

PRODUCT DATA SHEET

Sikament[®]-163

HIGH RANGE WATER-REDUCING

DESCRIPTION

Sikament[®]-163 is used as a highly effective water-reducing agent and superplasticizer for the production of high quality concrete in hot climates. The dual action of Sikament[®]-163 promotes accelerated hardening with high early and ultimate strengths. Complies with A.S.T.M. C 494-92 Type F.

USES

As a superplasticizer, Sikament[®]-163 is used for flowing concrete in :

- Slabs and foundations
- Walls and columns
- Slender components with densely packed reinforcement
- Beams and ceilings

As a substantial water-reducing agent, Sikament[®]-163 is used where high early and ultimate strength is required, for example in :

- Prestressed concrete elements

- Concrete elements manufactured in precast factories, where rapid demoulding and early load application is required
- Bridges and cantilever structures

CHARACTERISTICS / ADVANTAGES

Sikament[®]-163 provides the following properties :

- Substantial improvement in workability without increased water content
- Normal set without retardation
- Accelerated hardening after setting
- Significant increase of early and ultimate strengths
- Especially suitable for concreting at elevated temperatures
- Increased watertightness
- Improved surface finish
- Reduced shrinkage and creep
- Chloride-free, does not attack reinforcement

PRODUCT INFORMATION

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| Chemical base | Modified Naphthalene Formaldehyde Sulfonate | |
| Packaging | 240 kg drum 1000 L Bulk delivery | |
| Appearance / Colour | Liquid / Dark brown | |
| Shelf life | 12 months from date of production if stored properly in undamaged unopened, original sealed packaging. | |
| Storage conditions | Store in dry conditions at temperatures between +5 °C and +30 °C. Protect from direct sunlight and frost. | |
| Density | at +20 °C | 1.20 ± 0.01 kg/L |

TECHNICAL INFORMATION

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| Concreting Guidance | The standard rules of good concreting practice, concerning production and placing, are to be followed. Laboratory trials before concreting on site are strongly recommended when using a new mix design or producing new concrete components. Fresh concrete must be cured properly and as early as possible. |
| Specific Advice | Accidental overdosing of Sikament®-163 causes an extension of the initial set however, no excessive amount of additional air will be entrained. |

APPLICATION INFORMATION

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| Recommended Dosage | Sikament®-163 can be used at the dose rate 0.30 % - 2.30 % by total weight of cementitious material depending on requirements concerning workability and strength. It is recommended that trial mixes be conducted to determine the exact dosage rate required. Note : <ul style="list-style-type: none">▪ Typical dosage rate for use with silica sand is 0.60 % - 1.30 % by weight of cementitious material for normal precast concrete application.▪ Typical dosage rate for use with combination of manufactured sand / volcanic sand is 0.8 % - 2.0 % by weight of cementitious material for normal precast concrete application. For more specific requirements, advice is available from our Technical Service Department to determine the usage rate for optimum results. |
| Compatibility | Sikament®-163 may be combined with the following products: <ul style="list-style-type: none">▪ Plastiment® P121R▪ Plastiment® VZ▪ Sika® Fume▪ SikaFibre® Do not use sikament series combined with viscocrete / viscoflow series. To produce flowing and / or self-compacting concrete, special concrete mix design is required. Pre-trials are recommended and mandatory if combinations with the above products are required. Please consult to our Technical Service Department. |

APPLICATION INSTRUCTIONS

DISPENSING

Sikament®-163 can be added to the gauging water prior to its addition to the dry aggregates or separately to the freshly mixed concrete (on the batching plant or on site into the truck mixer). Where added to truck mixer on site, further mixing for five minutes should be carried out.

BASIS OF PRODUCT DATA

All technical data stated in this 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 declared data and recommended uses for this product may vary from country to country. Please consult the Local Product Data Sheet for the exact product data and uses.

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.

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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