BUILDING TRUST

PRODUCT DATA SHEET

Sika® ViscoCrete® GL 3173

POLYCARBOXYLIC ETHER SUPERPLASTICIZER FOR THE PRODUCTION OF HIGH-QUALITY CONCRETE WITH EXTENDED WORKABILITY RETENTION

DESCRIPTION

Sika® ViscoCrete® GL 3173 is an innovative latest generation superplasticizer based on polycarboxylic ether (PCE) polymers and is specially engineered for ready-mix concrete and precast concrete. Sika® ViscoCrete® GL 3173 is differentiated from conventional superplasticisers, such as those based on sulphonated melamine and naphthalene formaldehyde condesates in that it is based on a unique carboxylic ether polymer with long lateral chains. This greatly improves cement dispersion. At the start of the mixing process the same electrostatic dispersion occurs but the presence of the lateral chains, linked to the polymer backbone, generate a steric hindrance which stabilises the cement particles capacity to separate and disperse. Suitable for use in hot and tropical climatic conditions.

USES

- Site mix, ready-mix and pre-cast concrete
- For the production of concrete with extended transportation or placing times in hot weather condition
- For the production of Self Compacting Concrete (SCC)
- Extremaly low water cement ratio concrete
- Congested steel reinforcement elements
- High performance / high strength concrete

FEATURES

Sika® ViscoCrete® GL 3173 provides the following beneficial properties:

- Enhanced rheology is maintained from time of mixing to time of placement
- Provides extended workability retention and stable setting behavior under high ambient temperatures
- Reduces stickness whcih helps internal lubrication of the concrete.
- Enhance the pumpability of the concrete
- Enhances internal lubrication of the concrete
- Easier and faster concrete casting with improved strength development
- Improved concrete surface appearance
- Concrete meets the specification requirements
- High quality durable concrete

CERTIFICATES AND TEST REPORTS

Sika® ViscoCrete® GL 3173 follows the requirements of ASTM C494; Type F & G and BS EN 934-2

PRODUCT INFORMATION

Composition	Aqueous solution of modified polycarboxylates, co-polymers.
Packaging	1000 L flowbin or bulk supply in tanker.
Appearance and colour	Colorless to brown liquid
Shelf life	12 months from date of production if stored properly.
Storage conditions	Store in undamaged, unopened, original sealed packaging in dry conditions at temperatures between +5°C and +45°C. Protect from direct sunlight. Mix well before using.

Density	~1.04 kg/l (+25°C)	
pH-Value	3.0 – 7.0	
Total chloride ion content	Nil	(BS EN 934-2)

TECHNICAL INFORMATION

Concreting guidance	The standard rules of good concreting practice for production and placing must be observed when using Sika® ViscoCrete® GL 3173 in concrete. Refer to relevant standards. Fresh concrete must be cured properly especially at high temperatures in order to prevent plastic and drying shrinkage. Use Sika® Antisol® products as a curing agent or apply wet hessian.
Recommended dosage	0.4 to 2.1 L per 100 kg of total binder. Trial mixes must be performed to establish the exact dosage rate required.
Compatibility	Sika® ViscoCrete® GL 3173 is suitable for mixes containing all types of cement and supplementary cementitious materials such as: Microsilica (Silica Fume), Fly Ash (PFA), GGBS (Ground Granulated Blast Furnace Slag) and the following Sika products: ▪ SikaPump® ▪ Sika® FerroGard® ▪ SikaFume® ▪ SikaFiber® ▪ SikaControl® ▪ Sika® Stabilizer We recommend to perform trial mixes to establish the required performance when combining Sika® ViscoCrete® GL 3173 with the above products or other admixtures. Please consult our Sika Technical Department for further assistance.

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.

LIMITATIONS OF USE

Sika® ViscoCrete® products are not compatible with admixtures based on sulfonated napthalene or melamine.

IMPORTANT CONSIDERATIONS

When using Sika® ViscoCrete® GL 3173 a mix design must be selected for the local material sources used and trial mixes performed to verify suitability. If frozen and/or if precipitation has occurred, it may only be used after thawing slowly at room temperature and intensive mixing. Sika® ViscoCrete® GL 3173 should not be added to dry cement. Before pouring, suitability tests on the fresh concrete must be carried out. Due to the extended workability take special care that formwork is properly installed and secured. In case the setting time of concrete is extended, if cured properly, other properties may not be affected, and higher ultimate strength may be achieved. When accidental overdosage occurs, bleeding and segregation of the concrete and retardation of initial set may be observed.

ECOLOGY, HEALTH AND SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

DISPENSING

Sika® ViscoCrete® GL 3173 is a ready-to-use admixture to be added to the concrete as a separate component. Optimal result is obtained if Sika® ViscoCrete® GL 3173 is poured into the concrete mix right after the addition of the first 80 % of the mixing water, i.e. when all solids are wetted. Avoid adding the admixture to the dry aggregates.

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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