

# Sika Control<sup>®</sup> 40

## Shrinkage Reducing Admixture

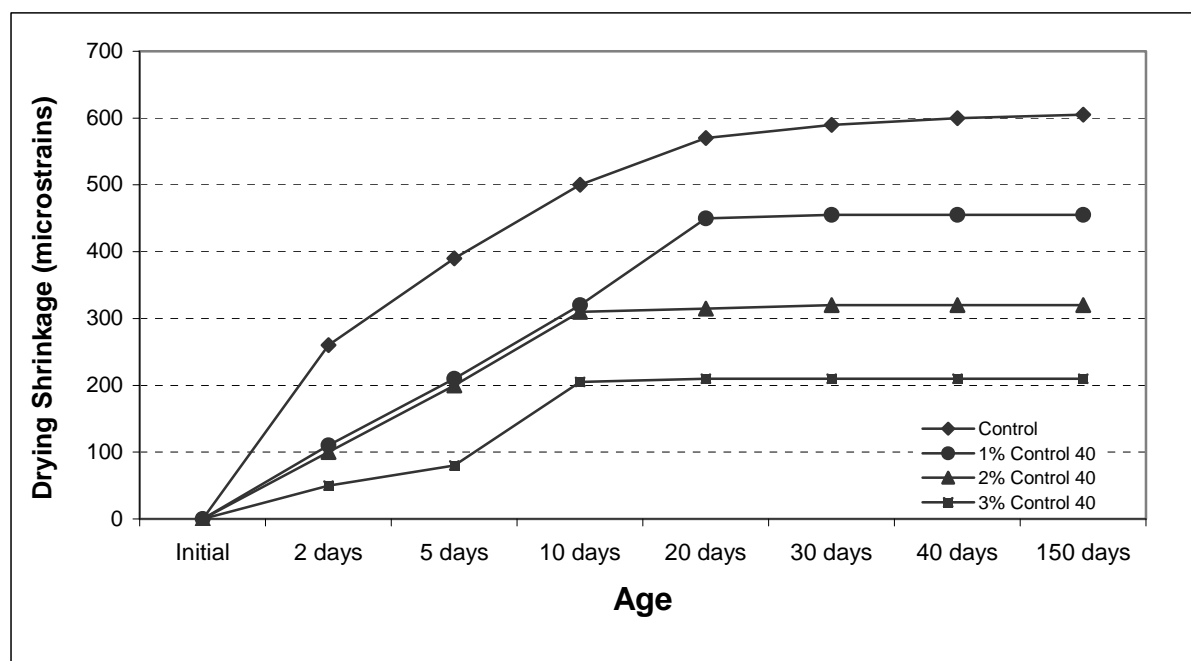
Construction

<b>Description</b>	Sika <sup>®</sup> Control 40 is a shrinkage reducing admixture used to produce high performance concrete with greatly reduced drying shrinkage.
<b>Uses</b>	<ul style="list-style-type: none"> <li>• In premixed and precast concrete elements where lower concrete drying shrinkage is required.</li> <li>• Minimises risk of shrinkage cracking for the same joint spacing.</li> <li>• Allows greater joint spacing without increasing the risk of shrinkage cracking.</li> <li>• In thin bonded topping slabs, to minimise the difference in shrinkage between the new topping and the existing substrate.</li> <li>• In concrete elements which are restrained against shrinkage.</li> <li>• For durable concrete in marine environments.</li> <li>• For watertight concrete in reservoirs, sewage treatment plants, dams.</li> </ul>
<b>Advantages</b>	<ul style="list-style-type: none"> <li>• Greatly reduced drying shrinkage.</li> <li>• Reduction in the potential for drying shrinkage cracking.</li> <li>• Reduces the potential for slab curling.</li> <li>• Substantially improved impermeability, resulting in improved concrete durability.</li> </ul>
<b>Shelf life</b>	Stored at temperatures between 5°C and 35°C in unopened original containers protected from direct sunlight and frost, shelf life is at least one (1) year.
<b>Instructions for Use</b>	
<b>Dosage</b>	Recommended rate is 1.0 – 4.0% by weight of cement.
<b>Mixing</b>	<p>The required dosage of Sika<sup>®</sup> 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 into the transit mixer 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.</p> <p>Sika<sup>®</sup> Control 40 is classified as non hazardous for transportation.</p>
<b>Specification Type</b>	<p>Sika<sup>®</sup> Control 40 meets and exceeds all requirements of Australian Standard 1478.1-2000 as Special Purpose Admixture Type (SN).</p> <p>Queensland Government Department of Main Roads approved.</p>

## Technical Data

Form	Liquid hydroxy combinations
Colour	Clear/Red
Density (20°C)	1.0 kg/litre approximately
pH Value (20°C)	10.0 ± 1.0
Chloride content	No added chlorides
TEA content	Does not contain triethanolamine
Air entrainment	May have an effect depending on mix design
Effect on setting time	May retard concrete at lower temperatures
Packaging	20 litre drums 205 litre drums (non-returnable) Bulk delivery

## 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.

Mortar prisms were not stored according to AS2350.13.

Determination of drying shrinkage of Portland and blended cement mortars.

Dose rates of Sika® Control-40 are based on weight of cement.

---

### Important Notes

- Independent tests confirm that, at a dosage of 2% of Control 40 by weight of cement, shrinkage over the long term can be reduced by as much as 40%. However the amount of shrinkage reduction is dependant on the mix design and the components of the concrete
  - When using Sika® Control 40, plant and site trials are always recommended to verify the performance and handling characteristics of the design concrete mix.
  - 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 Sika® Film evaporation retardant and Antisol curing compounds for this purpose. Refer to the Technical Data Sheets for information.
  - 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 any written recommendations, or from any other advice offered
  - Sika® Control 40 is compatible with other Sika admixtures, however, they must be added separately. Do not pre-mix Sika® Control 40 with other admixtures, and always conduct trials to test compatibility.
- 

### Handling Precautions

- Avoid contact with the skin, eyes and avoid breathing it's vapour.
  - Wear protective gloves when mixing or using.
  - If poisoning occurs, contact a doctor or Poisons Information Centre.
  - If swallowed, do NOT induce vomiting. Give a glass of water.
  - If skin contact occurs, remove contaminated clothing and wash skin thoroughly.
  - If in eyes, hold eyes open, flood with water for at least 15 minutes and see a doctor.
  - A full Material Safety Data Sheet is available from Sika on request.
- 

### Important Notification

The information, and, in particular, the recommendations relating to the application and end-use of Sika's 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 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 proprietary rights of third parties must be observed. All orders are accepted subject of our terms and conditions of sale. Users should always refer to the most recent issue of the Australian version of the Technical Data Sheet for the product concerned, copies of which will be supplied on request.

PLEASE CONSULT OUR TECHNICAL DEPARTMENT FOR FURTHER INFORMATION.

---



# Construction



**Sika Australia Pty Limited**  
ABN 12 001 342 329

**[www.sika.com.au](http://www.sika.com.au)**  
Tel: 1300 22 33 48

**Sika® Control 40**  
Page 4 of 4