

## PRODUCT DATA SHEET

# Sika® ViscoCrete®-3513 Ease

(formerly MasterEase® 3513)

**Low Viscosity Concrete Concept** New superplasticizer technology imparts advanced rheological properties delivering a significant decrease in the viscosity of concretes and extended rheology maintenance

### DESCRIPTION

Sika® ViscoCrete®-3513 Ease is a superplasticizer, high range water reducer from recent research work of R & D laboratories of Sika. The Sika® ViscoCrete®-3513 Ease is designed to impart exceptional rheological properties to fresh concrete. It improves considerably the placing and finishing of concretes and enhances the ease of concrete pumping for all construction activities.

### INNOVATION

Sika® ViscoCrete®-3513 Ease is based on an innovative polymer chemistry and it is patented by Sika. Its action differs from traditional superplasticizers, to the extent that the adsorption of polymers of Sika® ViscoCrete®-3513 Ease on binder particles is provided by a flexible chemical bond which does not impede the flow of concretes. This innovation significantly improves rheological behaviour of concretes treated by Sika® ViscoCrete®-3513 Ease, they have a low yield stress, low viscosity with additional feature of long workability retention

### LOW VISCOSITY CONCRETE

Low Viscosity Concrete is an innovative concept dedicated to the viscosity (rheology) of concretes. It is based on the use of Sika polymer with dedicated technical services of Sika. This concept not only allows the achievement of a significant reduction in concrete viscosity but also optimizing the performance of concrete.

### USES

Sika® ViscoCrete®-3513 Ease is recommended for the production of self-compacting concrete requiring low viscosity, long workability retention and high compressive strength.

Sika® ViscoCrete®-3513 Ease is specially formulated

for the concrete industry. It is also suitable for applications in the general Civil and building sites.

It can be used for the realization and achievement of the following:

- Concrete complying to EN 206-1 / CN
- Precast and Site Mix concretes
- Superior Concrete pumping
- Reduction of Concrete waste
- Ease of compacting and finishing concrete
- High performance and ultra-high strength concrete
- Concrete for low environmental impact and high in mineral additions
- Architectural concrete

### CHARACTERISTICS / ADVANTAGES

Sika® ViscoCrete®-3513 Ease delivers many advantages both in the fresh concrete on hardened concrete.

At fresh state, optimizing the rheology:

#### **Decrease in the viscosity of concretes at constant W/C**

- Improvement of the implementation of concretes
- Improved pumping (lower pressure and longer distance)
- Better response to vibration
- Greater Ease of Pumping
- Superior finishing, floating and smoothing operations
- Excellent flexibility, mobility and flow of self-compacting concrete.

#### **Reduction possible to the W/C ratio without affecting the viscosity of concretes.**

- New windows for technical and economic optimization of concrete mix designs (addition and types of binder, choice of aggregates)
- High strength and resistance to segregation
- Workability retention over 120 minutes without retardation.
- Good compatibility with all types of cement and mineral addition

#### **In the cured state, improvement of sustainability**

- Excellent early and late compressive strength
- Improvement of quality of surface finishes
- As part of a reduction of W/C
- Increased mechanical resistances
- Decreased porosity and permeability
- Decreased shrinkage and cracking
- Enhanced durability

## APPROVALS / STANDARDS

IS 9103, ASTM C494 Types F & G

## PRODUCT INFORMATION

<b>Packaging</b>	245kg
<b>Shelf life</b>	12 months from date of production if stored properly in undamaged unopened, original sealed packaging.
<b>Storage conditions</b>	Sika® ViscoCrete®-3513 Ease 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.
<b>Appearance / Colour</b>	Light to dark reddish brown liquid
<b>Density</b>	1.10 ± 0.02 @ 25°C
<b>pH-value</b>	≥ 6

## APPLICATION INFORMATION

<b>Recommended Dosage</b>	Recommended range: 300ml to 1500ml per 100kg cementitious material. For other uses, please contact your local Sika representative. To use in synergy and combination with another Sika product range, please consult your local Sika representative.
<b>Dispensing</b>	The optimal effect is generally achieved by dosing Sika® ViscoCrete®-3513 Ease in the concrete mix after addition 70% of water in the mixer.

## 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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