Construction

Sika® ViscoCrete®-510 P

High-performance superplasticizer

Product Description	Sika® ViscoCrete®-510 P is a high-performance superplasticizer and water reducer in powder form, based on Sika® ViscoCrete® polycarboxylate (PCE) polymer technology.
Uses	Sika® ViscoCrete®-510 P is formulated for use in cementitious dry mortar or dry concrete applications. Especially suitable for cements with high C_3A, sulphate and alkali content but also for a wide range of calcium sulphate or ternary binder systems. Sika® ViscoCrete®-510 P is universally applicable and can be used for the production of: ■ Calcium sulphate- and cement-based screeds and self-levelling screeds and underlayments ■ Non-shrink and anchor grouts, tile adhesives, injection and repair mortars ■ Building plaster, render, stucco, bonding/filling compound, molding plaster, dental & medical plaster ■ Self-levelling and self-compacting concretes with low w/c-ratio
Characteristics / Advantages	Sika® ViscoCrete®-510 P is adsorbed onto the surface of the binder particles and due to repulsive forces from the effect known as steric hindrance, the solid binder particles are very effectively dispersed in the mix. The benefits of Sika® ViscoCrete®-510 P include, but are not limited to the following: ■ High water reduction at low dosage, resulting in shorter drying times, higher densities and strengths ■ Greatly reduced processing and compaction efforts due to very good flow and self-levelling behaviour ■ Particularly high activity in systems with pH-value > 12 ■ Reduced mixing times due to fast adsorption ■ High initial flow, long slump life and processing time ■ Improved shrinkage and creep behaviour ■ Low influence on hydration, resulting in low activator/accelerator consumption ■ Compatible with cements with high C_3A, sulphate and alkali content ■ Compatible with other additives (e.g. fruit acid, such as citric acid) ■ Free of formaldehyde and ammonia
Approval / Standards	Confirms to EN 934-2, Table 3.1/3.2 (superplasticizer)

Product Data

Appearance / Colour	White powder
Chemical Base	Modified polycarboxylate
Density (DIN 1060)	Bulk density: 0.6 ± 0.1 g/cm³
pH Value	4.0 ± 0.5 at +23°C (40% solution)
Alkali content	≤ 2.0 % (Na_2O-equiv.)
Total Chloride Ion Content	≤ 0.1 %

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Packaging	20 kg bags / 800 kg per pallet; 500-kg- bigbag
Storage	Dry storage at temperatures up to 40°C. Protect from direct sunlight. 24 months shelf life from date of production, if stored properly in undamaged, unopened, original sealed packaging.

Processing

Consumption / Dosage	Depending on the application the dosage rate of Sika® ViscoCrete®-510 P varies from 0.05 to 0.5% of the binder weight. At high dosage and/or at low temperatures Sika® ViscoCrete®-510 P can also cause retardation. At too high dosage, the mixture may also tend to repel water or to separate. Note: Preliminary testing is required to determine the exact dosage for your specific conditions. Please contact our Technical Services Department for more information and advice.
Dispensing / Mixing	Sika® ViscoCrete®-510 P is added to the dry mix. For optimum utilisation of the high water reduction capability, a minimum wet mixing time of 30 seconds is recommended for the mortar before use.
Compatibility	Sika® ViscoCrete®-510 P may be combined with most existing redispersible powders, accelerators, retarders and other additives used in dry-mortar applications. In order to achieve an optimal effect with respect to initial liquefaction and slump keeping, the combination with another Sika® ViscoCrete® Powder is possible. Important: Always conduct trials before combining products in specific mix designs and contact our Technical Services Department for any additional information and advice concerning specific combinations with other products.

Important Notes

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.
Health, Safety and Environment Information	Product code BZM 1 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	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.

Sika Deutschland GmbH
Peter-Schuhmacher-Str.8
69181 Leimen
GERMANY

Phone +49 62 24 / 988-04
Telefax +49 62 24 / 988-502
www.sika.de

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