

# Sika® Control NS

## Shrinkage Reducing and Compensating Admixture

**Description** Sika® Control NS is a shrinkage-reducing and compensating admixture. The effect of the dual-mechanism to control shrinkage allows to produce high-performance concrete with greatly reduced potential for drying shrinkage, cracking and curling.

**Where to Use** Sika® Control NS can be used in any type of cast-in-place or precast/prestressed concrete, grout, mortar or any other cementitious mixes. Some of the applications of Sika® Control NS may include:

- Concrete floors, to compensate for drying shrinkage cracking, control curling and increased joint spacing.
- In thin bonded topping slabs, to minimize the difference in shrinkage between the new topping and the existing substrate.
- In concrete elements which are restrained against shrinkage.
- For bridge decks and parking structures.
- For mass concrete structures such as mat foundations, dams and other structures requiring large thicknesses of concrete exceeding 1 m (3 ft).
- For durable concrete in marine environments.
- For watertight concrete in reservoirs, sewage treatment plants, and dams.

**Advantages**

- Dual-mechanism control effect on the concrete shrinkage giving predictable and reproducible results.
- Controlled expansion mechanism for producing a volume stable concrete.
- Greatly reduced cracking potential related to autogenous shrinkage.
- Reduces curling and allows for increased joint spacing.
- Reduces porosity and permeability, resulting in improved concrete durability.
- Reduces contraction forces induced from drying shrinkage thus minimizing risks of long-term and unsolicited cracks formation.

**Standards and compliance** Sika® Control NS meets the requirements of the following standards:  
- ASTM C494, Type S  
- NSF/ANSI 61

<b>Typical Data</b>	
<b>Packaging</b>	11.34 kg (25 lb) dissolvable bag and 907 kg (2000 lb) FIBC*
<b>Colour and Form</b>	Off-white to light brown powder
<b>Shelf Life and Storage</b>	1 year when stored in dry warehouse conditions. Store in dry environment; exposed, unprotected material will absorb moisture and carbon dioxide from the air resulting in reduced product performance.
<b>Properties</b>	
<b>Specific Gravity</b>	Approx 2.71

\* Flexible Intermediate Bulk Container

**How to Use**

**Dosage** The recommended dosage range for Sika® Control NS is from 2 to 7 % by weight of cement mass for concrete, mortars or grouts. Sika® Control NS, at a 5 % dosage rate, has shown significant reduction in shrinkage cracking in independent lab testing.

When trial mixes are performed for mix approval, ensure that all materials used are representative of the materials to be used during actual production.

For more information on the optimal dosage regarding the mix design, contact Sika Canada.



<b>Mixing</b>	<p>Sika® Control NS can be added to the concrete either along with the other powder components or after all the other ingredients are added to the concrete mixer or truck. If it is added after all the other ingredients, adequate mixing should be ensured. The 11.34 kg (25 lb) dissolvable bags are designed to disintegrate through a combination of wetting and grinding of the paper during concrete mixing.</p> <p><b>Combination with SCMs and other admixtures:</b> Sika® Control NS is compatible with commonly-used SCMs and other Sika® admixtures. Do not premix with other admixtures.</p>
<b>Curing</b>	<p>The performance of Sika® Control NS is dependent on proper curing practices. To maximize the shrinkage reducing and compensating effects, it is recommended to follow proper curing practices by wet cure only as per ACI 308 recommendations.</p>
<b>Clean Up</b>	<p>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.</p>
<b>Limitations</b>	<ul style="list-style-type: none"><li>■ Do not introduce dissolvable bags into concrete mixes with low water to cementitious material ratios and smaller size aggregates as these mixes may not develop sufficient mixing energy to fully dissolve the bags. Always determine the capacity of the bags to dissolve by pretesting mix designs and batch sequence.</li><li>■ Not following proper curing practices will lead in a decrease of efficiency of the admixture.</li><li>■ Sika® Control NS will provide best results by using wet curing methods.</li><li>■ The use of a curing and sealing compounds will reduce the efficiency of the admixture.</li></ul>
<b>Health and Safety Information</b>	<p>For information and advice on the safe handling, storage and disposal of chemical products, users should refer to the <b>most recent Safety Data Sheet</b> containing physical, ecological, toxicological and other safety-related data.</p> <p>KEEP OUT OF REACH OF CHILDREN FOR INDUSTRIAL USE ONLY</p>

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](http://www.sika.ca).



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