

PRODUCT DATA SHEET

Sika ViscoFlow®-4005

High Performance Workability Enhancing Superplasticizer

DESCRIPTION

Sika ViscoFlow®-4005, a specially designed PCE based SuperPlasticizer to achieve a significantly enhanced slump flow retention without additional retardation

USES

Sika ViscoFlow®-4005 is especially suitable for concrete mixes with extended workability requirements as well as improved flow characteristics.

Sika ViscoFlow®-4005 is mainly used for the following types of concrete:

- Any concrete hot/cold weather with extended transportation and workability time
- Suitable for a wide range of applications with high or low W/C and /or high or low environment temperatures
- Define the workability time based on project requirements without a negative effect on early strength development

CHARACTERISTICS / ADVANTAGES

Sika ViscoFlow®-4005 produces a more uniformly cohesive high quality free flowing concrete

Sika ViscoFlow®-4005 will result in the following advantages of concrete:

- Improved dispersion properties
- Keeps workability for extended time
- Slump flow retention without additional retardation
- Constant slump flow
- Smooth concrete and concreting operations
- Improved rheology
- Improved strength development
- Reduced drying shrinkage
- Improved durability

APPROVALS / STANDARDS

Conforms to IS 9130 / ASTM C494

PRODUCT INFORMATION

Chemical base	Polycarboxylate ether
Packaging	255kg drum/ bulk
Appearance / Colour	Light brown liquid
Shelf life	12 months from date of production
Storage conditions	The Product must be stored in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +10 °C and +40 °C. Protect from direct sunlight and frost. Always refer to the packaging. Frost: If frozen or if precipitation has occurred, the Product may be used after thawing slowly at room temperature and intensive mixing.
Density	~1.10 kg/l at 25°C
pH-value	≥6

TECHNICAL INFORMATION

Concreting Guidance

- Follow the standard rules of good concreting practice for both production and placement.
- Carry out laboratory trials before concreting on site, especially when using a new mix design or producing new concrete components.
- Carry out trials to confirm the flowability and workability of the concrete.
- Cure fresh concrete properly and apply curing as early as possible, particularly in hot, windy and dry conditions, as well as at low temperatures.

Specific Advice

- Excessive water addition or overdosing may cause bleeding, segregation and extension of setting-times.
- Due allowance should be made for the effect of fluid concrete pressure on formwork, and stripping times should be monitored.
- The product ensures that the concrete remains workable for a certain period. Workability loss depends on the following aspects:
 - temperature,
 - type of cement,
 - nature of aggregates,
 - method of transport,
 - and initial workability.
- To achieve longer workability period please use a setting retarder from the Sika® Retarder series.

APPLICATION INFORMATION

Recommended Dosage

Optimum dosage of Sika ViscoFlow®-4005 should be determined by site trials.

Recommended dosage: 0.2 – 2.0% by weight of cementitious.

A higher dosage might be used if agreed by client or consultant. Stir well before use.

SYSTEM INFORMATION

Compatibility

Sika ViscoFlow®-4005 may be combined with many other Sika® Products. Compatible with all types of cements and cementitious materials.

Important: Always conduct trials before combining products in specific mixes and contact our Technical Service Department for information about specific combinations.

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

APPLICATION INSTRUCTIONS

DISPENSING

Sika ViscoFlow®-4005 can be added into the mixing water or directly into the concrete mixer after 50 – 70% of the mixing water has been added.

The addition of Sika ViscoFlow®-4005 to dry aggregate or cement is not recommended.

To achieve optimum performance a minimum wet mixing time, which is depending on the mixing conditions and the mixer performance, of 60 seconds is recommended.

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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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