

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 / CERTIFICATES

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

PRODUCT INFORMATION

Composition	Nitrate-containing calcium silicate compounds.
Packaging	drum Container bulk
Appearance / Colour	Withish liquid
Shelf life	6 months from date of production if stored properly in undamaged unopened, original sealed packaging
Storage conditions	Storage temperatures between +5°C and +30°C. Protect from direct sunlight, frost and contamination.
Density	~1,40 kg/l (at +23 °C).
pH-Value	~4,5 ±0,5

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Conventional dry material content	~59 M.-%
Viscosity	~108 mPa·s at +23 °C
Total chloride ion content	< 0,01 M.-% (chloride-free)
Equivalent sodium oxide	< 5 M.-%

TECHNICAL INFORMATION

Concreting guidance	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.
Specific advice	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. Before application, suitability tests must be performed.

APPLICATION INFORMATION

Recommended dosage	1,0–4,0 % by weight of cement (according to the target accelerating effect)
Compatibility	SikaRapid® C-100 may be combined with many other Sika products. Do not use SikaRapid® C-100 in conjunction with expansion generating or shrinkage compensating admixtures. Important: Always conduct trials before combining products in specific mixes and contact Sika technical service for information and advice about any specific combinations.
Dispensing	SikaRapid® C-100 is added to the gauging water or added with it into the concrete mixer. SikaRapid® C-100 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 m ³ concrete and a minimum of 5 minutes to achieve a uniform mix. The concrete has to be visually checked for uniform consistence before discharging.
Restrictions	SikaRapid® C-100 shall not be added to dry cement.

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.

IMPORTANT CONSIDERATIONS

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, 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.

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

Any information or suggestions for use concerning Sika's products, which we either in writing or orally have given buyers or end-users of the product, have been given in good faith based on our own experiences and based on approved praxis and the technological and scientific knowledge on the time of giving such suggestions and information, which are given without any type of guarantees, and which do not lead to any further responsibility from Sika Danmark A/S, besides what is stated in the sales agreement in question. The buyer or end-user should themselves investigate or otherwise make sure, that our products are suitable for the use in question and further make sure that the products are kept and used correct and in agreement with the published rules and considering the actual conditions in order to avoid damages or less satisfactory results. Any order is accepted and any deliverance is affected according to the general terms of sales and delivery from Sika Danmark A/S, which are considered known and accepted, and which could be handed out when asked for. Our catalogues are not up-dated automatically. The present product data sheet is only for use in Denmark. Values stated in the present product data sheet should be seen as recommended, unless stated otherwise.