

## PRODUCT DATA SHEET

# SikaRapid<sup>®</sup>-1

### Hardening accelerator

#### DESCRIPTION

SikaRapid<sup>®</sup>-1 is a new generation hardening accelerator for concrete and mortar. It increases the early strengths of concrete without negatively influencing final strengths. SikaRapid<sup>®</sup>-1 fulfills all the requirements for a concrete admixture based on active agent group FS according to guideline A of FSHBZ and SIA specs. 162 (1989) without any undesired side effects.

#### USES

SikaRapid<sup>®</sup>-1 is being used at RMC plants at concrete temperatures of +5 °C to +25 °C, where extremely high requirements for early strengths of between 6-24 hours have to be met.

SikaRapid<sup>®</sup>-1 does not contain any chlorides and can therefore be used without any reservations for reinforced as well as prestressed concrete. However, it should not be used in combination with expanding or shrinkage compensating admixtures.

#### CHARACTERISTICS / ADVANTAGES

SikaRapid<sup>®</sup>-1 is normally used in combination with a superplasticiser. The addition of SikaRapid<sup>®</sup>-1 does not change the positive properties (e.g. fluidifying, stiffening behaviour etc.) of the superplasticiser.

Depending on the dosage of SikaRapid<sup>®</sup>-1 an increase in early strengths during the first 24 hours of up to 100% in comparison with normal Sikament concrete can be achieved. Depending on the brand of OPC/HPC used and the temperature of the fresh concrete, the effect may vary slightly.

#### PRODUCT INFORMATION

<b>Chemical base</b>	Mixture of organic & inorganic complexing agents
<b>Packaging</b>	5 / 25 / 200 L drums (non-returnable)
<b>Shelf life</b>	15 months from date of production if stored properly in original unopened packing
<b>Storage conditions</b>	Store protected from direct sunshine at temperatures between +5 °C and +35 °C
<b>Appearance / Colour</b>	Transparent/light yellow liquid.
<b>Density</b>	1.17–1.19
<b>pH-Value</b>	8.5±1.0

#### TECHNICAL INFORMATION

**Concreting Guidance** The standard rules of good concrete production and placing must also be

observed when SikaRapid®-1 is being used. Optimal curing of the fresh concrete is a must, especially at low temperatures. According to SIA Standard 162 (1989), the temperature of fresh concrete during placing may not be lower than +5 °C (Art. 6 07 4 to 6 07 7).

In case of danger of frost, winter precautions must be implemented and maintained until concrete has developed 10 N/mm<sup>2</sup> (freeze-resistance)

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#### Specific Advice

#### Frozen SikaRapid®-1:

Frozen SikaRapid®-1 may be used after being thawed slowly at room temperatures and intensive stirring.

#### Combinations:

SikaRapid®-1 may be sensibly combined with any non retarded Sika plasticizer or superplasticiser. Tests must be carried out in combination with such products.

SikaRapid®-1 should not be combined with expansion promoting admixtures such as Intraplast or Intracrete.

For important projects, please consult our Technical Services.

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## APPLICATION INFORMATION

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#### Recommended Dosage

Depending on desired acceleration effect 0.4–1.3 % by weight of cement

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#### DISPENSING

SikaRapid®-1 is either mixed with the gauging water or added simultaneously with the gauging water into the concrete mixer.

It is also possible to add SikaRapid®-1 to the basic concrete carried in a transit mixer at the place of discharge. In this case, an additional mixing time of 1 minute per m<sup>3</sup> of concrete must be observed. Prior to its discharge the concrete is to be checked visually for uniform consistency.

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## BASIS OF PRODUCT DATA

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.

## ECOLOGY, HEALTH AND SAFETY

**Safety precautionary:** Accidental splashes on the skin must be washed off with water and soap. In contact with eyes or mucous membrane, rinse with clean warm water and seek medical attention without delay.

**Ecology:** Do not dispose of into water or soil but according to local regulations

**Toxicity:** Class 4 under the relevant Swiss Health and Safety Codes

**Transportation class:** Non-hazardous

## LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the declared data for this product may vary from country to country. Please consult the local Product Data Sheet for the exact product 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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#### Product Data Sheet

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