

## PRODUCT DATA SHEET

# Sikament<sup>®</sup> R-4 QV

HIGH RANGE WATER-REDUCING AND SLUMP RETAINING

CONCRETE ADMIXTURE

### DESCRIPTION

Sikament<sup>®</sup> R-4 QV is a highly effective dual action liquid superplasticiser that imparts excellent slump retention for prolonged periods. It is used for the production of free flowing concrete or as a substantial water-reducing agent for promoting high early strengths. Suitable for use in hot and tropical climatic conditions.

### USES

- High flow concrete
- Concrete with high water reduction
- High strength concrete
- Slabs
- Foundations
- Walls
- Columns and piers
- Piles
- Pre-stressed concrete,
- Bridges and cantilever structures

### PRODUCT INFORMATION

Chemical Base	Sulphonated naphthalene
Packaging	1000 L flow bins. Bulk supply in tanker trucks possible on request.
Appearance / Colour	Dark brown liquid
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 +45 °C. Protect from direct sunlight and frost.
Density	~1.19 (+25 °C)
Total Chloride Ion Content	Nil (EN 934)

### TECHNICAL INFORMATION

PRODUCT DATA SHEET  
Sikament<sup>®</sup> R-4 QV  
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### CHARACTERISTICS / ADVANTAGES

Sikament<sup>®</sup> R-4 QV provides the following properties:

As a Superplasticiser:

- Workability is greatly improved
- Concrete is placed easily
- Especially suitable for slender components with densely packed reinforcement Concrete requires less vibrating
- Improved cohesion of the concrete mix significantly reduces the risk of segregation and allows greater time for placement

As a Water Reducer:

- Impressive water reduction capability
- Final strength improvement

### APPROVALS / STANDARDS

Sikament<sup>®</sup> R-4 QV follows the requirements of ASTM C494; Type G and EN 934-2

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**Concreting Guidance**

The standard rules of good concreting practice for production and placing must be observed when using Sikament® R-4 QV 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.

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**APPLICATION INFORMATION**

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**Recommended Dosage**

0.6 - 2.0 % by weight of binder  
Higher dosages by weight of binder can be used depending on the mix design, raw materials, climatic conditions and concrete requirements.  
Trial mixes must be performed to establish the exact dosage rate required.

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**Compatibility**

Sikament® R-4 QV may be combined with all types of Portland cement, concretes containing pozzolanic materials such as; GGBS, PFA , micro-silica and the following Sika products:

- SikaPump®
- Sika® FerroGard®-901
- SikaFume®
- SikaFiber®
- Sika Aer®
- Sika® Stabilizer
- Sika®-1 WT

We recommend to perform trial mixes to establish the required performance when combined with the above products. Please consult our Sika Technical Department.

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**Dispensing**

Sikament® R-4 QV is added to the gauging water or simultaneously poured with it into the concrete mixer at the batching plant.  
Do not add Sikament® R-4 QV directly to the dry mix.  
For optimum utilization of its high water reduction property we recommend thorough mixing at a minimal wet mixing time of 60 seconds.  
The addition of the remaining gauging water (to fine tune concrete consistency) may only be started after two-thirds of the wet mixing time to avoid surplus water in the concrete.

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**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**

Before pouring suitability tests on the fresh concrete must be carried out.  
Due to the extended workability take special care that formwork is properly installed and secured.  
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 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.

## 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. 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.

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