

Product Data Sheet

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Sika® Control 40

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Shrinkage Reducing Admixture

Description Sika® Control 40 is a shrinkage reducing admixture used to produce high performance concrete with greatly reduced drying shrinkage.

Where to Use

- In situ concrete floors where reduced shrinkage minimizes risk of shrinkage cracking for the same joint spacing, and allows greater joint spacing without increasing the risk of shrinkage cracking.
- In thin bonded topping slabs, to minimize the difference in shrinkage between the new topping and the existing substrate.
- In concrete elements where resistance to shrinkage is of paramount importance.
- For durable concrete in marine environments.
- For watertight concrete in reservoirs, sewage treatment plants, and dams.

Advantages

- Greatly reduced drying shrinkage.
- Reduction in drying shrinkage cracking.
- Reduces the potential for slab curling.
- Substantially improved impermeability, resulting in improved concrete durability.

Typical Data**Packaging**

18.9 L (5 US gal.) pail
 208 L (55 US gal.) drum
 1040 L (275 US gal.) IBC container
 Bulk delivery

Colour and Form

Pink liquid

Shelf Life and Storage

1 year when stored in dry warehouse condition between 10 - 27°C (50 - 80°F). Store at above 5°C (40°F). If frozen, thaw and agitate thoroughly to return to normal state.

Properties**Specific Gravity**

Approx. 1.0

How to Use**Dosage**

Dosage rates will vary according to materials used, ambient conditions and the requirements of a specific project. Sika recommends dosage at 520 - 1950 mL/100 kg of cementitious material for general concrete applications.

Dosage rates outside the recommended range may be used when unusual project conditions require special consideration. In this case, please contact your Sika Canada Technical Sales Representative for further information.

Laboratory tests show that, at a dosage of 1950 mL/100 kg of Sika® Control 40, shrinkage over the long term can be reduced by as much as 40%. However, the amount of shrinkage reduction is dependent on the mix design and the components of the concrete.

When using Sika® Control 40, lab and field tests are always recommended to verify the performance and handling characteristics of the specified concrete mix.

Mixing

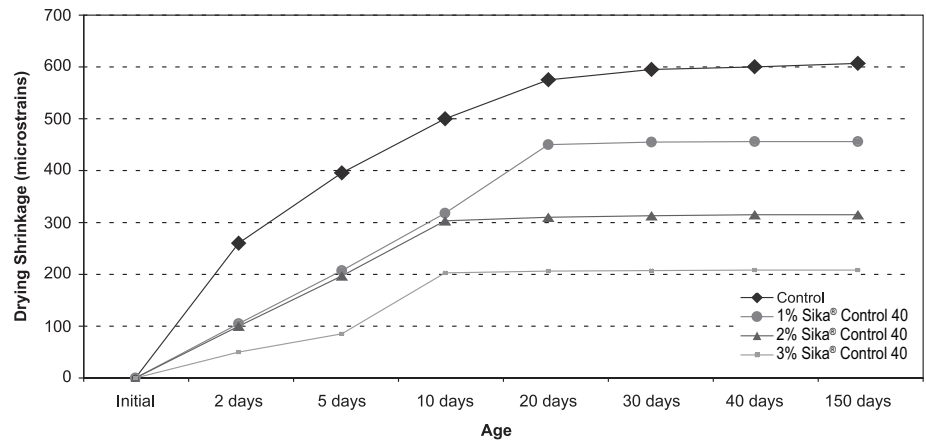
The required dosage of Sika® Control 40 should be added to the concrete at the batching plant, with the gauging water or poured into the concrete simultaneously with it. It may also be added in the ready-mix truck at the point of discharge, but an additional mixing time of 5 minutes is required and the concrete should be visually checked for uniform consistency.

Combination with other admixtures:

Sika® Control 40 is highly effective as a single admixture or in combination with other Sika® admixtures. Do not pre-mix with other admixtures.



Typical Shrinkage Results in Mortar



Note: Above results should be used strictly as a guide only. Different results should be expected based on testing method and condition of test. Determination of drying shrinkage of Portland and blended cement mortars. Dose rates of Sika® Control 40 are based on weight of cement.

Clean Up

Use personal protective equipment (chemical resistant goggles/gloves/clothing). Without direct contact, remove spilled or excess product and place in suitable sealed container. Dispose of excess product and container in accordance with applicable environmental regulations.

Limitations

- Sika® Control 40 will reduce drying shrinkage. It will not eliminate cracking. The reduction of cracking is dependant on good engineering design that allows for concrete shrinkage by incorporating well designed and properly located shrinkage control joints.
- It is essential to protect the concrete from water evaporation during the crucial early age period. We recommend the use of an evaporation retardant and curing compounds for this purpose.
- When Sika® Control 40 is used for the production of air entrained concrete, a higher dosage of the air entraining admixture may be required.
- Sika® Control 40 will cause retardation when used during cold weather concreting. This effect can be reduced by adding Sika® Rapid-1 or other accelerating admixtures.

Health and Safety Information

For information and advice on the safe handling, storage and disposal of chemical products, users should refer to the **most recent Material Safety Data Sheet** containing physical, ecological, toxicological and other safety-related data.

**KEEP OUT OF REACH OF CHILDREN
FOR INDUSTRIAL USE ONLY**

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, within their shelf life. 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 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 should 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 can be accessed in the Internet under www.sika.ca.



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