

PRODUCT DATA SHEET

SikaControl®-40

SHRINKAGE REDUCING ADMIXTURE

DESCRIPTION

SikaControl®-40 is a liquid based shrinkage reducing admixture used to produce high performance concrete. SikaControl®-40 increases cohesion within the concrete pore system which reduces water loss and reduces drying shrinkage to improve concrete durability.

USES

- Structures with strict demands regarding crack width limitations
- In concrete where low drying shrinkage is important
- Increasing the joint spacing of situ concrete floors without increasing the risk of shrinkage cracking
- In thin bonded topping slabs, to minimise the differential shrinkage from the existing substrate
- In concrete elements which are restrained against shrinkage
- Concrete in marine environments requiring enhanced durability
- Watertight and water retaining concrete structures

CHARACTERISTICS / ADVANTAGES

- Reduced drying shrinkage
- Reduced drying shrinkage cracking
- Reduced slab curling potential
- Reduced permeability
- Increased concrete durability
- Suitable for use in reinforced and pre-stressed concrete
- Does not contain chlorides or any other substances which promote steel corrosion

PRODUCT INFORMATION

Chemical Base	Hydroxyl combination
Packaging	230 kg drums bulk
Appearance / Colour	Reddish liquid
Shelf Life	12 months from date of production
Storage Conditions	The product must be stored in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +5 °C and +30 °C. Always refer to packaging.
Density	~1,0 kg/l (at +20 °C)
pH-Value	~11,5
Total Chloride Ion Content	< 0,10 M-% (chloride-free)

TECHNICAL INFORMATION

Concreting Guidance	The standard rules of good concreting practice, concerning production and placing must be followed. Laboratory trials must 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	When using SikaControl®-40, a suitable mix design must be calculated. The local material sources used within the mix design must always be trialled and approved for suitability before commencement of the project.
Effect on Setting	The application of SikaControl®-40 will result in retarded setting of the concrete and in cold ambient temperatures this effect will be increased. When combining SikaControl®-40 with retarding admixtures, their combined retardation effect and the delay in setting time must be taken into account.

APPLICATION INFORMATION

Recommended Dosage	0,5–2,0 % by weight of cement Note: Application at higher dosages will increase the retardation effects.
Compatibility	SikaControl®-40 may be combined with many other Sika products. Trials must always be carried out before combining products in specific mixes. Contact Sika Technical Services for additional information and any specific combinations.
Dispensing	SikaControl®-40 must be measured using suitable equipment then mixed with the batching gauging water or both added together at the same time into the batching plant concrete mixer.
Restrictions	SikaControl®-40 must not be added to dry cement.

LIMITATIONS

- If frozen and/or if separation of the product has occurred, SikaControl®-40 may be used after thawing slowly at room temperature and intensive mixing. Before application, suitability tests must be performed.
- Independent tests confirm, that at a dosage of 2 % of SikaControl®-40 by weight of cement, shrinkage over the long term can be reduced by as much as 40 %. However the actual amount of shrinkage reduction is also dependant on the concrete mix design and the other components of the concrete.
- SikaControl®-40 will reduce drying shrinkage. It will not eliminate cracking. The reduction of cracking is primarily dependant on good engineering design, that allows for concrete shrinkage by incorporating well designed and properly allocated shrinkage control joints.
- Kiln drying of the fresh concrete containing SikaControl®-40 has to be carried out outdoors or with constant ventilation.

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.

LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the declared data for this product may vary from country to country. Please consult the local Product Data Sheet for the exact product data.

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 Safety Data Sheet (SDS) 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.

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