

# Sika® ViscoCrete®-SF 12

## High performance superplasticiser

### Product Description

Sika® ViscoCrete®-SF 12 is a third generation superplasticiser for concrete and mortar.

### Uses

Sika® ViscoCrete®-SF 12 is a unique multi purpose superplasticiser that is particularly suitable for the production of ready mixed concrete. Additionally it provides ultra high water reduction and excellent flow characteristics.

With its outstanding combination of workability time and strength development Sika® ViscoCrete®-SF 12 is used for the following:

- n A wide range of applications where excellent workability and high strength development are required
- n Concrete with ultra high water reduction (up to 30%)
- n High performance concretes
- n Self Compacting Concrete (SCC)

### Characteristics / Advantages

Sika® ViscoCrete®-SF 12 is a powerful superplasticiser based on advanced technology which gives the following advantages:

- n High water reduction, resulting in high density, high strength and reduced permeability
- n Extended workability in conjunction with subsequent fast strength development
- n Excellent plasticising effect, resulting in improved flow, placing and compaction characteristics
- n Reduced shrinkage during curing and reduced creep when hardened
- n Provides many opportunities for cost improvement e.g.:
  - More economic mix design
  - Reduction of potential claims etc.

Sika® ViscoCrete®-SF 12 does not contain chlorides or any other ingredients which promote the corrosion of steel. It is therefore suitable for use in reinforced and prestressed concrete structures.

### Tests

#### Approval / Standards

Conforms to the requirements of EN 934 - 2, Table 3.1 / 3.2.



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## Product Data

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### Form

**Appearance / Colour** Light brownish liquid

**Packaging** 1000 kg container  
Bulk supply on demand

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### Storage

**Storage Conditions / Shelf Life** 12 months from date of production if stored properly in undamaged unopened, original sealed packaging, in dry conditions at temperatures between +5°C and +30°C. Protect from direct sunlight and frost.

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### Technical Data

**Chemical Base** Modified polycarboxylates based polymer

**Density** 1.09 – 1.13 kg/l, at +20°C

**pH Value** 3 – 7

**Freezing point** -10°C

**Soluble in Water** Max. 0,1%, chloride-free (TS EN 934-2)  
**Chloride Ion Content % w/w**

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## System Information

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### Application Details

**Consumption / Dosage** Recommended dosage:

- n** For medium workability: 0.4 – 1.0 % by weight of cement.
- n** For concrete with high workability, very low water/cement ratio and for Self Compacting Concrete: 1.0 - 2.0% by weight of cement.

When adjusting the consistency, high water retarding feature of the additive must be taken into account and excessive water addition to the mixture must be prevented. Before application, pre-trials are always recommended.

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### Application Conditions / Limitations

**Compatibility** Sika® ViscoCrete®-SF 12 may be combined with many following Sika Products among other:

- Sika® AER
- SikaPump®
- SikaRapid®
- Sika® FerroGard 901
- SikaFume® HR
- Sika® Antifreeze
- Sika® Stabilizer

Always conduct trials before combining products in specific mixes and contact our Technical Service Department for information about specific combinations.

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## Application Instructions

**Dispensing** Sika® ViscoCrete®-SF 12 is added to the gauging water or added with it into the concrete mixer.

To take advantage of the high water reduction, a wet mixing time of at least 60 seconds is recommended.

**Application Method / Tools** The standard rules of good concreting practice, concerning production and placing, are to be followed.

Laboratory trials before concreting on site are strongly recommended when using a new mix design or producing new concrete components.

Fresh concrete must be cured properly and as early as possible.

**Cleaning of Tools** Clean all tools and application equipment with water immediately after use. Hardened / cured material can only be removed mechanically.

**Notes on Application / Limitations**

- n Excessive water addition or overdosing may cause bleeding or segregation.
- n If frozen and / or if precipitation has occurred, Sika® ViscoCrete®-SF 12 may be used after thawing slowly at room temperature followed by intensive remixing.
- n When using Sika® ViscoCrete®-SF 12, a suitable mix design has been taken into account and local material sources should be trialled.
- n Sika® ViscoCrete®-SF 12 should not be added to dry cement.
- n Sika® ViscoCrete®-SF 12 should be added with the mixing water.
- n When using Sika® ViscoCrete®-SF 12 for the production of self compacting concrete, suitable mix design must be taken into account.

**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 application fields.

**Health and Safety Information** For information and advice on the safe handling, storage and disposal of chemical products, users should 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.



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