

PRODUCT DATA SHEET

SikaControl®-500 WT

WATER RESISTING AND CRYSTALLINE WATERPROOFING CONCRETE ADMIXTURE THICKNESS MORE 300 MM.

DESCRIPTION

SikaControl®-500 WT is a combined water resisting and crystalline waterproofing admixture used to reduce the permeability of concrete and to enhance the self-healing abilities of the concrete more 300 mm.

USES

SikaControl®-500 WT has been specifically formulated to produce high quality waterproof concrete. SikaControl®-500 WT treated concrete is used as a part of the Sika Watertight Concrete System. SikaControl®-500 WT can be used in any below/in/ underground watertight structures such as:

- Basements
- Parking garages
- Tunnels
- Water retaining structures
- Dams
- Waste water treatment structures
- Underground commercial facilities (malls, transportation hubs etc.)

CHARACTERISTICS / ADVANTAGES

SikaControl®-500 WT consists of a mixture of cements, amino alcohols and fillers. These active materials will form non-soluble materials throughout the pore and capillary structure of the concrete and seal the concrete permanently against penetration of water and other liquids. In addition the special formula and ingredients of SikaControl®-500 WT enhances the self-healing properties of concrete and will improve the ability to heal cracks in concrete.

SikaControl®-500 WT has the following characteristics and benefits:

- Reduced water penetration under pressure
- Reduced water absorption
- Enhancement of self-healing properties of the concrete
- Improvement in resistance against chemical attack
- Reduced vapour transmission

APPROVALS / CERTIFICATES

Conforms to the requirements of EN 934 – 2, Table 9

PRODUCT INFORMATION

Composition	Mixture of cements, amino alcohols and fillers
Packaging	14 kg/pail (1.75 kg x 8 soluble bags) 14 kg/pail (1.00 kg x 14 soluble bags)
Appearance / Colour	Greyish powder
Shelf life	12 months from the date of production If stored properly in undamaged, original, sealed packaging.
Storage conditions	Storage at temperatures between 5 °C and 30 °C. Protect from direct sunlight, moisture, frost and contamination.
Bulk density	750 kg/m ³ ± 50

pH-Value	12±1.0
Total chloride ion content	<0.1%
Equivalent sodium oxide	≤ 3%

TECHNICAL INFORMATION

Concreting guidance	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.
Concrete mix design	For waterproof concrete: Concrete mix design depends on local requirements and / or local standards for watertight concrete systems. For Sika® Watertight Concrete: SikaControl®-500 WT has been formulated for use in concrete with a minimum binder content of 350 kg/m ³ and a maximum w/b-ratio of 0.45. Depending on the specific mix design the dosage of HRWR/superplasticizer has to be evaluated in order to achieve a S3 / F4 consistence class (EN 206-1). Laboratory trials are always recommended to evaluate and confirm actual water reduction and consistence class.
Effect on setting	The chemical and physical composition of the components, concrete, SikaControl®-500 WT and concrete and ambient temperature can affect the setting time of the concrete.

APPLICATION INFORMATION

Recommended dosage	3.5 kg of SikaControl®-500 WT per m ³ of concrete.
Compatibility	SikaControl®-500 WT may be combined with many other Sika products. Note: Always conduct trials before combining products in specific mixes and contact Sika technical service for more information and advice.
Dispensing	<ul style="list-style-type: none"> ▪ SikaControl®-500 WT is added at the time of batching to the concrete. ▪ Depending on the operation it is either added to the gauging / mixing water to form a very thin slurry and add it into the concrete mixer. ▪ Or add SikaControl®-500 WT to the fine and coarse aggregate. The aggregates and SikaControl®-500 WT have to be mixed thoroughly for about 120 seconds before adding cement and gauging / mixing water. ▪ 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. ▪ The w/b-ratio and consistency control remains the responsibility of the concrete producer. Laboratory trials are recommended to evaluate and confirm the actual flowability and workability.
Restrictions	When using of SikaControl®-500 WT in combination with SCM the SCM content should be limited to max. 40 % of total binder content. (Fly ash / GGBFS / Silica fume).

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.

ECOLOGY, HEALTH AND SAFETY

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.

IMPORTANT CONSIDERATIONS

When using SikaControl®-500 WT a suitable mix design has to be taken into account and local material sources shall be tested.

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.

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