

# PRODUCT DATA SHEET

## SikaRapid® C-100

### Hardening accelerator

#### DESCRIPTION

SikaRapid® C-100 is a liquid hardening accelerator for concrete and mortar.

SikaRapid® C-100 promotes early strength development while positively influencing final strengths.

#### USES

SikaRapid® C-100 is especially suitable for any application where fast early strength development plays a major role, or is of crucial importance within the first hours.

SikaRapid® C-100 is used for the following applications:

- Precast concrete
- Ready- mixed concrete where early demoulding is essential
- Slip-formed concrete
- Ready- mixed concrete where minimum time delays are critical
- Concrete mixes containing blended cements

#### CHARACTERISTICS / ADVANTAGES

SikaRapid® C-100 provides the following advantages through accelerated hardening of the concrete within 4 to 18 hours depending on concrete mix design, fresh concrete temperature and curing conditions:

- Faster turnaround of formwork in precast applications
- Reduced or eliminated heat or steam curing
- Fast construction processes and early load bearing capacity
- No negative effects on the final strengths
- Ensured early strength development of concrete mixes produced with blended cements
- Utilization of optimized binder paste volume leading to increased durability

SikaRapid® C-100 does not contain chlorides or any other ingredients which promote the corrosion of steel. It is therefore suitable for use in reinforced concrete structures.

#### APPROVALS / STANDARDS

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

#### PRODUCT INFORMATION

|  |  |
|--|--|
| <b>Chemical Base</b>                     | Nitrate-containing calcium silicate compounds.   |
| <b>Packaging</b>                         | drum<br>Container<br>bulk  |
| <b>Shelf Life</b>                        | 6 months from date of production if stored properly in undamaged unopened, original sealed packaging |
| <b>Storage Conditions</b>                | Storage temperatures between +5°C and +30°C. Protect from direct sunlight, frost and contamination.  |
| <b>Appearance / Colour</b>               | Withish liquid   |
| <b>Density</b>                           | ~1,40 kg/l (at +23 °C).  |
| <b>Conventional Dry Material Content</b> | ~59 M.-%   |

|                            |                             |
|----------------------------|-----------------------------|
| Viscosity                  | ~108 mPa·s at +23 °C        |
| pH-Value                   | ~4,5 ±0,5                   |
| Total Chloride Ion Content | < 0,01 M.-% (chloride-free) |
| Equivalent Sodium Oxide    | < 5 M.-%                    |

## TECHNICAL INFORMATION

|                            |   |
|----------------------------|---|
| <b>Concreting Guidance</b> | The standard rules of good concreting practice, concerning production as well as placing, are to be followed.<br>Laboratory trials shall be carried out before concreting on site, especially when using a new mix design or producing new concrete components.<br>Fresh concrete must be cured properly and curing applied as early as possible, especially at low temperatures. |
| <b>Specific Advice</b>     | If frozen and/or if precipitation of the product has occurred, SikaRapid® C-100 may be used after thawing slowly at room temperature and intensive mixing.<br>Before application, suitability tests must be performed.  |

## APPLICATION INFORMATION

|                           |   |
|---------------------------|---|
| <b>Recommended Dosage</b> | 1,0–4,0 % by weight of cement (according to the target accelerating effect)   |
| <b>Dispensing</b>         | SikaRapid® C-100 is added to the gauging water or added with it into the concrete mixer.<br>SikaRapid® C-100 may also be added into the ready-mix truck on site.<br>When added on site the truck mixer shall rotate its drums at maximum revolutions for at least 1 minute per m <sup>3</sup> concrete and a minimum of 5 minutes to achieve a uniform mix. The concrete has to be visually checked for uniform consistence before discharging. |
| <b>Compatibility</b>      | SikaRapid® C-100 may be combined with many other Sika products.<br>Important: Always conduct trials before combining products in specific mixes and contact Sika technical service for information and advice about any specific combinations.  |

## 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.

## LIMITATIONS

When using SikaRapid® C-100 a suitable mix design has to be produced and the local material sources shall always be trialled.

It is advised against the application of SikaRapid® C-100 in pre-tensioned prestressed concrete produced with the span bed method.

## ECOLOGY

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.

## 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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