Construction

Sika ViscoCrete® HE-230

Superplasticiser for production of high early strength concrete and mortar

Product Desciption

Sika Viscocrete HE-230 is a superplasticizer for production of cementitious materials.

Uses

Sika Viscocrete HE-230 is a third generation superplasticizer for production of concrete and mortar, especially used for SCC concrete and mortar in the precast industry.

- Improved flow ability
- Concrete with high water reduction
- A combination of high water reduction and high flow ability
- SCC concrete for precast production

High water reduction, improved flow ability without retardation and high early strength all have a positive impact of the above mentioned uses.

Sika Viscocrete HE-230 acts trough several different mechanisms including surface adsorption and sterical effects separating the cementitious binder particles. Parallel with the hydration process the following advantageous properties are achieved:

- Extremely high water reduction
- High compaction and strength
- Excellent flow ability
- Reduction of problems during pouring and vibration
- Especially suitable for self-compacting concrete
- High early strength

Product Data

Technical Data

Chemical base	Modified polycarboxylat
Colour:	Light yellow-brownish liquid
Homogeneity:	Homogeneous when stirring
Density, kg/l:	1.05 ± 0.02
Conventional dry material content, weight-%:	26.0 ± 1.5 (EN 480-8)
pH-value:	4.4 ± 1.0
Equivalent alkali content, Na_2O, weight-%:	≤ 0,5
Chloride content, weight-%	≤ 0,01
Normal dosage, weight-% of powder (cement, fly ash, micro silica):	0.2 – 1.5
Side-effects within range of dosage:	None

	Side-effects above range of dosage: Retardation / segregation
Product certification	Sika ViscoCrete HE-230 does not contain chloride or other material that increase corrosion. It is therefore safe to use for reinforced concrete. Sika ViscoCrete HE-230 is CE marked.
Concrete production Dosage	Sika Viscocrete HE-230 is added to the gauging water or added with it into the concrete mixer. A delayed addition after the gauging water will increase the efficiency of Sika Viscocrete HE-230. To avoid excess water in the concrete, the final dosage must begin only after 40 seconds of the wet mixing time. In some cases it is necessary to dose above recommended dosage. In these situations we recommend it happens in consultation with our technical service.
Notes on Application / Limitations	For the sake of working environment it is a great advantage to work with SCC since the concrete does not require vibration for pacing and compaction. Sika ViscoCrete HE-230 opens new possibilities by eliminating noisy vibration equipment and therefore implements possible ways of new production techniques and routines.
Curing	The standard rules of good concrete practice, concerning production and placing are to be followed. Fresh concrete must be cured properly and curing applied as early as possible. Protection against drying out should be taken in consideration of possible later curing. Proper curing compound or plastic are considered proper protection. By adding small amounts of Crackstop polypropylene fibres (0.6 kg/m^3) the concrete quality is improved and crack formation is minimized.

Important

SCC concrete	Sika ViscoCrete HE-230 is often used to produce SCC concrete, both with and without steel fibres. In these situations a suitable mix design has to be used. In case of doubt, please contact out Technical Service.
Storage Conditions / Shelf Life	12 months from date of production if protected frost at temperatures between +5°C and +25°C. If frozen and/or precipitation has occurred, Sika® ViscoCrete HE-230 may be used after thawing slowly at room temperature and intensive mixing. The product does not chance characteristics. If stored in containers, Sika Danmark A/S recommends stirring before use, since even small contamination can cause precipitation of dry material. When used the product must be stirred approx. half an hour a day.
Combinations	Sika® ViscoCrete HE-230 can be combined with several additional admixtures from Sika Danmark A/S. In case of combination, individual dosage is recommended. Additional trials are recommended in case of combination with other admixtures. Please contact our technical service.
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

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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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