

## PRODUCT DATA SHEET

# SikaPlast® V-220

Powered by ViscoCrete®  
Mid-range water reducing admixture

### DESCRIPTION

SikaPlast® V-220 is a multi-purpose water reducer and superplasticizer, utilizing Sika's 'ViscoCrete' polycarboxylate polymer technology.

### USES

SikaPlast® V-220 may be used in both ready mix and on site batching applications:

- **As a plant added high range water reducer (High dosage range)**, to provide excellent plasticity, while maintaining slump for ~120 minutes with minimal retardation.
- **As a plant added mid range water reducer (Medium dosage range)**, for pumped concrete flatwork and applications where superior finishing characteristics are required with low retardation levels.

SikaPlast® V-220 is ideal for use with lean, harsh concrete mixes, and concrete containing, slag, fly ash or microsilica.

### CHARACTERISTICS / ADVANTAGES

**Water Reduction:** SikaPlast® V-220 can be dosed at low to medium quantities to obtain water reduction from 5-15% and will achieve water reduction up to 22% at high dosage rates.

**High Plasticity:** The superplasticizing action of SikaPlast® V-220 provides highslump, flowing concrete that maintains excellent workability and may be placed with minimal vibration.

**Extended Slump Life and Set Control:** SikaPlast® V-220 has been formulated to provide controlled and predictable extended slump life for periods of 90 to 120 minutes (depending on dosage) allowing good slump retention without significant loss in early strength development.

### PRODUCT INFORMATION

The combined high range water reduction and superplasticising action of SikaPlast® V-220 provides the following benefits in hardened concrete:

- Higher early compressive strengths for earlier removal of forms and structural use of concrete.
- Higher ultimate strengths allow for greater engineering design flexibility and structural economies.
- Reduced water cement ratios produce more durable, dense concrete with reduced permeability.
- Highly effective plasticiser reduces surface defects in concrete elements and improves aesthetics appearance.

SikaPlast® V-220 does not contain formaldehyde, calcium chloride or any other added chlorides and will not initiate or promote the corrosion of steel present in the concrete.

### APPROVALS / CERTIFICATES

Complies with both ASTM C494 and EN 934 standard specifications for chemical admixtures for concrete.

<b>Composition</b>	Aqueous solution of modified polycarboxylates.
<b>Packaging</b>	200 and 1000 Litre containers
<b>Shelf life</b>	12 months from date of production if stored properly in undamaged, unopened, original sealed packaging.
<b>Storage conditions</b>	Store in dry conditions at temperatures between +5°C and +25°C. Protect from direct sunlight and frost.
<b>Appearance / Colour</b>	Dark Brown Liquid
<b>Density</b>	1.10 kg/litre
<b>pH-Value</b>	5.0 +/- 0.5

## APPLICATION INFORMATION

<b>Recommended dosage</b>	<p>Dosage rates will vary according to materials used, ambient conditions and the requirements of a specific project.</p> <ul style="list-style-type: none"> <li>▪ <b>For general concrete applications (water reduction of 5 -15%):</b> 0.4 – 0.8% by weight of cementitious (400 - 800 ml/100kg cementitious)</li> <li>▪ <b>For maximum water reduction:</b> 0.8 - 2.0 % by weight of cementitious (800 - 2000 ml/100kg cementitious)</li> <li>▪ SikaPlast® V-220 will retard the set of concrete when used at high dosages.</li> </ul>
<b>Dispensing</b>	<p><b>SikaPlast® V-220 is added to the gauging water or simultaneously with it poured into the concrete mixer.</b> For optimum utilisation of the high water reduction, we recommend thorough mixing at a minimal wet mixing time of 60 seconds.</p> <p>The addition of the remaining gauging water – to fine tune concrete consistency – may only be started after 2/3 of wet mixing time, to avoid surplus water in the concrete.</p> <p>SikaPlast® V-220 can also be added directly to the freshly mixed concrete in the concrete mixer at the end of the batching cycle.</p> <p><b>Frozen SikaPlast® V-220</b> Frozen SikaPlast® V-220 may be used after it has been slowly thawed at room temperature and intensively mixed.</p>
<b>Compatibility</b>	<p><b>Combinations with other admixtures</b> SikaPlast® V-220 is highly effective as single admixture or in combination with many admixtures in the Sika System. Field evaluations are needed to determine, based on local materials, the proper dosage of air entraining agent that needs to be used. In certain instances, it may be possible to reduce the air entraining dosage rate by as much as half or less to achieve the desired air content in the concrete mix. Please contact your local Sika representative for more information and assistance.</p> <p><b>Combinations with microsilica</b> SikaPlast® V-220 is particularly well suited for use with microsilica, slag and fly ash because of its water reduction capability and superior slump control.</p>

## 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

## LOCAL RESTRICTIONS

Please note that as a result of specific local regulations

the declared data for this product may vary from country to country. Please consult the local Product Data Sheet for the exact product data.

## 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 recommenda-

tions. 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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**Product Data Sheet**

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