

# Sika® ViscoCrete® -3110 W

## High Performance Superplasticizer

<b>Product Description</b>	<p><b>Sika® ViscoCrete® -3110 W</b> is a third generation superplasticizer for concrete and mortar. It is particularly developed for the production of high flow concrete with exceptional flow retention. <b>Sika® ViscoCrete® -3110 W</b> is especially suitable for use in concrete mixes containing Micro-silica and other pozzolanic materials like GGBS and Fly Ash.</p> <p>This product is suitable for use in moderate climatic conditions.</p>
<b>Uses</b>	<p><b>Sika® ViscoCrete® -3110 W</b> facilitates extreme water reduction, excellent flowability with optimum cohesion and excellent self-compacting behaviour.</p> <p><b>Sika® ViscoCrete® -3110 W</b> is used for the following types of concrete:</p> <ul style="list-style-type: none"><li>▪ High flow concrete</li><li>▪ Self-compacting concrete</li><li>▪ Concrete with high water reduction</li><li>▪ High strength concrete</li><li>▪ In slabs, foundations, walls, columns and piers, piles, pre-stressed concrete, bridges, cantilever structures and precast concrete.</li></ul>
<b>Advantages</b>	<p><b>Sika® ViscoCrete® -3110 W</b> acts by surface absorption on the cement particles producing a sterical hindrance as well as electrostatic repulsion between cement particles which results in higher dispersion, flow and retention.</p> <p><b>Sika® ViscoCrete® -3110 W</b> provides the following beneficial properties :</p> <ul style="list-style-type: none"><li>▪ Strong self-compacting behavior</li><li>▪ High water reduction (resulting in high density and strengths)</li><li>▪ Increased high ultimate strength development</li><li>▪ Improved shrinkage and creep behavior</li><li>▪ Reduced rate of carbonation of the concrete</li><li>▪ Improved finish</li></ul> <p><b>Sika® ViscoCrete® -3110 W</b> does not contain chlorides or other steel corrosion promoting ingredients. Therefore, it may be used without restriction for reinforced and pre-stressed concrete construction.</p> <p><b>Sika® ViscoCrete® -3110 W</b> gives the concrete extended workability and depending on the mix design and the quality of materials used, workability can be maintained for more than 1 hour at 30°C</p>
<b>Tests</b>	
<b>Approval / Standards</b>	This product conforms to the requirement of ASTM C494 / C494M-99a Type G and EN 934-2.
<b>Product Data</b>	
<b>Form</b>	Liquid
<b>Appearance / Colour</b>	Colourless to Yellowish
<b>Packaging</b>	1000 litres flow bins / IBC Bulk supply in tanker trucks possible on demand



## Storage

**Storage conditions / shelf life** **Sika® ViscoCrete® - 3110 W** should be stored in original containers under dry conditions between +5°C and +35°C. Prolonged storage at higher temperature (above 35°C) is not advisable. Failure to comply with the recommended storage condition may result in premature deterioration of the product or packaging.

**Shelf Life** 12 months from date of production if stored properly in undamaged and unopened original sealed containers away from direct sunlight.

## Technical Data

**Chemical Base** Aqueous solution of modified polycarboxylates, co-polymers

**Density (at 25°)** 1.08 – 1.10 kg/lit

**Chloride Content** Nil (EN 934-2)

## Application Details

**Dosage**

- For soft plastic concrete 0.2 – 0.4% by weight of binder.
- For flowing and self-compacting concrete 0.4 – 1.5%\* by weight of binder.

Higher dosages up to 1.7 % by weight of binder, can be used depending on the mix design & concrete workability requirement, but a pre-trial to confirm the dosage must be done by the user.

\* Note: With some binders set retardation may occur at dosages greater than 1.0%.

**Dispensing** **Sika® ViscoCrete® - 3110 W** is added to the gauging water or simultaneously discharge it into the concrete mixer. For optimum utilization of its high water reduction property, we recommend thorough mixing at a minimal wet mixing time of 60 seconds. The addition of the remaining gauging water (to fine tune concrete consistency) may only be started after two-thirds of the wet mixing time, to avoid surplus water in the concrete.

**Concrete Placing** With the use of **Sika® ViscoCrete® - 3110 W** concrete of the highest quality is produced.

The standard rules of good concreting practice (production as well as placing) must also be observed with **Sika® ViscoCrete® - 3110 W** concrete. Refer to relevant standards.

**Curing** Fresh concrete must be cured correctly, especially at high temperatures in order to prevent plastic and drying shrinkage. Use Sika Antisol® products as a curing agent or apply wet hessian.

**Compatibility** **Sika® ViscoCrete® - 3110 W** may be combined with many other Sika Products particularly:

- SikaPump®
- Sika® Fume
- Sika Retarder®
- Sika® Retardol-25
- Sika®-1

It's important to note that always conduct trials before combining products in specific mixes and contact our Technical Services Department for information and advice about any specific combination.

**Cleaning** Clean all tools and application equipment with water immediately after use

**Notes on Application/ Limitations** When using **Sika® ViscoCrete® - 3110 W** a suitable mix design must be selected and local material sources should be trialled.

If frozen and/or if precipitation has occurred, **Sika® ViscoCrete® - 3110 W** may only be used after thawing slowly at room temperature and intensive mixing until fully homogenised.

**Sika® ViscoCrete® - 3110 W** should not be added to dry cement.

Before pouring, suitability tests on the fresh concrete must be carried out. Due to the extended workability, take special care that formwork is properly installed and secured.

<b>Value Base</b>	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.
<b>Local Restrictions</b>	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 product uses.
<b>Health and Safety Information</b>	For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Material Safety Data Sheet containing physical, ecological, toxicological and other safety related data.
<b>Legal Notes</b>	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.

All products are manufactured under a management system certified to conform to the requirements of the quality, environmental and occupational health & safety standards ISO 9001, ISO 14001 and OHSAS 18001.



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