

PRODUCT DATA SHEET

Sika ViscoFlow®-946 X

High range water reducer / superplasticiser with advanced rheological properties

DESCRIPTION

Sika ViscoFlow®-946 X is a concrete admixture used as high-range water reducer or superplasticiser. The Product is used to impart exceptional rheological properties to fresh concrete. It improves significantly the placing and finishing of concretes, while also enhancing the ease of concrete pumping for all construction activities.

USES

is used for:

- Production of self-compacting concrete requiring low viscosity, long workability retention and high compressive strength
- Very good concrete pumping

is used in:

- Ready-mixed concrete
- All consistencies, including Self-Compacting Concrete (SCC)
- High performance and ultra-high strength concrete
- All standard cement types, including low-clinker mixes containing fly ash, slag, and silica fume
- Architectural concrete
- Reinforced and pre-stressed concrete

CHARACTERISTICS / ADVANTAGES

At fresh state:

- Decreases the viscosity of the concrete at constant W/C ratio
- Possible reduction of W/C ratio without affecting the viscosity
- Improves mixing, lowers pressure on pumping, and eases the placing
- Very good finishing, floating and smoothing operations
- Improves the response to vibration
- Very good flexibility, mobility and flow of self-compacting concrete
- Enables technical and economic optimization of concrete mix designs
- Workability retention over 120 minutes without set-retardation
- Good compatibility with all types of cement and mineral additions
- If used in conjunction with Sika®Rapid® concept, cycle times can be further reduced, and temperature curing regimes can be further reduced or even eliminated

At hardened state:

- Very good early and late compressive strength
- Improves the quality of surface finishes
- Increases mechanical resistance
- Decreases porosity and permeability
- Decreases shrinkage and cracking
- Enhances durability

APPROVALS / STANDARDS

Conforms to IS 9103 / ASTM C494

PRODUCT INFORMATION

Packaging	255kg drum/ bulk supply
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 +5 °C and +35 °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	~1.12 kg/l at 25°C
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pH-value	≥6
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APPLICATION INFORMATION

Recommended Dosage

- 0.3–2.0 kg per 100 kg of cement (binder).
- The dosage rates given above are for typical usages, they are not meant as absolute limits, as other dosages may be utilized in special cases according to specific job conditions.
- Note: Preliminary laboratory trials are always recommended to determine the optimum consumption and injection parameters.
- Contact Sika Technical Services for additional information.

SYSTEM INFORMATION

Compatibility

The Product is compatible with all standard cement types. For use with other cements contact your local Sika technical service for information. The Product can be combined and is recommended for use with other Sika products, such as:

- Sika® Retarder setting retarders
- SikaRapid® hardening accelerators
- Sika® Stabilizer workability improver, for example Sika® Stabilizer VMA series to modify viscosity
- SikaControl® durability and quality enhancer, for example SikaControl® AER series to improve frost and thaw resistance
- SikaFume® silica fume strength and durability enhancer
- Sika® Separol® mould release agents
- Sika® Antisol® curing compounds

The Product is not compatible with admixtures from the Sikament® range. Always conduct trials before combining different products.

Contact Sika Technical Services for additional information.

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.

APPLICATION INSTRUCTIONS

MIXING

The Product is a ready-to-use liquid that is added to the concrete during the mixing process. Optimal water reduction is obtained if the Product is dispensed into the concrete mix after the addition of 50–90 % of mixing water. Avoid adding the Product to dry materials. The Product should not be pre-mixed with other admixtures. If other admixtures are to be used in conjunction with the Product they must be dispensed separately.

After adding the Product allow enough mixing time to secure a homogenous concrete. If necessary, continue mixing and add additional Product to obtain the required workability.

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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