

PRODUCT DATA SHEET

Sikament[®] F-4

HIGH RANGE WATER-REDUCING CONCRETE ADMIXTURE

DESCRIPTION

Sikament[®] F-4 is a high-range water reducer (HRWR) type concrete admixture of the new generation for the production of high strength concrete with increased acceleration for early strength development.

USES

Sikament[®] F-4 is used as superplasticizer for flowing concrete at:

- Slabs and Foundations
- Walls and columns with slender dimensions and packed reinforcements
- Beams and Ceilings

Sikament[®] F-4 is used as high-range water reducer at:

- Pre-cast concrete elements for high quality demand
- Bridges and cantilevers
- Pre-stressed structures

CHARACTERISTICS / ADVANTAGES

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

As superplasticizer:

- Substantial improvement in workability without increase of w/c ratio
- No segregation
- Normal set without retardation
- Accelerated hardening after setting
- Improved density and surface finish

As high-range water reducer:

- With up to 30% water reduction, and increase of the 28 days strength of up to 40% can be achieved
- Early strength increased of more than 100% can easily be achieved (depending on dosage and w/c ratio)
- Increased impermeability to water
- Improved resistance to wear and abrasion

As retempering of concrete:

- Added into mixing truck on site to increase workability (slump) of concrete

APPROVALS / CERTIFICATES

Complies with ASTM C-494 - 81 Type F

PRODUCT INFORMATION

Composition	Polymer type dispersion
Packaging	200 l/ drum 1,000 l/ tote or bulk
Appearance / Colour	Brown Liquid
Shelf life	12 months from the date of production If stored properly in undamaged, original, sealed packaging.
Storage conditions	Store in dry conditions, protected from direct sunlight at temperature between 5°C and 40°C
Density	1.180 - 1.200 kg/l (at temperature 25°C)
pH-Value	4.5 - 7.0 Approx.

APPLICATION INFORMATION

Recommended Dosage	Sikament® F-4 is dosed at normal rate of 0.6-2.5% by weight of cement. The exact dosage depends upon the effect required and should be established from laboratory trials. Sikament® F-4 is compatible with all types of Portland Cement, including S.R.C. type and Hydraulic Cement.
Dispensing	Sikament® F-4 can be added separately to the freshly mixed concrete, or directly to the gauging water prior its addition to the dry mix. When added separately to the mix, a further mixing of at least one minute should take place. It is typical that a later addition of superplasticizer to the concrete would improve the workability retention.
Restrictions	Concrete shall be designed in accordance with ACI 211.1-89 standard recommended practise for selecting proportions for concrete and shall contain the superplasticizer which shall be Sikament® F-4 as manufactured by Sika. It shall be used in strict accordance to the manufacture's recommendations.

IMPORTANT CONSIDERATIONS

Accidental overdosing of Sikament® F-4 may cause a slight segregation. However it is advisable to prolong the mixing time then, until the mix becomes normal.

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.

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.

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.

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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