

## PRODUCT DATA SHEET

# Sika® ViscoCrete® Ferro-1000

POWERFUL SUPERPLASTICIZING CONCRETE ADMIXTURE FOR SPECIAL DEMAND PROJECTS



### DESCRIPTION

Sika® ViscoCrete® Ferro-1000 is an edge technology, powerful, highly concentrated superplasticizer for concrete, based on the polycarboxylate technology, offering prolonged workability maintenance. It has been designed for special demand projects, such as constructions made of FerroCement.

### USES

Sika® ViscoCrete® Ferro-1000 offers at the same extremely high reduction of W/C ratio and prolonged slump retention, cohesion and self-compacting behaviour. It is especially suitable:

- For concrete with extremely high water reduction
- For special concrete types, such as FerroCement, S.C.C. (Self-Compacting Concrete)
- For concrete with increased fine content
- For high quality technical projects, such as bridges, tunnels, etc.
- For concreting at high temperatures and long distance transportations and / or in case of demands for prolonged workability of concrete
- For concrete with high early and final strengths
- For concrete with increased resistance to mechanical and chemical attacks

### CHARACTERISTICS / ADVANTAGES

Sika® ViscoCrete® Ferro-1000 acts multiply to the cement particles, as well as to the hydration process, through surfacial adsorption and stereochemical effects. Its actions enable:

- Extremely high water reduction, which results in high density and strengths
- Exceptional flow ability, which results in the reduction of vibrations and the need for compaction
- Extremely good consistency and internal cohesion of concrete mix, which results in prevention of bleeding and separation, even at high dosages
- Very high workability maintenance in cases of long distance transportation and high temperature
- Reduction of waterpermeability of concrete
- Shrinkage and creep reduction
- High range reduction of water penetration and carbonation
- Sika® ViscoCrete® Ferro-1000 does not contain chloride and is therefore suitable for prestressed and reinforced concrete

### APPROVALS / CERTIFICATES

High range water reducing / superplasticizing admixture (Tables 3.1 & 3.2) and Set retarding / high range water reducing / super plasticizing admixture (Tables 11.1 & 11.2) according to EN 934.02:2009+A1:2012, Declaration of Performance 14698418, and provided with the CE-mark.

### PRODUCT INFORMATION

<b>Chemical base</b>	Aqueous solution of polycarboxylate polymers
<b>Packaging</b>	IBC, 210 kg drums, 20 kg containers. Bulk supply on demand.
<b>Appearance / Colour</b>	Liquid, light brown
<b>Shelf life</b>	8 months from date of production

<b>Storage conditions</b>	Store properly in undamaged, unopened, original sealed packaging, in dry conditions at temperatures between +5°C and +35°C. Protect from direct sunlight and frost.
<b>Density</b>	~1.09 kg/l (at +20°C)
<b>pH-Value</b>	4.2-6.2 (at +20°C)
<b>Total Chloride Ion Content</b>	Free (EN 934.01)

## TECHNICAL INFORMATION

<b>Concreting Guidance</b>	The standard rules of good concreting practice, concerning production as well as placing, are to be followed. Refer to relevant standards. Fresh concrete must be cured properly.
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## APPLICATION INFORMATION

<b>Recommended Dosage</b>	0.2 – 2.0% by weight of cement
<b>Compatibility</b>	Sika® ViscoCrete® Ferro-1000 can be combined with the following Sika products: - Sika® Plastiment® series - Sika® Stabilizer-4R - Sika® Visco I-100 - Sikafume® HR-E / Sikacrete® AR - Sikacrete® UCS - Sika-Aer® Fine - SikaRapid®-2 - Sika® Ferrogard-901 S - Sika® Antifreeze Trials are recommended before combining products.
<b>Dispensing</b>	Sika® ViscoCrete® Ferro-1000 is added to the gauging water at the plant or added on-site into the concrete mixer.
<b>Restrictions</b>	<ul style="list-style-type: none"> <li>▪ When using Sika® ViscoCrete® Ferro-1000 a suitable mix design has been taken into account and local material sources should be trialled.</li> <li>▪ Sika® ViscoCrete® Ferro-1000 should not be added to dry cement.</li> <li>▪ Sika® ViscoCrete® Ferro-1000 should be added with the mixing water or introduced at the end of the mixing process.</li> <li>▪ In case it is used for special projects, the mix in which the product will be incorporated must be appropriately designed. Rules that apply, regarding quality control of the produced mix, must be observed.</li> <li>▪ Before application, suitability tests must be performed.</li> </ul>

## BASIS OF PRODUCT DATA

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 application fields.

## 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-re-

lated 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.

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