minimum when stored in dry warehouse conditions at temperatures between 5 °C and 27 °C (40 °F and 80 °F).
Storage Conditions	Store at temperatures above 5 °C (40 °F). If frozen, thaw and agitate thoroughly to return to normal state. Protect from direct sunlight.
Specific Gravity	Approx. 1.06

TECHNICAL INFORMATION

Specific Advice	Curing Proper curing according to CSA A23.1 guidelines should be always followed to achieve maximum possible quality of concrete.
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APPLICATION INFORMATION

Recommended Dosage	<p>The typical dosage range for Sika® ViscoCrete®-1000 is 130-780 mL/100 kg (2-12 fl. oz/100 lb) of cementitious material.</p> <p>For maximum water reduction, dosage rates up to 1170 mL per 100 kg (18 fl. oz/100 lb) of cementitious material may be used. At higher dosages, delayed setting time will likely occur. Dosage rates vary depending upon the amount of plasticity and/or water reduction desired. Slump, ambient temperature, water-cementitious ratio, mixing time and various concrete materials, such as type of cement and supplementary cementitious materials, will affect dosage rates. It is recommended to conduct trial mixes with the actual materials to determine the required dosage for optimum performance.</p> <p>To the extent specialized materials (such as microsilica) are specified, extreme ambient project conditions are encountered, or other unusual project conditions require special consideration outside the recommended dosage, contact your Sika Canada Technical Sales Representative for further information.</p>
Mixing	<p>Measure the required quantity manually or by automated dispenser. Add Sika® ViscoCrete®-1000 directly into the freshly mixed concrete, or as an integral material in the batching cycle. Do not mix with dry cement. Sika® ViscoCrete®-1000 may be dispensed on site directly prior to placement. Care must be taken to mix thoroughly. When used in combination with other admixtures dispense each admixture separately into the mix. 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>Compatibility with other admixtures: Sika® ViscoCrete®-1000 can be used in combination with other Sika admixtures and can be successfully used in mix designs utilizing supplementary cementitious materials.</p>

BASIS OF PRODUCT DATA

Product properties are typically averages, obtained under laboratory conditions. Reasonable variations can be expected on-site due to local factors, including environment, preparation, application, curing and test methods.

ENVIRONMENT, HEALTH & 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 recommendations, or from any other advice offered. The information contained herein does not relieve the user of the products from testing them for the intended application and purpose. 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 or may be downloaded from our website at: www.sika.ca

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