

# BUILDING PRODUCT INFORMATION SHEET

## Sika® ViscoCrete®-5-555 (NZ)

### SUPERPLASTICISER FOR CONCRETE AND MORTAR

#### DESCRIPTION

Sika® ViscoCrete®-5-555 (NZ) is a third generation polymer-based ultra-high range superplasticiser for ready mix and precast concrete.

#### USES

Sika® ViscoCrete®-5-555 (NZ) is suitable for use as a superplasticiser for the production of concrete where extreme water reduction, excellent flowability and optimal cohesion are required. Sika® ViscoCrete®-5-555 (NZ) is ideal to use in the following types of concrete:

- Precast concrete
- High strength concrete
- Placing of concrete where steel congestion is a problem
- Placing of concrete where high flowability is important
- Placing of concrete without vibration or mechanical compaction (SCC - Self Compacting Concrete)

#### PRODUCT INFORMATION

<b>Product identifier</b>	Sika® ViscoCrete®-5-555 (NZ)
<b>Place of manufacture</b>	Aotearoa New Zealand
<b>Composition</b>	Light blue aqueous solution of modified polycarboxylate
<b>Packaging</b>	20 litre and 200 litre drums, and bulk delivery
<b>Shelf life</b>	Twelve (12) months when stored as stated.
<b>Storage conditions</b>	Store in unopened, original containers, protected from sunlight and stored at temperatures between +5°C and +35°C. If frozen, thaw and agitate thoroughly to return to normal state.
<b>Appearance and colour</b>	Light blue liquid
<b>Density</b>	Approx 1.11 kg/litre
<b>Total chloride ion content</b>	No added chlorides

#### APPLICATION INFORMATION

<b>Recommended dosage</b>	<b>For soft / plastic concrete:</b> 150 - 400 mls/100 kg cement <b>For high slump and self-compacting concrete:</b> 400 - 800 mls/100 kg cement
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#### FEATURES

Concrete containing Sika® ViscoCrete®-5-555 (NZ) has the following advantages:

- Extremely high water reduction - up to 40%
- High early strength development
- High density and high ultimate strengths
- Extended slump life (60mins + depending on ambient temperatures and other influencing factors).

Self-Compacting Concrete:

- Excellent flowability resulting in easier placing
- No vibration required resulting in better compaction
- Excellent cohesion without segregation.

#### APPROVALS / CERTIFICATES

Sika® ViscoCrete®-5-555 (NZ) meets and exceeds all requirements of Australian Standard 1478.1-2000 for High Range Water Reducer Type (HWR).

**Water reduction:** up to 40%.

**Effect on setting time:** High dosages may retard the set times.

Refer to "Important Considerations" section for further information.

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**Compatibility**

Suitable for use with all types of Portland cements. Sika® ViscoCrete®-5-555 (NZ) is highly effective as a single admixture or in combination with other admixtures in the Sika System - trials are recommended first. Always add separately, do not premix. Please contact a Sika representative for further information.

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**Dispensing**

Sika® ViscoCrete®-5-555 (NZ) can be added directly to the initial batching water. The addition of the balance of the batching water to adjust concrete consistency should only be done after a minimum of 2/3 of the wet mixing time to avoid surplus water in the concrete. Sika® ViscoCrete®-5-555 (NZ) may also be added to mixed concrete in ready mix trucks if necessary. For best water reduction we recommend a minimum wet mixing time of 6 minutes.

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**MANUFACTURER AND IMPORTER INFORMATION**

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**Manufacturer information**

Address

Sika (NZ) Limited  
85-91 Patiki Road  
Avondale, Auckland 1026  
New Zealand

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Phone number

0800 745 269

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Website

<https://nzl.sika.com/>

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Email address

[info@nz.sika.com](mailto:info@nz.sika.com)

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NZBN

9429000018791

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**BUILDING CODE INFORMATION**

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**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

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**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 2008.

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](http://nzl.sika.com) for further information if required

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## 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.

## 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.

## IMPORTANT CONSIDERATIONS

- Dosages are given as a guide only and actual doses for any mix design will need to be confirmed with trials by the concrete plant engineer to establish suitability for the intended purpose of the concrete
- Sika® ViscoCrete®-5-555 (NZ) can be used in conjunction with the following Sika products (trials are recommended before use): SikaPump®, SikaRapid®, Sika® Retarder, Sika® Ferrogard®-901 S, Sika®-1+, SikaControl®-40 (NZ), Sika® Stabilizer-4 R.
- Sika® ViscoCrete®-5-555 (NZ) is compatible with Sika® Plastocrete®, Sika® Plastiment® and SikaPlast® admixtures.
- For self-compacting concrete it is necessary for concrete mixes to be designed to specifically satisfy the required flow and cohesive characteristics (contact our Sika Technical Department)
- When using high doses of Sika® ViscoCrete®-5-555 (NZ), the air content of the concrete must be checked at the plant and at the site for each individual project
- As with all concretes it is essential to protect mixes containing Sika® ViscoCrete®-5-555 (NZ) from water evaporation during the crucial early age curing period. We recommend the use of Antisol curing membranes for this purpose. Refer to the separate Sika Antisol data sheet for further information
- Air entrainment must be checked and adjusted when using Sika® ViscoCrete®-5-555 (NZ) in combination with Sika® Air Mix or Sika® Ae 200

## APPLICATION INSTRUCTIONS

### 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 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. It may be necessary to adapt the above disclaimer to specific local laws and regulations. Any changes to this disclaimer may only be implemented with permission of Sika® Corporate Legal in Baar.

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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### NZ BUILDING PRODUCT INFORMATION SHEET

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