BUILDING TRUST

BUILDING PRODUCT INFORMATION SHEET

SikaControl®-40 (NZ)

SHRINKAGE REDUCING ADMIXTURE

DESCRIPTION

SikaControl®-40 (NZ) is a shrinkage reducing admixture used to produce high performance concrete with greatly reduced drying shrinkage.

USES

- In premixed and precast concrete elements to reduce the drying shrinkage of the concrete
- 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 durable concrete in marine environments
- For watertight concrete in reservoirs, sewage treatment plants, dams.

FEATURES

- Reduced drying shrinkage
- Reduction in the potential for drying shrinkage cracking
- Reduces the potential for slab curling
- Substantially reduces the occurrence of drying shrinkage cracks and therefore reduces permeability, resulting in improved concrete durability.

APPROVALS / CERTIFICATES

SikaControl®-40 (NZ) meets and exceeds all requirements of AS 1478.1-2000 as Special Purpose Admixture Type (SN).

PRODUCT INFORMATION

Product identifier	SikaControl®-40 (NZ)
Place of manufacture	Aotearoa New Zealand
Composition	Liquid hydroxy combinations
Packaging	20 litre drums, 200 litre drums and bulk delivery
Shelf life	Twelve (12) months from date of manufacture when stored as stated.
Storage conditions	Store at temperatures between +5°C and +35°C in unopened original containers protected from direct sunlight and frost.
Appearance and colour	Colourless liquid
Specific gravity	~ 1.0 kg/litre
Total chloride ion content	Nil

TECHNICAL INFORMATION

Effect on setting	The use of SikaControl®-40 (NZ) will result in a delay in the setting time of concrete. At low ambient temperatures this effect will be increased. When combining SikaControl®-40 (NZ) with retarding admixtures their combined retardation effect and the delay in setting time has to be taken into account.

Concreting guidance	**Air Entrainment:** Air entrainment must be checked and adjusted when using SikaControl®-40 (NZ) in combination with Sika air entraining admixtures. When SikaControl®-40 (NZ) is used in the production of air entrained concrete, a higher dosage of air entraining admixture may be required.

APPLICATION INFORMATION

Recommended dosage	Dosage rates will vary according to materials used, ambient conditions and the requirements of a specific project. Sika recommends a dosage of 2 to 6 L/m^3 of concrete, 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 local regional Sika office or Sika Technical Service Department for more information and assistance.
Dispensing	The required dosage of SikaControl®-40 (NZ) should be added to the concrete at the batching plant, with the gauging water or poured into the concrete simultaneously with the gauging water. 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.

MANUFACTURER AND IMPORTER INFORMATION

Manufacturer information	Address	Sika (NZ) Limited 85-91 Patiki Road Avondale, Auckland 1026 New Zealand
	Phone number	0800 745 269
	Website	https://nzl.sika.com/
	Email address	info@nz.sika.com
	NZBN	9429000018791

BUILDING CODE INFORMATION

Building Code clauses	Note: This product on its own is not within the scope of the NZ Building Code. It is an additive / admixture for use in the manufacture of concrete, to enhance its performance properties in either its plastic or hardened state. When added to concrete that must comply with the NZ Building Code, and it used in accordance with Sika's technical literature, it will contribute to meeting the requirements of the following clauses: B1 Structure: Performance Clauses B1.3.1, B1.3.2, B1.3.3 (a, b, f, h, m, q) B1.3.4 B2 Durability: Performance clause B2.3.1-(a) not less than 50 years F2 Hazardous Building Materials: Performance clause F2.3.1
Building Code compliance statements	Performance B1.3.1, B1.3.2, B1.3.3 (a, b, f, h, m, q), B1.3.4: This product meets the requirements of AS1478.1 Chemical Admixtures for Concrete, Mortar and Grout. When added to concrete during the production phase it contributes to the hardened concrete meeting loading requirements arising from self-weight, imposed gravity loads, earthquake, wind impact, and the effects of creep and shrinkage over time. Performance B2.3.1 (a) 50 years: This product meets the requirements of AS1478.1 Chemical Admixtures for Concrete, Mortar and Grout. When added to concrete, mortar or grout during the manufacturing process it helps the hardened concrete to achieve its durability requirements and to remain serviceable for 50 years, or more. According to Sika's "Service Improvement" records, maintained within its ISO9001:2015 Quality Management System, this product has performed successfully since it was introduced in 2000. Performance F2.3.1: This product meets this requirement when used and applied in accordance with Sika's installation instructions and does not present a health hazard to people occupying or using the building. Refer to the Sika Product Technical Data sheet and product Safety Data Sheet nzl.sika.com for further information if required

BASIS OF PRODUCT DATA

All technical data in this document are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

IMPORTANT CONSIDERATIONS

- When using SikaControl®-40 (NZ), plant and site trials are always recommended to verify the performance and handling characteristics of the design concrete mix
- SikaControl®-40 (NZ) 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 SikaFilm® evaporation retardant and Sika Antisol® curing compounds for this purpose. Refer to the relevant Product data sheets for information
- SikaControl®-40 (NZ) is compatible with other Sika admixtures; however they must be added separately. Do not pre-mix SikaControl®-40 (NZ) with other admixtures, and always conduct trials to test compatibility.

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.

DESIGN REQUIREMENTS

Design requirements for concrete that contains Sika admixtures, or other concrete additives are the responsibility of the ready mixed concrete producer and/or the concrete design engineer.

MAINTENANCE REQUIREMENTS

Once added the Sika admixture / additive becomes an integral part of the hardened concrete, mortar or grout. Refer to the supplier of that product for their maintenance instructions.

LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for the exact product data and uses.

LEGAL NOTES

The building product/building product line is not subject to warning or ban under section 26 of the Building Act 2004.

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