

PRODUCT DATA SHEET

Sika ViscoFlow® MR-1

HIGH RANGE WATER REDUCING / SUPERPLASTICISING CONCRETE ADMIXTURE

DESCRIPTION

Sika ViscoFlow® MR-1 is a high range water reducing admixture for concrete and mortar. It enables the industrial, economical and high-quality production of both conventional concrete and self-compacting concrete.

USES

Sika ViscoFlow® MR-1 is particularly suitable for ready-mix concrete production when a very long workability time is required together with good strength development, powerful water reduction and good concrete flowability. Main applications: Ready-mix concrete plants, especially in warm weather and for long transport distances; Mass concrete pours; Large in-situ castings requiring good pumpability and long workability; Self-compacting concrete.

FEATURES

Sika ViscoFlow® MR-1 is a powerful superplasticiser acting through several mechanisms. By delaying active cement sites, surface adsorption, electrostatic repulsion and steric hindrance, cement/binder particles are dispersed, providing: High water reduction leading to higher density, higher strength and lower permeability; Excellent plasticising effect leading to improved flowability, easier handling, placing and compaction; Reduced concrete shrinkage during curing and in the hardened state; Reduced remedial finishing together with improved quality and early strength.

CERTIFICATES AND TEST REPORTS

Sika ViscoFlow® MR-1 is a superplasticising / high range water reducing admixture according to EN 934-2 Table 3.1/3.2 + A1:2013 and is CE marked.

PRODUCT INFORMATION

Composition	Modified polycarboxylate
Packaging	20 kg canister, 200 kg drum, 1,000 kg IBC container or bulk in tank truck
Appearance and colour	Light beige cloudy liquid
Shelf life	9 months from date of production if stored properly in original unopened packaging
Storage conditions	Store protected from frost between +1°C and +30°C. Protect from direct sunlight and contamination. Use plastic, glass fibre or acid-resistant steel tanks. Daily mechanical mixing or recirculation pumping is recommended. Do not mix with air.
Density	1.045 kg/dm ³ ± 0.020 kg/dm ³
pH-Value	4.0 ± 1.0
Conventional dry material content	21.0 % ± 0.8 %
Total chloride ion content	≤ 0.10 mass-%

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APPLICATION INFORMATION

Recommended dosage	Approximately 0.3–2.0 % by weight of binder depending on the desired effect. Carry out preliminary trials with the cement/binders and aggregates to be used.
Compatibility	The performance of Sika ViscoFlow® MR-1 may vary with different cements, binder systems, concrete mix designs and working methods. It may be used with other Sika admixtures when added separately. Consult Sika Technical Service and perform preliminary trials.
Dispensing	Sika ViscoFlow® MR-1 can be added at the earliest together with the mixing water. For full performance, add approximately 10–20 seconds after water addition. Recommended wet mixing time is 45–180 seconds depending on mixer type.
Restrictions	Overdosing may cause segregation in highly fluid or incorrectly proportioned concrete. Overdosing has a minor retarding effect.

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.

ECOLOGY, HEALTH AND SAFETY

For information and advice on safe handling, storage and disposal of chemical products, refer to the most recent Safety Data Sheet containing physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

Good concreting practice (production and placing) must be followed. Preliminary testing shall be carried out before actual concrete casting, especially when changing mix designs or raw materials. Fresh concrete must be cured appropriately and as early as possible.

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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