

Sika® ViscoCrete® -20 HE

High performance superplasticiser

Product Description Sika® ViscoCrete®-20 HE is a third generation superplasticiser for concrete. It meets the requirements for high range water reducing superplasticisers according to EN 934-2.

Uses Sika® ViscoCrete®-20 HE is especially suitable for the production of concrete mixes which require high early strength development, powerful water reduction and improved flowability. Sika® ViscoCrete®-20 HE is mainly used for the following applications:

- Precast concrete
- Fast-track concrete
- In situ concrete requiring fast stripping time
- Self-Compacting Concrete (SCC)

Characteristics / Advantages Sika® ViscoCrete®-20 HE as a powerful superplasticiser acts through several different mechanisms including surface adsorption and sterical effects separating the binder particles. The following advantageous properties are achieved:

- 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 flowability, 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

Sika® ViscoCrete®-20 HE 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.

Product Data

Appearance/Colours Light brownish liquid, clear to slightly cloudy

Packaging 200 l drums / 1000 l containers / Bulk

Storage Conditions / Shelf-Life 12 months from date of production if stored properly in original, unopened packaging, at temperatures between +5°C and +35°C. Protect from direct sunlight and frost.

Technical Data

Chemical base Aqueous solution of modified polycarboxylates

Density Specific density: 1.07 – 1.11 kg/l (at +20°C)



pH value 4.5 +/- 1.0

Chloride content ≤ 0.1 M.-%

Na₂O eq. content ≤2.0%

Application Details

Dosage Recommended dosage:
For medium workability: 0.2 - 0.8% by weight of cement.
For concrete of high workability, very low water/cement ration and for self compacting concrete: 1.0 - 2.0% by weight of cement.

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.

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.

Notes on Application Limitations 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.
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.

Information 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 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, must 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 must always refer to the most recent issue of the Product Data Sheet for the product concerned, copies of which will be supplied on request or accessed on the Internet under www.nga.sika.com



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