BUILDING TRUST

BUILDING PRODUCT INFORMATION SHEET

Sika®-1+

Waterproofing Concrete Admixture for Concrete and Mortars - Part of the Sika® Watertight Concrete Concept

DESCRIPTION

Sika®-1+ is liquid waterproofing admixture used for permeability reduction in concrete and cementitious mortars. A concrete or mortar containing Sika®-1+ can achieve extremely enhanced properties regarding its water permeability and water tightness.

USES

Sika®-1+ has been specially formulated for the production of watertight concrete and mortars. It also forms part of the Sika® Watertight Concrete Concept. Types of constructions where it can be used are:

- Building construction, foundations and wherever waterproofed concrete is required
- Reservoirs and dams
- Underwater construction
- Pools and ponds

For watertight cementitious mortars it can be used in:

- Underground or above ground masonry structures
- Waterproofing in concrete structures
- Manufacturing of small cementitious parts with a high degree of water resistance and resistance to inclement weather

FEATURES

Reduces water permeability in concrete and cementitious mortars

APPROVALS / CERTIFICATES

Water resisting admixture, Table 9 according to EN934.02:2009+A1:2012, Declaration of Performance 14465848, and provided with the CE-mark.

PRODUCT INFORMATION

Product identifier	Sika®-1+
Place of manufacture	Aotearoa New Zealand
Composition	Partially neutralised composition of amino alcohols
Packaging	20 litre pail
Shelf life	12 months from date of production
Storage conditions	Store properly in undamaged unopened, original sealed packaging, in dry conditions at temperatures between +5°C and +35°C. Protect from direct sunlight and frost.
Appearance and colour	Liquid, pink
Density	~ 1.02 kg/lt (at +20^{0}C)
pH-Value	8.0-10.0 (at +20^{0}C)
Total chloride ion content	Free (EN 934.01)

TECHNICAL INFORMATION

Mortar mix design	For Sika® Watertight Concrete:name has been designed for all concrete types. In general, adaptation of Sika's suggestions for production of Watertight Concrete, which will have minimum 350 kg/m^3 cement and maximum active W/C ratio = 0.45 is recommended. Depending on the specific demands of the mixture for each application, the incorporation of superplasticizer for achieving S3/S4 slump category must be evaluated (EN 206-1).

APPLICATION INFORMATION

Recommended dosage	Concrete:	Standard dosage = 5.5 litres/m^3 or 1.5% by weight of cement
	Mortar:	Add to gauging water at a rate of 1 part Sika®-1+ to 12 parts water. For wet sand increase dosage ratio to 1 : 9

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 1999. 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 Sika®-1+ a suitable mix design has been taken into account and local material sources should be trialled.
- Sika®-1+ should not be added to dry cement.
- Sika®-1+ must be added to the gauging water or incorporated in the fresh concrete mix.
- Use mortar prepared with Sika®-1+ as long as it retains its workability.
- Regarding curing of mortar/ concrete prepared with Sika®-1+, the same rules that apply for conventional mortar/concrete are to be followed. Protect mortar prepared with Sika®-1+ during its curing phase, especially at summer time or when relative humidity is low.
- Sika®-1+ is compatible with other Sika admixtures. In all cases, trials are recommended before combining products.
- Before application, suitability tests must be performed.

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.

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.

APPLICATION

- The standard rules of good concreting practice, concerning production as well as placing, are to be followed. Refer to relevant standards. Fresh concrete must be cured properly.
- name is added to the gauging water at the plant or on-site into the fresh mixture in the truck, in the production unit.
- name is added into the fresh mortar or to the gauging water.
- Production of the main waterproofing layer with Sika®-1+ must follow consumption instructions, depending on the mortar's cement content.
- For mortar application: Substrates should be clean and free from oil, grease, old coatings, cement laitance and all loosely adhering particles. Wash and dampen with water the substrate up to saturation. Remove all standing water from the surface before application.
- In cases where a bonding layer is necessary, use Sikadur®-32 according to the relevant Product Data Sheet. Apply immediately onto the bonding layer (wet on wet).
- Before the application of a mortar prepared with name, concrete must be cured at least for 14 days.

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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