

# BUILDING PRODUCT INFORMATION SHEET Sika® WT-200 P

## Water Resisting and Crystalline Waterproofing Concrete Admixture

#### DESCRIPTION

Sika® WT-200 P is a combined water resisting and crystalline waterproofing admixture used to reduce the permeability of concrete and to enhance the self-healing abilities of the concrete.

#### **USES**

Sika® WT-200 P has been specifically formulated to produce high quality waterproof concrete. Sika® WT-200 P treated concrete is used as a part of the Sika® Watertight Concrete System.Sika® WT-200 P can be used in any below / in / above ground watertight structures such as:

- Basements
- Parking garages
- Utility / plant rooms
- Tunnels
- Swimming pools
- Water retaining structures
- Dams
- Waste water treatment structures
- Underground commercial facilities (malls, transportation hubs etc.)

#### **FEATURES**

Sika® WT-200 P consists of a mixture of cements, amino alcohols and fillers. These active materials will form non-soluble materials throughout the pore and capillary structure of the concrete and seal the concrete permanently against penetration of water and other liquids. In addition the special formula and ingredients of Sika® WT-200 P enhances the self-healing properties of concrete and will improve the ability to heal cracks in concrete. Sika® WT-200 P has the following characteristics and benefits:

- Reduced water penetration under pressure
- Reduced water absorption
- Enhancement of self-healing properties of the concrete
- Improvement in resistance against chemical attack
- Reduced vapour transmission

### **APPROVALS / CERTIFICATES**

- Conforms to the requirements of AS1478.1, type Special Purpose normal setting
- Conforms to the requirements of AS/NZS 4020 Products for use in contact with Drinking Water, Eurofins | ams Report No.: 1607138
- BRANZ Appraisal No. 1150 [2021] Sika Watertight Concrete (Sika WT-200 P)

#### PRODUCT INFORMATION

| Product identifier    | Sika® WT-200 P   |  |
|-----------------------|--|--|
| Place of manufacture  | Overseas   |  |
| Composition           | Mixture of cements, amino alcohols and fillers   |  |
| Packaging             | 1 x pail containing 6 x 1.75 kg soluble bags   |  |
| Shelf life            | 12 months from date of production if stored in unopened and undamaged original sealed containers.                |  |
| Storage conditions    | Storage at temperatures between 5 °C and 35 °C. Protect from direct sunlight, moisture, frost and contamination. |  |
| Appearance and colour | Greyish powder   |  |
| Bulk density          | ~750 kg/m³   |  |

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| pH-Value                   | ~12 (dispersed in water) |  |
|----------------------------|--------------------------|--|
| Total chloride ion content | < 0.1 M-%                |  |
| Equivalent sodium oxide    | ≤ 3% (alkali)            |  |

#### APPLICATION INFORMATION

| Recommended dosage | 1% of Sika® WT-200 P by weight of binder  |  |
|--------------------|---|--|
| Compatibility      | Sika® WT-200 P may be combined with many other Sika products.Note:Always conduct trials before combining products in specific mixes and contact Sika technical service for more information and advice. |  |

When using of Sika® WT-200 P in combination with SCM the SCM content should be limited to max. 40 % of total binder content. (Fly ash / GGBFS / Silica fume).

- Sika® WT-200 P is added at the time of batching to the con-
- Depending on the operation it is either added to the gauging / mixing water to form a very thin slurry and add it into the concrete mixer.
- Or add Sika® WT-200 P to the fine and coarse aggregate. The aggregates and Sika® WT-200 P have to be mixed thoroughly for about 120 seconds before adding cement and gauging / mixing water.
- A wet mixing time, which is depending on the mixing conditions and mixer performance, of at least 60 seconds is recommended.
- To avoid excess water in the concrete, the final dosage must begin only after 2/3 of the wet mixing time.
- The w/b-ratio and consistency control remains the responsibility of the concrete producer. Laboratory trials are recommended to evaluate and confirm the actual flowability and workability.

#### **TECHNICAL INFORMATION Concreting guidance** The standard rules of good concreting practice, concerning production and placing, are to be followed.Laboratory trials shall be carried out before concreting on site, especially when using a new mix design or producing new concrete components. Fresh concrete must be cured properly and curing applied as early as possible. Concrete mix design For waterproof concrete: Concrete mix design depends on local requirements and / or local standards for watertight concrete systems. A concrete mix design with a minimum grade of 30 MPa is recommended. ■ For Sika® Watertight Concrete: Sika® WT-200 P has been formulated for use in concrete with a minimum binder content of 350 kg/m³ and a maximum w/b-ratio of 0.45. Depending on the specific mix design the dosage of HRWR/superplasticizer has to be evaluated in order to achieve a S3 / F4 consistence class (EN 206-1).

 Laboratory trials are always recommended to evaluate and confirm actual water reduction and consistence class.

#### **Effect on setting**

The chemical and physical composition of the components, concrete, Sika® WT-200 P and concrete and ambient temperature can affect the setting time of the concrete.

#### MANUFACTURER AND IMPORTER INFORMATION

| Importer 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           |
| Manufacturer information | Address       | Sika Australia Pty Ltd  |
|                          |               | 55 Elizabeth St         |

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#### **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 2013.

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

#### SYSTEM INFORMATION

#### Compatibility

Sika® Admixtures:

- Compatible with all Sika® superplasticizer e.g. Sika® ViscoCrete®, SikaPlast®, Sikament®
- Other product compatibility information available on request

Cements / Binders:

- All cement combinations
- SCM content max. 40% of total binder content (Fly ash / GGBFS / Silica fume)

#### **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® WT-200 P a suitable mix design has to be taken into account and local material sources shall be tested.

#### **ECOLOGY, HEALTH AND SAFETY**

This product is an article as defined in article 3 of regulation (EC) No 1907/2006 (REACH). It contains no substances which are intended to be released from the article under normal or reasonably

foreseeable conditions of use. A safety data sheet following article 31 of the same regulation is not needed to bring the product to the market, to transport or to use it. For safe use follow the instructions given in this product data sheet. Based on our current knowledge, this product does not contain SVHC (substances of very high concern) as listed in Annex XIV of the REACH regulation or on the candidate list published by the European Chemicals Agency in concentrations above 0.1% (w/w).

#### **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.



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#### DISPENSING

- Sika® WT-200 P is added at the time of batching to the concrete.
- Depending on the operation it is either added to the gauging / mixing water to form a very thin slurry and add it into the concrete mixer.
- Or add Sika® WT-200 P to the fine and coarse aggregate. The aggregates and Sika® WT-200 P have to be mixed thoroughly for about 120 seconds before adding cement and gauging / mixing water.
- A wet mixing time, which is depending on the mixing conditions and mixer performance, of at least 60 seconds is recommended
- To avoid excess water in the concrete, the final dosage must begin only after 2/3 of the wet mixing time.
- The w/b-ratio and consistency control remains the responsibility of the concrete producer. Laboratory trials are recommended to evaluate and confirm the actual water reduction.

#### **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.

Sika (NZ) Limited

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