

## PRODUCT DATA SHEET

# Sika® ViscoCrete®-20 HE PK

## High Performance Superplasticizer

### DESCRIPTION

Sika® ViscoCrete®-20 HE PK is a third generation superplasticizer for concrete and mortar. The product is suitable for tropical and hot climatic conditions.

### USES

Sika® ViscoCrete®-20 HE PK is especially suitable for the production of concrete mixes which require high early strength development, powerful water reduction and excellent flowability.

Sika® ViscoCrete®-20 HE PK is mainly used for the following applications:

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

### CHARACTERISTICS / ADVANTAGES

Sika® ViscoCrete®-20 HE PK as a powerful superplasticizer acts by different mechanisms.

Through surface adsorption and sterical effects separating the binder particles the following properties are achieved:

- Pronounced increase in the early strength development, resulting in very economic stripping times for pre-cast and in situ concrete
- Extremely powerful water reduction, resulting in high density, high strengths and reduced water permeability etc.
- Excellent plasticizing effect, resulting in improved flowability, placing and compacting behavior
- Reduced energy cost for steam cured pre-cast elements
- Especially suitable for the production of Self Compacting Concrete (SCC)
- Improved shrinkage and creep behavior
- Reduced closure times for repairs of roads and runways

Sika® ViscoCrete®-20 HE PK does not contain chlorides or other ingredients which promote the corrosion of steel reinforcement. It is therefore suitable for reinforced and pre-stressed steel.

### APPROVALS / STANDARDS

Sika® ViscoCrete®-20 HE PK complies with the requirements for superplasticizers according to ASTM C494 Type F.

## PRODUCT INFORMATION

|                            |                                                                                                                                                                                          |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Chemical Base              | Aqueous solution of modified polycarboxylates                                                                                                                                            |
| Packaging                  | 1000 ltr IBC<br>200 ltr drum<br>20 ltr plastic can<br>05 ltr jerry can<br>Bulk supply in tanker                                                                                          |
| Appearance / Colour        | Light brownish liquid, clear to slightly cloudy                                                                                                                                          |
| Shelf Life                 | 12 months minimum from date of production if stored properly in original unopened packaging                                                                                              |
| Storage Conditions         | The product must be stored properly in undamaged, unopened original sealed packaging in dry conditions at temperatures between +5° C and +35° C. Protect from direct sunlight and frost. |
| pH-Value                   | ≥4                                                                                                                                                                                       |
| Total Chloride Ion Content | Nil (EN 934-2)                                                                                                                                                                           |
| Specific gravity           | 1.11 ± 0.03                                                                                                                                                                              |

## APPLICATION INFORMATION

|                    |                                                                                                                                                                                                                                                                                                                                                                 |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Recommended Dosage | For medium workability: 0.2-0.8% by weight of cement<br>For concrete of high workability, very low water/cement ratio and for Self Compacting Concrete: 1.0 – 2.0% by weight of cement.<br>It is advisable to carry out trial mixes to establish the correct dosage.                                                                                            |
| Compatibility      | Sika® ViscoCrete®-20 HE PK may be combined with the following Sika Products among others: <ul style="list-style-type: none"><li>▪ Sika Pump</li><li>▪ Sika Ferrogard-901</li><li>▪ Sika Fume</li><li>▪ Sika Rapid</li><li>▪ Sika Stabilizer-229</li><li>▪ Sika Retarder and Sika Retardol 25</li></ul> Trials are always recommended before combining products. |
| Dispensing         | Sika® ViscoCrete®-20 HE PK is added to the gauging water or added with it into the concrete mixer. For optimum utilization of the high water reduction property we recommend thorough mixing at a minimal wet mixing time of 60 seconds.                                                                                                                        |

## 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.

## LIMITATIONS

When accidental overdosing occurs (within reason), apart from retardation of the initial set and increased bleeding, no detrimental effect will take place. When using Sika® ViscoCrete®-20 HE PK to produce Self Compacting Concrete, a suitable mix-design has to be used.

**Note:** 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.

## ECOLOGY HEALTH AND SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

### CLEANING OF TOOLS

Clean all equipment and tools with water immediately after use.

## 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.

## 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. It may be necessary to adapt the above disclaimer to specific local laws and regulations. Any changes to this disclaimer may only be implemented with permission of Sika® Corporate Legal in Baar.

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#### **Product Data Sheet**

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