

## PRODUCT DATA SHEET

# Sika<sup>®</sup> ViscoCrete<sup>®</sup>-3110 W Plus

HIGH RANGE SUPERPLASTICIZING ADMIXTURE FOR  
(SCC)

SELF-COMPACTING CONCRETE

### DESCRIPTION

Sika<sup>®</sup> ViscoCrete<sup>®</sup>-3110 W Plus is a third generation polycarboxylate based superplasticizer for concrete. It has been particularly developed for use in ready mixed concrete to give extended slump retention and high strength development of normal grade concrete mixes.

Sika<sup>®</sup> ViscoCrete<sup>®</sup>-3110 W Plus is suitable for use in concrete mixes containing microsilica and other pozzolanic materials such as GGBS and fly ash. Suitable for use in hot and tropical climatic conditions.

### USES

Sika<sup>®</sup> ViscoCrete<sup>®</sup>-3110 W Plus facilitates extreme water reduction, excellent flow ability with optimum cohesion, high early strength development, impressive self-compacting behavior and extended slump life.

Sika<sup>®</sup> ViscoCrete<sup>®</sup>-3110 W Plus is mainly used for the following applications:

- Production of site mixed and ready-mix concrete
- During hot weather production of concrete with extended transportation or placing times
- Concrete requiring retained workability for extended periods
- Concrete with low water / cement ratio
- Concrete placement in congested steel reinforcement
- Self-compacting concrete
- Slim elements requiring a high standard of surface finish
- High performance / high strength concrete

### CHARACTERISTICS / ADVANTAGES

Sika<sup>®</sup> ViscoCrete<sup>®</sup>-3110 W Plus provides the following beneficial properties:

- Powerful self-compacting behavior
- No vibration is required, even at very low water cement ratios
- High Plasticity and Cohesion; Special formulation helps maintain plasticity of concrete and extends workability time during warmer months when slump loss and fast stiffening of the fresh concrete can be a concern
- Reduced energy cost for steam cured precast elements
- High strength development
- Allows for greater engineering design flexibility and structural economies
- Highly effective plasticizer reduces surface defects in concrete elements and improves aesthetic appearance
- Produce durable and dense concrete with reduced permeability
- Improved shrinkage and creep behavior
- Slower rate of carbonation ingress in the concrete
- Improved finishing characteristics, especially when a broom is desired
- Very good cost / performance ratio, structurally economic
- Does not contain chlorides or other steel corrosion promoting ingredients therefore may be used for reinforced and pre-stressed concrete construction

### APPROVALS / CERTIFICATES

Sika<sup>®</sup> ViscoCrete<sup>®</sup>-3110 W Plus follows the requirements of ASTM C494; Type G and EN 934-2

## PRODUCT INFORMATION

<b>Composition</b>	Aqueous solution of modified polycarboxylates, co-polymers
<b>Packaging</b>	1000 L flow bins Bulk supply in tanker trucks possible on request
<b>Appearance / Colour</b>	Light brown liquid
<b>Shelf life</b>	12 months from date of production if stored properly
<b>Storage conditions</b>	Store in undamaged, unopened, original sealed packaging in dry conditions at temperatures between +5 °C and +45 °C. Protect from direct sunlight and frost
<b>Density</b>	~1.08 kg/l (+25 °C)
<b>Total Chloride Ion Content</b>	Nil (EN 934-2)

## TECHNICAL INFORMATION

<b>Concreting Guidance</b>	The standard rules of good concreting practice for production and placing must be observed when using Sika® ViscoCrete®-3110 W Plus in concrete. Refer to relevant standards. Fresh concrete must be cured properly especially at high temperatures in order to prevent plastic and drying shrinkage. Use Sika® Antisol® products as a curing agent or apply wet hessian.
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## APPLICATION INFORMATION

<b>Recommended Dosage</b>	Normal workability concrete: 0.2 - 0.4 % by weight of binder Flowing / self-compacting concrete: 0.5 - 1.5 % by weight of binder. Higher dosages by weight of binder can be used depending on the mix design, raw materials, climatic conditions and concrete requirements. Trial mixes must be performed to establish the exact dosage rate required.
<b>Compatibility</b>	Sika® ViscoCrete®-3110 W Plus may be combined with all types of Portland cement and the following Sika products: <ul style="list-style-type: none"><li>▪ SikaPump®</li><li>▪ Sika® FerroGard®-901</li><li>▪ SikaFume®</li><li>▪ SikaFiber®</li><li>▪ Sika Aer®</li><li>▪ Sika® Stabilizer</li><li>▪ Sika®-1 WT</li></ul> We recommend to perform trial mixes to establish the required performance when combined with the above products. Please consult our Sika Technical Department.
<b>Dispensing</b>	Sika® ViscoCrete®-3110 W Plus is added to the gauging water or simultaneously poured with it into the concrete mixer at the batching plant. Do not add Sika® ViscoCrete®-3110 W Plus directly to the dry mix. 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.

## IMPORTANT CONSIDERATIONS

When using Sika® ViscoCrete®-3110 W Plus a mix design must be selected for the local material sources used and trial mixes performed to verify suitability. If frozen and/or if precipitation has occurred, it may only be used after thawing slowly at room temperature and intensive mixing.

Sika® ViscoCrete®-3110 W Plus 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. In case the setting time of concrete is extended, if cured properly, other properties may not be affected and higher ultimate strength is visualized. Sika® ViscoCrete® products are not compatible with admixtures based on sulfonated naphthalene or melamine.

## BASIS OF PRODUCT DATA

All technical data stated in this Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

## 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 the exact product data and uses.

## ECOLOGY, HEALTH AND SAFETY

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety-related data.

## 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 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.

### SIKA NORTHERN GULF

Bahrain / Qatar / Kuwait  
Tel: +973 177 38188  
sika.gulf@bh.sika.com  
gcc.sika.com

### SIKA SOUTHERN GULF

UAE / Oman / SIC  
Tel: +971 4 439 8200  
info@ae.sika.com  
gcc.sika.com

### SIKA SAUDI ARABIA

Riyadh / Jeddah / Damman  
Tel: +966 11 217 6532  
info@sa.sika.com  
gcc.sika.com



ISO 9001: Sika UAE LLC,  
Sika Gulf B.S.C. (c),  
Sika Saudi Arabia Co. Ltd,  
Sika Qatar LLC  
ISO 14001: Sika UAE LLC,  
Sika Gulf B.S.C. (c),  
Sika Saudi Arabia Co. Ltd  
OHSAS: Sika UAE LLC,  
Sika Gulf B.S.C. (c)

All products are supplied  
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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### Product Data Sheet

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