

# Sika ViscoCrete® 4100

## High Range Water Reducing Admixture

<b>Description</b>	<p>Sika ViscoCrete 4100 is a high range water reducing and superplasticizing admixture utilizing Sika's 'ViscoCrete' polycarboxylate polymer technology.</p> <p>Sika ViscoCrete 4100 meets the requirements for ASTM C-494 Types A and F.</p>
<b>Applications</b>	<p>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.</p> <p>Sika ViscoCrete 4100 can be combined with accelerating or retarding admixtures to achieve required compressive strengths and setting time.</p>
<b>Curing</b>	<p>Cure concrete according to ASTM C-31/C-31M or other applied specification.</p>
<b>Advantages</b>	<p><b>Water Reduction:</b> 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.</p> <p><b>High Plasticity and Cohesion:</b> 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.</p> <p>Sika ViscoCrete 4100 maintains excellent cohesion within the concrete matrix, and eliminates excessive bleeding or segregation. The unique plasticizing effect of ViscoCrete 4100 provides excellent formed surface finish.</p> <p>The combined high range water reduction and superplasticizing action of Sika ViscoCrete 4100 provide the following benefits in hardened concrete:</p> <ul style="list-style-type: none"><li>■ High early compressive strengths for earlier removal of forms and structural use of concrete.</li><li>■ High ultimate strengths allow for greater engineering design flexibility and structural economies.</li><li>■ Reduced water cement ratios produce more durable, dense concrete with reduced permeability.</li><li>■ Highly effective plasticizer reduces surface defects in concrete elements and improves aesthetic appearance.</li><li>■ Ideal for the production of Self Consolidating Concrete.</li></ul> <p>Sika ViscoCrete 4100 has been formulated to provide maximum water reduction, increased early strength, improved finishing characteristics, especially when a broom is desired.</p> <p>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.</p>

### How to Use

#### 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. 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 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.

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.

**Combination with other admixtures:** Sika ViscoCrete 4100 is highly effective as a single admixture or in combination with other Sika admixtures. 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:** Sika ViscoCrete 4100 is particularly well suited for use with microsilica because of its water reduction capability.

## Packaging

Sika ViscoCrete 4100 is available in 55 gallon drum (208 liter), 275 gallon totes (1040 liters) drums and bulk delivery.

## Storage and Shelf Life

Sika ViscoCrete 4100 should be stored at above 40°F (5°C). If frozen, thaw and agitate thoroughly to return to normal state.

Shelf life when stored in dry warehouse conditions between 50°F and 80°F (10°C - 27°C) is one year.

## Typical Data

### Appearance

Green Liquid.

### Specific Gravity

Approx. 1.1

### CAUTION: IRRITANT

Contains aqueous polymer solution (CAS:Mixture). 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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