

# PRODUCT DATA SHEET

## Sika® WT-110 P-id

### WATERTIGHT/SUPERPLASTICING (HRWR) CONCRETE ADMIXTURE

#### DESCRIPTION

Sika® WT-110 P-id is a combined watertight/superplasticising (HRWR) concrete admixture, used to enhance the workability of and reduce the water permeability of concrete. The product incorporates Sika® ViscoCrete superplasticiser technology and hydrophobic agent and depending on material package will produce watertight concrete at a S3 consistence with a w/c ratio of < 0.45 without the addition of a separate superplasticiser (HRWR).

#### USES

Sika® WT-110 P-id has been specifically formulated to produce high quality watertight concrete. Sika® WT-110 P-id treated concrete is used as a part of the Sika® Watertight Concrete system.

Sika® WT-110 P-id is mainly used for the following applications:

- Basements
- Parking garages
- Utility/plant rooms

- Tunnels
- Swimming pools
- Water retaining structures
- Dams
- Waste water treatment structures

#### CHARACTERISTICS / ADVANTAGES

Sika® WT-110 P-id has the following characteristics and benefits:

- Strong water reductions, resulting in higher density, durability and strength.
- Incorporation of hydrophobic agent to reduce water penetration under hydrostatic pressure and water absorption
- Sika® WT-110 P-id improves resistance to vapour transmission
- In combination with a Sika® ViscoCrete® Superplasticiser (HRWR) admixture, SCC can be produced
- Packaged in a water soluble bag for ease of dosage

#### PRODUCT INFORMATION

<b>Chemical Base</b>	Combination Fatty Acid and Polycarboxylate
<b>Packaging</b>	1.75 kg bag water soluble bag (5 bags/sealed plastic tub)
<b>Appearance / Colour</b>	Powder / White
<b>Shelf Life</b>	12 months from date of production if stored in original unopened and undamaged original sealed containers
<b>Storage Conditions</b>	Protected from moisture at temperatures between +5 °C and +25 °C.
<b>Bulk Density</b>	~0.50 kg/L

## TECHNICAL INFORMATION

### Concrete Mix Design

- Sika® WT-110 P-id has been formulated for use in concrete with a medium to high workability (> S3 Consistence) with a minimum cement content of 350 kg/m<sup>3</sup> and a maximum water/cement ratio of 0.45.
- Concrete containing Sika® WT-110 P-id should have a maximum SCM of not more than 25 %.
- Sika® WT-110 P-id has been specifically formulated to produce a S3 consistence with a w/c ratio of < 0.45 at 350 kg/m<sup>3</sup> without the addition of a separate superplasticiser (HRWR).
- Concrete containing Sika® WT-110 P-id should have a maximum drying shrinkage of 0.05 %.
- Subject to material package and cement content water reductions of between typically 10 - 15 % can be achieved. Laboratory trials are always recommended to evaluate and confirm actual water reduction.
- Should the addition of a Superplasticiser (HRWR) admixture be required to achieve a w/c ratio of < 0.45 a Sika® Viscocrete® (WR) admixture is to be selected to ensure compatibility.

#### Typical Results

350 kg/m<sup>3</sup> Cement Content (Cem1)

Control	Sika® WT-110 P-id
Dosage = -	Dosage = 1.75 kg/m <sup>3</sup>
W/C ratio = 0.50	W/C ratio = 0.45
Cement content (kg/m <sup>3</sup> ) = 350	Cement content (kg/m <sup>3</sup> ) = 350
Consistence = 110 mm	Consistence = 110 mm
Compressive strength (N/mm <sup>2</sup> ) = 22.0 (7 days), 47.0 (28 days)	Compressive strength (N/mm <sup>2</sup> ) = 38.0 (7 days), 54.0 (28 days)
Water reduction (%) = -	Water reduction (%) = 10.0

## APPLICATION INFORMATION

### Recommended Dosage

1 bag per m<sup>3</sup>

### Compatibility

Sika® WT-110 P-id is compatible with many Sika products.

- Sika® ViscoCrete® (WR) admixtures
- Concrete containing Sika® WT-110 P-id should have a maximum SCM of not more than 25 %

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

## APPLICATION INSTRUCTIONS

### DISPENSING

- Forced action and truck mixers should be free from all contaminants prior to the batching of concrete containing Sika® WT-110 P-id.
- Sika® WT-110 P-id should be added to the mixer at the recommended dose (1 bag per m<sup>3</sup>) prior to the batching of concrete.
- Batched concrete mix constituents should be subsequently batched on to the Sika® WT-110 P-id in accordance with Sika® mix design recommendations.
- Additional mixing water should then be dispensed to bring the concrete to the desired consistence.

- On completion of the batching procedure the concrete load should be mixed in the truck mixer/agitator on full revolutions for a minimum of 5 minutes to ensure that the optimum consistence has been achieved.

- The w/c ratio and consistence control remains the responsibility of the concrete producer. Laboratory trials are recommended to evaluate and confirm the actual water reduction.

In the event of a part load (< 1.0m<sup>3</sup>) it is recommended that 1 bag of Sika® WT-110 P-id is used.

### LIMITATIONS

Support from our Technical Department is recommended.

#### Alkali Content

< 0.4 % w/w

## 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.

## LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Please consult the local Product Data Sheet for the exact product data and uses.

## 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 Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety-related 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 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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Product Data Sheet

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