

## Sika® ViscoCrete®-5011 P

### Concrete Admixture for High Flow/ Self-compacting Concrete

<b>Product Description</b>	<p><b>Sika® ViscoCrete®-5011 P</b> is a third generation superplasticiser for concrete and mortar. It is particularly developed for the production of high flow concrete with good slump retention especially suitable for pre-cast concrete. <b>Sika® ViscoCrete®-5011 P</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 tropical and hot climatic conditions</p>
<b>Uses</b>	<p><b>Sika® ViscoCrete®-5011 P</b> facilitates extreme water reduction, excellent flowability with optimum cohesion and impressive self-compacting behaviour.</p> <p><b>Sika® ViscoCrete®-5011 P</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>▪ High Early Strength</li></ul> <p>Including slabs, foundations, walls, columns and piers, piles, pre-stressed concrete, bridges, cantilever structures and precast concrete</p>
<b>Characteristics / Advantages</b>	<p><b>Sika® ViscoCrete®-5011 P</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. <b>Sika® ViscoCrete®-5011 P</b> provides the following beneficial properties :</p> <ul style="list-style-type: none"><li>▪ Strong self-compacting behavior</li><li>▪ Extremely high water reduction (resulting in high density and strengths)</li><li>▪ Increased high early 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®-5011 P</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®-5011 P</b> gives the concrete extended workability and depending on the mix design and the quality of materials used, self-compacting properties can be maintained for more than 1 hour at 30°C.</p>
<b>Tests</b>	
<b>Approval/ Standard</b>	This product conforms to the requirement of ASTM C494 / C494 M-99a Type F/A and EN 934-2 -2009



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## Product Data

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Form	Liquid
Appearance / Colour	Brown Liquid
Packaging	1000 litre flow bins/ IBC Bulk supply in tanker trucks available on request

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## Storage

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Storage Conditions	<b>Sika® ViscoCrete®-5011 P</b> should be stored in a dry area in original containers between 5°C and 35°C. Protect from direct sunlight and frost. If frozen, gradually thaw and agitate until completely homogenised. Prolonged storage at higher temperatures (above 35°C) is not advisable. Failure to comply with the recommended storage condition may result in premature deterioration of the product or packaging after 6 months .
Shelf Life	12 months from date of production if stored properly in undamaged and unopened original sealed containers/ packaging away from direct sunlight.

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## Technical Data

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Chemical Base	Aqueous solution of modified polycarboxylates, co-polymers
Density (at 25°C)	1.10 kg/lit to 1.12 kg/lit

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## Application Details

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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 requirement, but a pre-trial to confirm the dosage must be done by the user.
Dispensing	<b>Sika® ViscoCrete®-5011 P</b> is added to the gauging water or simultaneously discharged 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 <b>Sika® ViscoCrete®-5011 P</b> , concrete of the highest quality is produced. The standard rules of good concreting practice (production as well as placing) must also be observed with <b>Sika® ViscoCrete®-5011 P</b> concrete. Refer to relevant standards.
Curing	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.
Compatibility	<b>Sika® ViscoCrete®-5011 P</b> may be combined with many other Sika Products particularly: <ul style="list-style-type: none"><li>▪ SikaPump®</li><li>▪ Sika® Fume</li><li>▪ Sika Retarder® and Sika® Retardol-25</li></ul> Pre-trials must be performed before combining products in a concrete mix. Please consult our Technical Services Department for further advice.
Cleaning	Clean all tools and equipment with water immediately after use
Notes on Application / Limitations	When accidental overdosing occurs, apart from retardation of the initial set and increased bleeding, no detrimental effect will take place. When <b>Sika® ViscoCrete®-5011 P</b> is used to produce flowing and self-compacting concrete, special mix designs must be selected and local material sources should be trialled. 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.

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<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.



Sika Pakistan (Pvt) Limited  
141-CCA, Phase IV, DHA  
Lahore  
Pakistan  
Phone: +92 42 35694266/7  
Fax: +92 42 35694268  
[information@pk.sika.com](mailto:information@pk.sika.com)  
[www.pak.sika.com](http://www.pak.sika.com)

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