

PRODUCT DATA SHEET

Sikament® RB 1100

(formerly MasterRheobuild® 1100)

High range water reducing, superplasticizer for Rheoplastic concretes

DESCRIPTION

Sikament® RB 1100 is composed of synthetic polymers specially designed to impart Rheoplastic qualities to concrete.

Rheo-plastic concrete is a fluid concrete with a slump of at least 200 mm, easily flowing, but at the same time free from segregation and having the same water/cement ratio as that of a no-slump concrete (25 mm) with admixture.

Sikament® RB 1100 is chloride-free.

USES

- Precast/pre-stress concrete
- Site batched concrete
- Pumped concrete
- Wet Shotcrete Mixes
- Concrete containing microsilica/ metakaolin
- Concreting in low temperatures
- High performance grouts/tunnel backfills
- Cementitious injection suspensions
- Suitable for Concrete Piles

FEATURES

- Controlled set times
- Produces flowable concrete at reduced W/C ratios
- High early strengths – Accelerated construction
- Least dependence on consolidation energy
- Improved bond strength to concrete
- Higher modulus of elasticity
- Increased compressive, tensile and flexural strengths as a benefit of its water reducing action
- Reduced permeability - Improved durability
- Reduced thermal peaks – reduced cracking
- Highly reliable in-place structural integrity

CERTIFICATES AND TEST REPORTS

Sikament® RB 1100 follows the requirements of ASTM C494; Type A & F and EN 934-2

PRODUCT INFORMATION

Composition	Sulphonated naphthalene
Packaging	Sikament® RB 1100 is supplied in 250 Kg, 1000 Kg or bulk on request.
Shelf life	12 months from date of production if stored properly
Storage conditions	Store in undamaged, unopened, original sealed packaging in dry conditions at temperatures between +5°C and +50°C. Mix well before using.
Appearance and colour	Dark brown liquid
Density	~1.21 kg/l (+25°C)
pH-Value	≥6
Total chloride ion content	Nil (EN 934-2)

TECHNICAL INFORMATION

Concreting guidance

The standard rules of good concreting practice for production and placing must be observed when using Sikament® RB 1100 in concrete. Refer to relevant standards.

Fresh concrete must be cured properly especially at high temperatures in order to prevent plastic and drying shrinkage. Use Sika® Antisol® products as a curing agent or apply wet hessian.

APPLICATION INFORMATION

Recommended dosage

Optimum dosage of Sikament® RB 1100 should be determined with trial mixes. As a guide, a dosage range of 500ml to 1500ml per 100kg of cementitious material is normally recommended. This dosage range applies for most concrete mixtures using typical concrete ingredients. However, variations in job conditions and concrete materials, such as silica fume, may require dosages outside of the recommended range.

For additional information on Sikament® RB 1100 admixture or on its use in developing concrete mixes with special performance characteristics, contact your local Technical service representative.

Effects of over dosage

A severe over-dosage of Sikament® RB 1100 can result in the following:

- Increase in air entrainment
- Bleed/segregation of mix, quick loss of workability
- Increased plastic shrinkage
- Delayed setting

A slight overdose may not adversely affect the ultimate strength of the concrete and can achieve higher strengths than normal concrete, provided it is properly compacted and cured. Due allowance should be made for the effect of fluid concrete pressure on form work, and stripping times should be monitored.

In the event of over dosage, consult your local Technical service representative immediately.

Dispensing

Sikament® RB 1100 is a ready-to-use liquid which is dispensed into the concrete together with the mixing water.

The plasticising effect and water reduction are higher if the admixture is added to the damp concrete after 50 to 70% of the mixing water has been added. The addition of Sikament® RB 1100 to dry aggregate or cement is not recommended.

When using Sikament® RB 1100 to produce flowing concrete at site using ready mix trucks, it can be added to the concrete via the feed hopper at the rear of the truck. Mix before discharge for 5 minutes at 10 rpm to produce a fully homogenous mix.

Compatibility

Sikament® RB 1100 is suitable for mixes containing all types of cement and supplementary cementitious materials such as: Microsilica (Silica Fume), Fly Ash (PFA), GGBS (ground granulated blast furnace slag) and the following Sika products:

SikaPump®, Sika® FerroGard®, SikaFume®, SikaFiber®, Sika® Aer, Sika® Stabilizer, SikaControl®

We recommend to perform trial mixes to establish the required performance when combining Sikament® RB 1100 with the above products or other admixtures. Please consult our Sika Technical Department.

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.

- Internal Reference - Version: MBS_CC-UAE/
Rh_1100_10_94/v1/11_13/v2/12_19

IMPORTANT CONSIDERATIONS

Before pouring, suitability tests on the fresh concrete must be carried out. With high workability mixes take special care that all formwork is properly installed and secured.

If frozen and/or if precipitation has occurred, it may only be used after thawing slowly at room temperature and intensive mixing. When using Sikament® RB 1100 a suitable concrete mix must be designed for the local material sources and trial mixes performed to verify suitability.

When accidental overdosing occurs the set retarding effect and workability increases. Additional air may also be entrained. During this period the concrete must be kept moist in order to prevent premature drying out.

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

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.

SIKA BANGLADESH LIMITED

Impetus Center, 242/B, 8th Floor
Bir Uttam Mir Shawkat Sarak
Dhaka-1208, Bangladesh
Phone 1: +88 01313095060
Phone 2: +88 01313095061
bgd.sika.com

Product Data Sheet

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