

## Sikament<sup>®</sup> 686

### High Range and Mid Range Water Reducing Admixture

<b>Description</b>	<p>Sikament 686 is a high range water reducing admixture utilizing Sika's Visco-Crete Technology. It's unique formulation is based on polycarboxylate technology.</p> <p>Sikament 686 meets the requirements for ASTM C-494 Types A and F.</p>
<b>Applications</b>	<p>Sikament 686 is recommended for use in the production of all high strength concrete products, whenever high plasticity and increased early and ultimate strengths are desired.</p> <p>The superplasticizing action of Sikament 686 provides excellent workability at low water cement ratios.</p>
<b>Advantages</b>	<p><b>High Range Water Reducing Applications:</b> 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.</p> <p><b>Mid Range Water Reducing Applications:</b> 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.</p> <p>The combined water reducing and superplasticizing action provide the following benefits:</p> <ul style="list-style-type: none"><li>■ Higher early and ultimate strengths for cost effective high strength concrete and earlier structural use of concrete.</li><li>■ Higher early strengths allow faster demolding and more efficient use of forms to precast producers.</li><li>■ Increased slump improves workability and reduces labor costs.</li><li>■ Full flow action aids in pumping and reduces need for vibration.</li><li>■ Greater concrete density reduces permeability and increases durability.</li></ul> <p>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.</p>

#### How to Use

##### Dosage

Dosage rates will vary depending on the material used, ambient conditions and the requirements of a specific project.

For general concreting applications, Sika recommends a dosage rate between 3-12 fl. oz. /100 lbs. (195-780 ml/100 kg) cementitious materials. If maximum water reduction is required, dosage up to 18 fl.oz./100 lbs. (1170 ml/100 kg) of cementitious materials 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. In this case please contact your local regional Sika office or Sika technical service department at 1-800-933-7452 for further information.

Construction

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## Mixing

For best plasticizing results, Sikament 686 should be added directly to freshly mixed concrete in the concrete mixer 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 80-100 revolutions, either in the concrete mixer or in the Ready-Mix truck.

**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. Please contact your local regional office or technical service department at 1-800-933-7452 for further information.

**Combination with Microsilica:** Sikament 686 is particularly well suited for use with Microsilica because of its water reduction capability.

## Packaging

Sikament 686 is available in 55 gallon drum (208 liter), 275 gallon totes (1040 liters) and bulk delivery.

## Storage and Shelf Life

Sikament 686 should be stored at above 40°F (5°C). If frozen, thaw and agitate thoroughly to return to normal state. Protect from direct sunlight.

Shelf life when stored in dry warehouse conditions between 40°F and 80°F (5°C - 27°C) is one year.

## Typical Data

**Appearance** Brown liquid.

**Specific Gravity** Approx. 1.1

**CAUTION: IRRITANT** Contains Aqueous Polymer Solution (CAS:Mixture), Triethanolamine (CAS: 102-71-6). May cause eye/skin/respiratory irritation. May be harmful if swallowed.

## Handling and Storage

Avoid direct contact. Wear personal protective equipment (chemical resistant goggles/gloves/clothing) to prevent direct contact with skin and eyes. Use only in well ventilated areas. Wash thoroughly with soap and water after use. Remove contaminated clothing and launder before reuse.

## First Aid

**Eyes:** Hold eyelids apart and flush thoroughly with water for 15 minutes. **Skin:** Remove contaminated clothing. Wash skin thoroughly for 15 minutes with soap and water. **Inhalation:** Remove to fresh air. **Ingestion:** Do not induce vomiting. Dilute with water. Contact physician. **In all cases contact a physician immediately if symptoms persist.**

## Clean Up

Use personal protective equipment (chemical resistant goggles/gloves/clothing). Without direct contact, remove spilled or excess product and place in suitable sealed container. Dispose of excess product and container in accordance with applicable environmental regulations.

KEEP CONTAINER TIGHTLY CLOSED  
NOT FOR INTERNAL CONSUMPTION

KEEP OUT OF REACH OF CHILDREN  
FOR INDUSTRIAL USE ONLY

CONSULT MATERIAL SAFETY DATA SHEET FOR MORE INFORMATION

Sika warrants this product for one year from date of installation to be free from manufacturing defects and to meet the technical properties on the current Technical Data Sheet if used as directed within shelf life. User determines suitability of product for intended use and assumes all risks. Buyer's sole remedy shall be limited to the purchase price or replacement of product exclusive of labor or cost of labor.

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Quality Certification Numbers: Lyndhurst: FM 69711 (ISO 9000), FM 70421 (QS 9000), Marion: FM 69715, Kansas City: FM 69107, Santa Fe Springs: FM 69408

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