



PRODUCT DATA SHEET

Sikament[®]-686

HIGH RANGE AND MID RANGE WATER REDUCING ADMIXTURE

PRODUCT DESCRIPTION

Sikament[®]-686 is a high range water reducing admixture utilizing Sika's ViscoCrete[®] Technology. Its unique formulation is based on polycarboxylate technology.

WHERE TO USE

- Production of all high strength concrete products, whenever high plasticity and increased early and ultimate strengths are desired
- As a superplasticizer, to provides excellent workability for concrete with low water-cement ratio

CHARACTERISTICS / ADVANTAGES

- **High Range Water Reducing Applications:** When used as a high range water reducing admixture, water reduction up to 30 % can be obtained. The superplasticizing action allows for the production of high slump flowing concrete with excellent workability that can be placed with minimum vibration even at a low water/cement ratio. The dispersing action of Sikament[®]-686 maximizes cement hydration efficiency and improves concrete's early and long term compressive strengths.
- **Mid Range Water Reducing Applications:** At a lower dosage, Sikament[®]-686 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. Sikament[®]-686 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
- Increased slump improves workability and reduces labor costs
- Full flow action aids in pumping and reduces need for vibration
- Greater concrete density reduces permeability and increases durability

Sikament[®]-686 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

APPROVALS / CERTIFICATES

- Meets ASTM C494 Types A and F requirements
- Ministère des Transports du Québec (MTQ) approved

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 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. 1.05

APPLICATION INFORMATION

Recommended Dosage	<p>For general concreting applications, the recommended dosage is 195 – 780 mL/100 kg of cementitious material. Dosage rates will vary depending on the material used, ambient conditions and the requirements of a specific project. If maximum water reduction is required, a dosage up to 1170 mL/100 kg of cementitious material may be used. In this case, delayed setting times may occur.</p> <p>Note: 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. Contact your Sika Canada Technical Sales Representative for further information.</p>
Mixing	<p>For best plasticizing results, Sikament®-686 should be added directly to freshly mixed concrete in the concrete mixer or at the end of the batching cycle. Sikament®-686 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 job site. To optimize the superplasticizing effect, Sika recommends that the combined materials be mixed for 60–90 revolutions, either in the concrete mixer or in the ready-mix truck.</p> <p>Combination with other admixtures: Sikament®-686 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. Contact your Sika Canada Technical Sales Representative for further information.</p> <p>Combination with microsilica: Sikament®-686 is particularly well suited for use with microsilica because of its water reduction capability.</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

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BUILDING TRUST
CONSTRUIRE LA CONFIANCE



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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