

## PRODUCT DATA SHEET

Sika<sup>®</sup>-1+

WATER RESISTING CONCRETE ADMIXTURE.



## PRODUCT DESCRIPTION

Sika<sup>®</sup>-1+ is a liquid water resisting admixture used to reduce the permeability of concrete. Used in combination with Viscocrete<sup>®</sup> Superplasticiser Technology, watertight concrete can be produced which is suitable for BS8102:2009 Type B construction (grades 1-3). It meets the requirements of BS EN 934-2.

## USES

Sika<sup>®</sup>-1+ has been specifically formulated to produce high quality watertight concrete. Sika<sup>®</sup>-1+ is used as a constituent of the Sika<sup>®</sup> WaterTight concrete system and contact MUST be made with Sika Ltd to ensure that full system compliance is achieved. This Technical Data Sheet MUST be read in conjunction with Sika publication Sika<sup>®</sup> Technology and Concept for Watertight Construction.

- Water retaining structures
- Below ground structures
- Swimming pools
- Lift pits
- Tunnels

## CHARACTERISTICS / ADVANTAGES

- Reduces water absorption
- Reduces water penetration

## APPROVALS / STANDARDS

Conforms to the requirements of BS EN 934-2 Table 9 DoP 02 07 05 04 001 0 000001 1088, certified by Factory Production Control Body 0086, Certificate 541325, and provided with the CE mark

## PRODUCT INFORMATION

|                     |                                                                                                                                                                    |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Chemical Base       | Neutralised amino alcohol                                                                                                                                          |
| Packaging           | 20 litre drum, 200 litre drum, 1000 litre IBC                                                                                                                      |
| Appearance / Colour | Pink liquid                                                                                                                                                        |
| Shelf Life          | 12 months from date of production if stored in unopened and undamaged original sealed containers.                                                                  |
| 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. |
| Density             | ~ 1.02 kg/lit (at +20°C)                                                                                                                                           |

|                                   |                       |
|-----------------------------------|-----------------------|
| <b>pH-Value</b>                   | 8.5 +/- 1.0           |
| <b>Total Chloride Ion Content</b> | <0.1% (chloride free) |

## APPLICATION INFORMATION

|                           |                                                               |
|---------------------------|---------------------------------------------------------------|
| <b>Recommended Dosage</b> | 1.5% by weight of cement or a minimum of 5.25L/m <sup>3</sup> |
|---------------------------|---------------------------------------------------------------|

## APPLICATION INSTRUCTIONS

### APPLICATION METHOD / TOOLS

- 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.
- Sika®-1+ is added to the gauging water at the plant or on-site into the fresh mixture in the truck, in the production unit.
- Sika®-1+ 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 the case which bonding layer is necessary, use Sika® ViscoBond® according to the relevant Product Data Sheet. Apply immediately above bonding layer (wet on wet).
- Before the application of a mortar prepared with Sika®-1+, concrete must be cured at least for 14 days.

## LIMITATIONS

- 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+ can be combined with the following Sika products:

1. Sika® ViscoCrete® Watertight superplasticizers
2. Sika® Plastiment® plasticizers/ superplasticizers
3. Sikament® superplasticizers

In all cases, trials are recommended before combining products.

- Before application, suitability tests must be performed.

## VALUE BASE

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

## LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the performance of this product may vary from country to country. Please consult the local Product Data Sheet for the exact description of the application fields.

## 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.

## 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.

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