



PRODUCT DATA SHEET

Sika® Watertight Concrete Powder

PERMEABILITY REDUCING ADMIXTURE

PRODUCT DESCRIPTION

Sika® Watertight Concrete Powder is a combined water-resisting and HRWR/Superplasticizing admixture used to enhance the workability and reduce the water permeability of concrete. When added to concrete, the HRWR component in the admixture allows for the reduction in the water-cementitious ratio and reduces the large capillary pores in the concrete; the pore blocking component blocks the remaining small capillary pores by forming a hydrophobic layer within the pores.

WHERE TO USE

Sika® Watertight Concrete Powder has been specifically formulated to produce high quality watertight concrete.

Typical applications include:

- Water retaining structures
- Below ground structures
- Residential foundations
- Swimming pools
- Lift pits
- Tunnels, etc.

PRODUCT INFORMATION

CSC MasterFormat®	03 05 00
Packaging	1.34 kg (2.95 lb) water soluble bags, in boxes of 10
Shelf Life	2 years when stored in original, unopened packaging, in dry warehouse conditions at temperatures between 5 and 27 °C (40 and 80 °F). Protect from moisture.
Storage Conditions	Store at temperatures above 5 °C (40 °F). Protect from direct sunlight.

To improve concrete's resistance to water permeability, it is recommended that along with the use of Sika® Watertight Concrete Powder, the concrete should have a minimum cementitious content of 350 kg/m³ (590 lb/yd³) and a maximum water/cement ratio of 0.42.

CHARACTERISTICS / ADVANTAGES

- Reduces water absorption
- Reduces water penetration

APPROVALS / CERTIFICATES

Sika® Watertight Concrete Powder meets requirements of ASTM C494 Type F, ASTM C494 Type S and is ANSI/NSF 61 certified.

APPLICATION INFORMATION

Recommended Dosage

The recommended dosage of Sika® Watertight Concrete Powder is 1.75 kg/m³ of concrete material. In the event of part loads of less than one (1) cubic metre, it is recommended that a one cubic meter dose (1.75 kg/m³) of Sika® Watertight Concrete Powder be used. Contact your Sika Canada Technical Sales Representative for further information.

Mixing

Truck mixers should be free from all contaminants prior to the batching of concrete containing Sika® Watertight Concrete Powder.

- Sika® Watertight Concrete Powder should be added to the mixer at the recommended dose.
- Batched concrete mix constituents should be subsequently batched on to the Sika® Watertight Concrete Powder.
- Additional mixing water should then be dispensed to bring the concrete to the desired consistency.
- Upon completion of the batching procedure, the concrete load should be mixed in the truck mixer on full revolutions for a minimum of five (5) minutes to ensure that the optimum consistency has been achieved.
- The w/c ratio and consistency control are the responsibility of the concrete producer. Laboratory trials are recommended to evaluate and confirm the actual water reduction.

Combination with Other Admixtures: Sika® Watertight Concrete Powder is compatible with other Sika admixtures. All admixtures should be added separately to the concrete mix. Contact your local Sika Canada Technical Sales Representative for further information.

Combination with Pozzolanic Materials: Sika® Watertight Concrete Powder can be successfully used in mix designs utilizing pozzolanic materials such as silica fume, fly ash and GGBFS.

Concrete Mix Design: Depending on the mix design, water reductions typically between 10 - 16 % can be achieved. Laboratory trials are always recommended to evaluate and confirm actual water reduction. Should the addition of a HRWR/Superplasticizer be required, it is recommended that a Sika® ViscoCrete® HRWR/Superplasticizer be selected. Contact your local Sika Canada Technical Sales Representative for further information.

Note: Results may vary with different materials, temperature conditions and testing practices.

350 kg/m³ (590 lb/yd³) of Cement Content (Type GU)

Admixture	Dosage	W/cm Ratio	Cement Content kg/m ³	Slump
Control	-	0.50	350	110 mm (4.5")
Sika® Watertight Concrete Powder	1.75 kg/m ³	0.42	350	110 mm (4.5")

Admixture	Compressive Strength		Water Reduction %
	7 days MPa	28 days MPa	
Control	28.6	43.1	-
Sika® Watertight Concrete Powder	52.1	60.2	16

400 kg/m³ (675 lb/yd³) of Cement Content (Type GU)

Admixture	Dosage	W/cm Ratio	Cement Content kg/m ³	Slump
Control	-	0.46	400	125 mm (5")
Sika® Watertight Concrete Powder	1.75 kg/m ³	0.42	400	125 mm (5")

Admixture	Compressive Strength 7 days MPa	Compressive Strength 28 days MPa	Water Reduction %
Control	53.1	48.0	-
Sika® Watertight Concrete Powder	57.4	60.9	16

BASIS OF PRODUCT DATA

Product properties are typically averages, obtained under laboratory conditions. Reasonable variations can be expected on-site due to local factors, including environment, preparation, application, curing and test methods.

ENVIRONMENT, HEALTH & SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

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 recommendations, or from any other advice offered. The information contained herein does not relieve the user of the products from testing them for the intended application and purpose. 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 or may be downloaded from our website at: www.sika.ca

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