

Sika® ViscoCrete®-4100 P

Concrete Admixture for High Flow/ Self-compacting Concrete

Product Description	<p>Sika® ViscoCrete®-4100 P is a third generation superplasticiser for concrete and mortar. It is particularly developed for the production of high flow concrete with good slump retention for precast concrete. Sika® ViscoCrete®-4100 P 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>
Uses	<p>Sika® ViscoCrete®-4100 P facilitates extreme water reduction, excellent flowability with optimum cohesion and impressive self-compacting behaviour.</p> <p>Sika® ViscoCrete® 4100 P is used for the following types of concrete:</p> <ul style="list-style-type: none">▪ High flow concrete▪ Self-compacting concrete▪ Concrete with high water reduction▪ High strength concrete▪ High early strength <p>Including slabs, foundations, walls, columns and piers, piles, pre-stressed concrete, bridges, cantilever structures and precast concrete</p>
Characteristics / Advantages	<p>Sika® ViscoCrete®-4100 P 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. Sika® ViscoCrete®-4100 P provides the following beneficial properties :</p> <ul style="list-style-type: none">▪ Strong self-compacting behavior▪ Extremely high water reduction (resulting in high density and strengths)▪ Increased high early strength development▪ Improved shrinkage and creep behavior▪ Reduced rate of carbonation of the concrete▪ Improved finish <p>Sika® ViscoCrete®-4100 P 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>Sika® ViscoCrete®-4100 P 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>
Tests	
Approval/ Standard	It conforms to the requirement of ASTM C494 / C494 M-99a Type F/A and EN 934-2-2009.
Product Data	
Form	Colourless to yellowish
Appearance / Colour	Colourless to yellowish
Packaging	1000 litre flow bins/ IBC Bulk supply in tanker trucks available on request



Storage

Storage Conditions **Sika® ViscoCrete®-4100 P** should be stored in original containers between 5°C and 35°C. 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 beyond 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.

Technical Data

Chemical Base Aqueous solution of modified polycarboxylates, co-polymers

Density (at 25°C) 1.10 kg/lit to 1.12 kg/lit

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 requirement, but a pre-trial to confirm the dosage must be done by the user.

Dispensing **Sika® ViscoCrete®-4100 P** 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 **Sika® ViscoCrete®-4100 P**, 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®-4100 P** concrete.
Refer to the relevant standards.

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

Compatibility **Sika® ViscoCrete®-4100 P** may be combined with many other Sika Products particularly:

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

Pre-trials must be performed before combining products in a concrete mix. Please refer to our Technical Services Department for further advice and information.

Cleaning Clean all tools and equipment with water immediately after use

Value Base	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.
Local Restrictions	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.
Health and Safety Information	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.
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.

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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