

Sika Viscocrete®20HE

High Performance Super-plasticizer

Product Description	Sika® Viscocrete®-20 HE is a third generation super-plasticiser for concrete and mortar. It meets the requirements for high range water reducing super-plasticisers according to EN 934-2
Uses	<p>Sika® Viscocrete®-20 HE is especially suitable for the production of concrete mixes which require high early strength development, powerful water reduction and improved flow ability.</p> <p>Sika® Viscocrete®-20 HE is mainly used for the following applications:</p> <ul style="list-style-type: none">■ Precast concrete■ Fast-track concrete■ In situ concrete requiring fast stripping time■ Self Compacting Concrete (SCC)
Advantages	<p>Sika® Viscocrete®-20 HE as a powerful super-plasticiser acts through several different mechanisms including surface adsorption and sterical effects separating the binder particles. The following advantageous properties are achieved:</p> <ul style="list-style-type: none">■ Pronounced increase in the early strength development, resulting in very economic stripping times for precast and in situ concrete.■ Extremely powerful water reduction, resulting in high density, high strength and reduced permeability for water etc.■ Superior plasticising effect, resulting in improved flow ability, placing and compacting behaviour.■ Reduced energy costs for steam cured precast elements■ Especially suitable for the production of Self Compacting Concrete (SCC)■ Improved shrinkage and creep behaviour■ Reduced closure times for repairs to roads and runways. <p>Sika® Viscocrete®-20 HE does not contain chlorides or any other ingredients which promote the corrosion of steel. It is therefore suitable in reinforced and pre-stressed concrete structures.</p>
Product Data	
Colour & Type	Light brownish liquid, clear to slightly cloudy Aqueous solution of modified polycarboxylates
Storage	Stored in dry conditions at temperatures between +5 °C and +35 °C. Protect from direct sunlight Protect from frost.



Shelf life	12 months from date of production if stored properly in original unopened packing.
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Packaging	200 Kg drums and 1100 Kg flow bins Bulk supply in tanker trucks possible on demand
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Technical Data

Density (at 20 °C)	Approximately 1.09 kg/Lt ± 0.01kg/Lt
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pH Value	4.5 ± 1
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Conventional Dry Material content	40 ± 1.0 M.-%
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Viscosity	Ca. 145 mPa s at +23°C
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Total Chloride Ion Content % w/w	≤ 0.1 M.-%
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Equivalent Sodium Oxide as % Na₂O	≤ 2.0 %
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Notes on application

Dosage	0.2% - 2.0% by weight of cement. For medium workability: 0.2 - 0.8% by weight of cement. For concrete of high workability, very low water/cement ration for self compacting concrete: 1.0-2.0% by weight of cement.
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Dispensing	Sika® Viscocrete®-20 HE 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, which is depending on the mixing conditions and mixer performance, of at least 60 seconds is recommended. To avoid excess water in the concrete, the final dosage must begin only after 2/3 of the wet mixing time.
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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.
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Compatibility	Sika® Viscocrete®-20 HE may be combined with many other Sika Products. Important: Always conduct trials before combining products in specific mixes and contact our Technical Service Department for information and advice about any specific combinations.
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Application Method	The standard rules of good concreting practice, concerning production and placing, are to be followed. Laboratory trials shall be carried out before concreting on site, especially when using a new mix design or producing new concrete components. Fresh concrete must be cured properly and curing applied as early as possible.
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Cleaning of tools	Clean all tools and application equipment with water immediately after use. Hardened/ cured material can only be removed mechanically.
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Notes on Application

When using Sika® Viscocrete®-20 HE a suitable mix design has to be taken into account and local material sources shall be trialled.

Sika® Viscocrete®-20 HE shall not be added to dry cement.

Excessive water addition or overdosing may cause bleeding or segregation.

Self Compacting Concrete:

When using Sika® Viscocrete®-20 HE to produce self compacting concrete, suitable mix design have to be used.

Frost:

If frozen and/or if precipitation has occurred, Sika® Viscocrete®-20 HE may be used after thawing slowly at room temperature and intensive mixing.

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.

Safety instructions

Safety precautions

Product may cause skin irritation. Wear gloves and goggles and apply barrier cream to hands. In contact with eyes or mucous membrane, flush immediately with plenty of warm water and seek medical attention without delay.

Ecology

Do not dispose of into water or soil but according to local regulations.

Transport

Non-hazardous.

Toxicity

Non-toxic

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 practice, the differences in materials, substratum 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 proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users should always refer to the most recent issue of the Technical Data Sheet for the product concerned, copies of which will be supplied on request



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