

## PRODUCT DATA SHEET

# Sikament® RB 616 SS

(formerly MasterRheobuild® 616SS)

High range water reducing, superplasticiser for rheoplastic concretes

### DESCRIPTION

Sikament® RB 616 SS is composed of synthetic polymers specially designed to impart rheoplastic qualities to concrete.

A rheoplastic 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 616 SS 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

### PRODUCT INFORMATION

<b>Packaging</b>	260kg drum
<b>Shelf life</b>	12 months from date of production if stored properly in undamaged unopened, original sealed packaging.
<b>Storage conditions</b>	Sikament® RB 616 SS must be stored where temperatures do not drop below +5°C. If product has frozen, thaw at +5°C or above and completely reconstitute using mild mechanical agitation. Do not use pressurized air for agitation. Store under cover, out of direct sunlight and protect from extremes of temperature. Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging. For specific storage advice consult your local Sika representative.
<b>Appearance / Colour</b>	Dark brown free flowing liquid

### CHARACTERISTICS / ADVANTAGES

- Controlled set times
- Produces flowable concrete at reduced W/C
- 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

### APPROVALS / STANDARDS

IS 9103, ASTM C-494 Type B,D & G, EN 934-2: T3.1/3.2

Density 1.16 ± 0.02 at 25°C

pH-value ≥ 6

## APPLICATION INFORMATION

### Recommended Dosage

Optimum dosage of Sikament® RB 616 SS should be determined with trial mixes. As a guide, a dosage range of 500ml to 1500ml per 100kg of cementitious material is 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 may be required. In such cases, contact your local Sika representative.

For addition information on Sikament® RB 616 SS admixture or on its use in developing concrete mixes with special performance characteristics, contact your local Sika representative.

#### Effects of over dosage

A severe over-dosage of Sikament® RB 616 SS can result in the following:

- Increase in air entrainment
- Bleed/segregation of mix,
- Delayed setting

A slight overdosing 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 Sika representative immediately.

### Dispensing

Sikament® RB 616 SS 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 616 SS to dry aggregate or cement is not recommended.

When using Sikament® RB 616 SS 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 616 SS is compatible with most admixtures used in the production of quality concrete including normal, other mid-range and high-range water-reducing admixtures, air entrainers, accelerators, retarders, extended set-control admixtures, corrosion inhibitors, and shrinkage reducers.

Sikament® RB 616 SS is also compatible with slag and pozzolans such as fly ash and silica fume.

## 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

### Corrosivity - Non corrosive

Sikament® RB 616 SS admixture will neither initiate nor promote corrosion of reinforcing steel embedded in concrete, prestressed concrete or concrete placed on galvanized steel floor and roof systems. Neither calcium chloride nor any calcium chloride-based ingredients are used in the manufacture of Sikament®

RB 616 SS admixture. In all concrete application, Sikament® RB 616 SS admixture will conform to the most stringent or minimum chloride ion limits currently suggested by construction industry standards and practices.

### Workability

Sikament® RB 616 SS ensures that rheoplastic concrete remains workable for 30 to 90 minutes at +25°C. Workability loss is dependent on temperature, and on the type of cement, the nature of aggregates, the method of transport and initial workability.

It is strongly recommended that concrete should be properly cured particularly in hot, windy and dry climates.

## 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 Material Safety Data Sheet containing physical, ecological, toxicological and other safety-related data.

## LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for exact product data and uses.

## 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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### Product Data Sheet

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