

## PRODUCT DATA SHEET

# Sika® ViscoCrete® WR-18

### 3rd Generation Superplasticiser

#### DESCRIPTION

Sika® ViscoCrete® WR-18 is a third generation superplasticizer for concrete and mortar. It meets the requirements for superplasticizers according to GB 8076.

#### USES

Sika® ViscoCrete® WR-18 is suitable for the production of site mixed as well as ready-mix concrete.

Sika® ViscoCrete® WR-18 facilitates extreme water reduction, excellent flow properties, optimal cohesion and highest self-compacting behaviour.

Sika® ViscoCrete® WR-18 is used for the following types of concrete:

- Self-compacting concrete (S.C.C)
- Precast concrete
- Concrete with highest water reduction
- High strength concrete
- High performance concrete

High water reduction and excellent flowability have a positive influence on the above mentioned applications.

#### FEATURES

Sika® ViscoCrete® WR-18 acts by different mechanisms. Through surface absorption and sterical separation effect on the cement particles, in parallel to the hydration process, the following properties are obtained.

- Strong self-compacting behaviour, therefore suitable for the production of self-compacting concrete (S.C.C)
- Extremely high water reduction (resulting in high density and strengths)
- Excellent flowability (resulting in highly reduced placing-and compacting efforts)
- Improved shrinkage-and creep behaviour
- Reduced rate of carbonation of the concrete
- Improved durability of the concrete

Sika® ViscoCrete® WR-18 does not contain chloride or other steel corrosion promoting ingredients. It may therefore be used without any restrictions for reinforced-and prestressed-concrete construction.

#### PRODUCT INFORMATION

<b>Composition</b>	Polycarboxylic polyether type polymer
<b>Packaging</b>	1000Kg containers
<b>Appearance and colour</b>	clear to slight yellowish turbid solution
<b>Shelf life</b>	The shelf life is at least 12 months from date of production.
<b>Storage conditions</b>	In unopened, undamaged original container, protected from direct sunlight and frost at temperatures between +5°C and 35°C.
<b>Density</b>	1.10±0.02Kg/L(+20°C)
<b>pH-Value</b>	5.0±0.5
<b>Conventional dry material content</b>	~45.0%

#### APPLICATION INFORMATION

<b>Recommended dosage</b>	Recommended dosage: <ul style="list-style-type: none"> <li>▪ For soft plastic concrete 0.3~0.5% by weight of cement</li> <li>▪ For flowing and self-compacting concrete (S.C.C) 0.5~0.7% by weight of cement.</li> </ul>						
<b>Compatibility</b>	Sika® ViscoCrete® WR-18 may be combined with the following Sika products: <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Sika® Pump</td> <td style="width: 33%;">Sika® Rapid 1</td> <td style="width: 33%;">Sika® FeroGard®-901</td> </tr> <tr> <td>SikaFume®</td> <td>Sika® AER 50C</td> <td>Sika® Retarder</td> </tr> </table> <p>Pre-trials are recommended if combinations with the above products are being made. Please consult our technical service.</p>	Sika® Pump	Sika® Rapid 1	Sika® FeroGard®-901	SikaFume®	Sika® AER 50C	Sika® Retarder
Sika® Pump	Sika® Rapid 1	Sika® FeroGard®-901					
SikaFume®	Sika® AER 50C	Sika® Retarder					
<b>Dispensing</b>	Sika® ViscoCrete® WR-18 is added to the gauging water or simultaneously with poured into the concrete mixed. For optimum utilisation of the high water reduction we recommend thorough mixing at a minimal wet mixing of 60 seconds.						
<b>Restrictions</b>	With the used of Sika® ViscoCrete® WR-18 concrete of highest quality is being produced. The standard rules of good concreting practice (production as well as placing) must also be observed with Sika® ViscoCrete® WR-18concrete. Fresh concrete must be cured properly.						

## 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.

## FURTHER DOCUMENTATION

If frozen, Sika® ViscoCrete® WR-18 may be used after thawed slowly at room temperature (preferably above 20°C) with intensive stirring.

## ECOLOGY, HEALTH AND SAFETY

### REGULATION (EC) NO 1907/2006 - REACH

## 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, expressed or implied, is made by Sika or its agents, sales representatives or distributors, or any other person, in relation to the suitability of the product 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 or oral 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 re-

serves 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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All products are supplied under a management system certified to conform to the requirements of the quality, environmental and occupational health & safety standards ISO 9001, ISO 14001 and ISO 45001.



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