

PRODUCT DATA SHEET

Sikament[®] R-4

High Range Water-Reducing and Set Retarding Concrete Admixture

DESCRIPTION

A highly effective superplasticizer with a set retarding effect for producing free-flowing concrete in hot climate and also a substantial water reducing agent for promoting early and ultimate strength. Sikament[®] R-4 complies with ASTM C494 Type D & G.

USES

Sikament[®] R-4 superplasticizer is used for flowable concrete in:

- Floor slabs
- Foundations
- Slender components with densely packed reinforcement
- Walls
- Columns
- Beams

CHARACTERISTICS / ADVANTAGES

Sikament[®] R-4 provides the following properties:

As a superplasticizer:

- Highly effective without increased w/c ratio or the risk of segregation
- Lasting control of slump loss
- No adverse effect on ultimate strength

As a water reducer:

- Early and ultimate strength significantly increased
- Allow substantial cement reduction compared to plain concrete
- Especially suitable for hot climate
- No excessive air entrainment
- No adverse shrinkage effect
- Improved surface finish
- Increased watertightness

PRODUCT INFORMATION

Chemical Base	Blend of Lignosulphonates
Packaging	5 / 25 / 200 L drum
Appearance / Colour	Liquid / Dark Brown
Shelf Life	Min. 1 year if stored properly in original unopened packaging
Storage Conditions	Dry, cool, shaded place
Density	1.14–1.16

TECHNICAL INFORMATION

Specific Advice	All Portland cement including sulfate resistant cement
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APPLICATION INFORMATION

Recommended Dosage	0.60–1.60 L per 100 kg of cement Typical Dosage: 0.80–1.20 L per 100 kg of cement Overdosing: Significant overdosing will result in increased workability and setting time of the concrete. However, provided concrete is cured effectively, ultimate strength and properties will not be affected. <u>Note:</u> Due to extended setting time, proper curing must be ensured. Do not vibrate green concrete or tamper embedded rebars whilst setting.
Compatibility	Possible to combine with all Sikament®, Sika® Aer, Sika® Pump, Sikacrete® PP-1, but must be added separately to the mix and not pre-mixed prior addition.
Dispensing	Sikament® R-4 can be added directly to the gauging water prior to its addition to the dry mixed aggregates or simultaneously with the gauging water at the batching plant. When added directly to the freshly mixed concrete, the plasticizing effect is more pronounced. For addition at job site, Sikament R4 is added to the concrete immediately prior to discharge and after further mixing has taken place for three minutes.

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

Trial mixes are recommended to establish exact dosage rates required to suit individual requirements. If assistance is required, please contact the Sika Technical Service Department.

- Accurate dispensing equipment can be supplied by Sika Ltd. Vietnam
- Use an appropriate mixer and do not mix by hand
- Curing treatment - use of Sika curing compounds to cure concrete is advisable

ECOLOGY HEALTH AND SAFETY

Ecology: Do not dispose into water

Transportation class: Non-hazardous

Waste disposal: According to local law

Important notes: Avoid contact with foodstuffs and utensils. Avoid prolonged skin contact.

In the event of contamination wash thoroughly with water. If the eyes or mouth are affected wash with clean water and obtain medical attention immediately.

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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