

PRODUCT DATA SHEET

SikaRapid®-550

Non-chloride accelerating admixture

DESCRIPTION

SikaRapid®-550 is a ready-to-use liquid admixture formulated to accelerate the setting time of concrete under cool winter conditions and to produce high-early strength in special application concrete.

It does not contain added chloride and conforms to the most stringent chloride ion limits required by concrete industry standards.

USES

All types of concrete where a non-chloride type accelerator is beneficial:

- cold weather concreting
- concrete subject to chloride ion constraints such as high rise buildings in coastal environments
- concrete placed on galvanised steel floor and roof systems which are left in place
- precast concrete – either pre-tensioned or post-tensioned
- concrete pipes and other manufactured concrete products such as tiles and blocks
- concrete highway and bridge construction

CHARACTERISTICS / ADVANTAGES

Concrete with SikaRapid®-550 admixture has a significantly faster setting time than plain concrete. Increasing the dosage rate increases set acceleration. Both the compressive and the flexural strengths of concrete with SikaRapid®-550 develop, more rapidly than with plain concrete.

Benefits to concrete construction and to the manufacture of concrete products because of this earlier setting and and strength gain in cold weather include:

- earlier finishing of slabwork without the need for calcium chloride
- more efficient scheduling, generally faster construction and earlier occupancy
- earlier stripping and re-use of forms for walls, precast work and other fast-track construction
- earlier structural use of concrete such as tiltslab, paving, floors, car-park
- potential energy savings in steam cured concrete (precast, prestressed, blocks) by reducing curing temperatures and/or steaming time necessary to reach desired transfer strengths

APPROVALS / STANDARDS

European Norm: EN-934-2 (SANS 50934-2) and/or AS 1478.1 Type Ac and ASTM C494 Type C

PRODUCT INFORMATION

Packaging	SikaRapid®-550 is available in 20L and 1000 litre IBCs or in bulk.
Appearance / Colour	Opaque liquid
Shelf Life	12 months from date of manufacture, when stored correctly.
Storage Conditions	SikaRapid®-550 must be stored where temperatures do not drop below +5°C. If product has frozen thaw and agitate until completely reconstituted. Store under cover, out of direct sunlight and protect from extremes of temperatures.
Density	1.32 kg/litre
pH-Value	5.5 (+/- 1)

APPLICATION INFORMATION

Recommended Dosage	The normally recommended dosage rate of SikaRapid®-550 is approximately: By Volume - 0.50 to 3.00 litres per 100 kg of cement (binder) content. The dosage rates given above are for typical usages, they are not meant as absolute limits, as other dosages may be utilised in special cases according to specific job conditions. If required consult Sika South Africa Technical Services Department for advice. Trial mixes should be carried out to ensure optimum dosage and effect.
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SYSTEM INFORMATION

Compatibility

SikaRapid®-550 can be used with air entraining admixtures and other Sika admixtures to achieve cost-effective customised concrete performance. However, admixtures should be added separately to initial batching water to ensure complete distribution throughout the mix.

SikaRapid®-550 should not be used in conjunction with other admixtures supplied by other manufacturers unless specific test information is available.

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.

FURTHER DOCUMENTS

SikaRapid®-550 is designed to perform best in cold weather concrete. Tests conducted in laboratories at 23° +/- 2°C will not necessarily produce the degree of set acceleration that will be achieved in the field at lower temperatures.

LIMITATIONS

SikaRapid®-550 is stable in neutral and alkaline conditions. Avoid mixing or bringing it into contact with strong acids (such as hydrochloric/muriatic acid) in the presence of oxidising agents (e.g. hydrogen peroxide, nitrous acid compounds and sodium hypochlorite). Laboratory analysis involving degradation by strong acids or pre-treatment with oxidising agents should be performed in an efficient fume extraction cupboard.

ECOLOGY HEALTH AND SAFETY

SikaRapid®-550 is not a fire or health hazard. Spillages should be washed down immediately with cold water. For further information refer to the material safety data sheet.

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.

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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