

SikaRapid®-1

Hardening accelerator

Product Description

SikaRapid®-1 is a liquid hardening accelerator for concrete and mortar. It meets the requirements for hardening accelerators according to EN 934-2. SikaRapid®-1 promotes early strength development without negatively influencing final strengths.

Uses

SikaRapid®-1 is especially suitable for any application where fast early strength development plays a major role, or is of crucial importance within 6 to 24 hours.

SikaRapid®-1 is used for the following applications:

- Precast concrete
- Prestressed concrete
- Ready- mixed concrete where early demoulding is essential
- Cold ambient temperatures to achieve sufficient strength gain
- Slip-formed concrete
- Ready- mixed concrete where minimum time delays are critical

Characteristics / Advantages

SikaRapid®-1 provides the following advantages through accelerated hardening of the concrete:

- When applied with a superplasticizer, SikaRapid®-1 will not change the fresh concrete properties produced by the superplasticizer
- Faster turnaround of formwork in precast applications
- Early release of stressing cables in prestressed concrete structures
- Reduced or eliminated heat or steam curing
- Fast construction processes and early load bearing capacity
- Continuous concreting at low temperatures
- No negative effects on the final strengths

SikaRapid®-1 does not contain chlorides or any other ingredients which promote the corrosion of steel. It is therefore suitable for use in reinforced and prestressed concrete structures.

Tests

Approval / Standards

Conforms to the requirements of EN 934-2, Table 7



Product Data

Form

Appearance / Colours Red liquid

Packaging 180 kg drums (non returnable).
1000 litre IBC's or tanker delivery on request.

Storage

Storage Conditions / Shelf -Life 12 months from date of production if stored properly in original, unopened packaging, at temperatures between +5°C and +30°C.
Protect from direct sunlight and frost.

Technical Data

Chemical Base Mixture of organic and inorganic complex agents

Density Specific density: 1.0 kg/l (at +20°C)

pH Value 9.0 +/- 0.5

Viscosity < 10 mPa s at +20°C

Total Chloride Ion Content % w/w < 0.01 M-% (chloride-free)

Equivalent Sodium Oxide as % Na₂O < 10.0 M-%

System Information

Application Details

Consumption / Dosage Recommended dosage (according to the target accelerating effect):
0.5 - 2.0% by weight of cement

Application Conditions / Limitations

Compatibility SikaRapid®-1 may be combined with many other Sika products.

Do not use SikaRapid®-1 in conjunction with expansion generating or shrinkage compensating admixtures.

Important: Always conduct trials before combining products in specific mixes and contact our Technical Service for information and advice about any specific combinations.

Application Instructions

Dispensing SikaRapid®-1 is added to the gauging water or added with it into the concrete mixer.

SikaRapid®-1 may also be added into the ready- mix truck on site. When added on site the truck mixer shall rotate its drums at maximum revolutions for at least 1 minute per m³ concrete and a minimum of 5 minutes to achieve a uniform mix. The concrete has to be visually checked for uniform consistence before discharging.

Application Method / Tools

The standard rules of good concreting practice, concerning production as well as 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, especially at low temperatures.

Cleaning of Tools	Clean all tools and application equipment with water immediately after use. Hardened / cured material can only be removed mechanically.
Notes on Application / Limitations	<p>When using SikaRapid®-1 a suitable mix design has to be produced and the local material sources shall always be trialed.</p> <p>If frozen and/or if precipitation of the product has occurred, SikaRapid®-1 may be used after thawing slowly at room temperature and intensive mixing.</p> <p>SikaRapid®-1 shall not be added to dry cement.</p> <p>Before application, suitability tests must be performed.</p> <p>It is advised against the application of SikaRapid®-1 in pretensioned prestressed concrete produced with the span bed method.</p>
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.
Health and Safety Information	For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Material Safety Data Sheet containing physical, ecological, toxicological and other safety-related data.
Legal Notes	<p>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.</p> <p>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.</p>

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