BUILDING TRUST

PRODUCT DATA SHEET

Sika® Stabilizer-102

(formerly MasterMatrix® 102)

Viscosity Modifying Admixture (VMA) for Smart Dynamic concrete

DESCRIPTION

Sika® Stabilizer-102 is a ready-to-use, liquid, organic, viscosity-modifying admixture (VMA) specially developed for producing concrete with enhanced viscosity and controlled rheological properties. Concrete containing Sika® Stabilizer-102 admixture exhibits superior stability and controlled bleeding characteristics, thus increasing resistance to segregation and facilitating placement.
The new technology of smart dynamic concrete allows concretes to be compacted without vibration, even with strongly reinforced structures.
A self-compacting mix should have a high workability and viscosity.
The fluidity of the mix is guaranteed provided there is no friction between the internal particles and the concrete can flow freely; segregation occurs when the components of the concrete separate out into mortar and large aggregates.
Reaching the right balance between fluidity and resistance to segregation – apparently opposing properties – is essential for this type of mix. This balance is lacking when the fluidity of the concrete is obtained by adding water. Although a superplasticiser admixture gives high fluidity, alone it does not guarantee the necessary properties to ensure a good degree of self-compacting. That is why Sika® Stabilizer-102 is a fundamental admixture when making Self Compacting Concrete.

USES

- Smart Dynamic Concrete
- Concrete containing gap-graded aggregates
- Lean concrete mixtures
- Concrete containing manufactured sand

CHARACTERISTICS / ADVANTAGES

- Increased viscosity & thixotropic properties
- Improved stability during transport & placing
- Controlled bleeding
- Reduced segregation, even with highly fluid mix
- Enhanced pumping and finishing
- Reduced sagging – dimensional stability
- Enables flexibility in mixture proportioning

Sika® Stabilizer-102 consists of a mixture of water soluble copolymers which is adsorbed onto the surface of the cement granules, thereby changing the viscosity of the water and influencing the rheological properties of the mix.
Sika® Stabilizer-102 is chloride-free and compatible with all cements. It is incompatible for use with naphthalene sulphonate based superplasticiser admixtures.
It is possible with Sika® Stabilizer-102 to:
Refine the rheology of the mixes by increasing cohesiveness and eliminating bleeding;
Produce concretes distinguished by their great stability and strong capacity to retain water;
Make the mixture less sensitive to variations in sand grading, to the shape and moisture content of the aggregates and to the characteristics of the binders;
Obtain greater flexibility of choice and type of casts because of a low risk of segregation, greater pumping speeds and distances.

APPROVALS / STANDARDS

EFNARC - VMA guidelines 2006

PRODUCT INFORMATION

Packaging	Sika® Stabilizer-102 is available in 20 & 235 kg drums.
Shelf life	12 months
Storage conditions	Sika® Stabilizer-102 must be stored where temperatures do not drop below +5°C. If product has frozen, thaw at +5°C or above and completely reconstitute using mild mechanical agitation. Do not use pressurized air for agitation. Store under cover, out of direct sunlight and protect from extremes of temperature. Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging. For specific storage advice consult your local Sika representative.
Appearance / Colour	Colourless free flowing liquid
Density	1.01 ± 0.01 at 25°C
pH-value	≥ 6

APPLICATION INFORMATION

Recommended Dosage	Sika® Stabilizer-102 is dosed at the rate of 30 to 500 ml/100 kg of cementitious material. Other dosages may be recommended in special cases according to specific job site conditions.
Dispensing	Sika® Stabilizer-102 is a ready-to-use liquid admixture, which should be added to the concrete after all the other components of the mix. This is particularly important in order to obtain maximum efficacy. For best performance it is advisable to continue mixing until the mix is completely homogeneous. To produce Self Compacting, Sika® Stabilizer-102 should be used in combination with the other superplasticizer admixtures of the MasterGlenium range in order to guarantee maximum efficacy. A slight decrease in slump or slump flow may be noted after the addition of Sika® Stabilizer-102 admixture due to the increase in concrete viscosity. If necessary, the slight decrease in slump or slump flow can be offset easily by a minor increase in superplasticiser dosage. Also, because of its thixotropic properties, concrete containing Sika® Stabilizer-102 admixture may stiffen if left in a mixing vessel or truck without agitation. Workability can be restored by simply remixing the concrete mixture. Sika® Stabilizer-102 admixture has little to no effect on concrete setting time, sump retention, air content and compressive strength within the recommended dosage rate.

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.

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.

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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