BUILDING TRUST
CONSTRUIRE LA CONFIANCE

PRODUCT DATA SHEET
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Sika® Watertight Concrete Powder

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Permeability Reducing Admixture

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

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.

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 355 kg/m³ (590 lb/yd³) and a maximum water/cement ratio of 0.42.

Advantages

- Reduces water absorption
- Reduces water penetration

Technical Data

Packaging	1.34 kg (2.95 lb) water soluble bags, in boxes of 10
Colour	White Powder
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. Store at temperatures above 5 °C (40 °F). Protect from direct sunlight.

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.

HOW TO USE

Dosage

The recommended dosage of Sika® Watertight Concrete powder is 1340 g/m³ of concrete material. In the event of part loads of less than one cubic metre, it is recommended that a one cubic meter dose (1.34 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 (1 bag per m³ prior to the batching of concrete).
- 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.

Mixing (cont'd)

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.

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

Admixture	Dosage	W/cm Ratio	Cement Content kg/m³	Slump	Compressive Strength		Water Reduction %
					7 days MPa	28 days MPa	
Control	-	0.50	355	110 mm (4.5")	28.6	43.1	-
Sika® Watertight Concrete Powder	1.34 kg/m³	0.42	355	110 mm (4.5")	52.1	60.2	16

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

Admixture	Dosage	W/cm Ratio	Cement Content kg/m³	Slump	Compressive Strength		Water Reduction %
					7 days MPa	28 days MPa	
Control	-	0.46	400	125 mm (5")	53.1	48.0	-
Sika® Watertight Concrete Powder	1.34 kg/m³	0.42	400	125 mm (5")	57.4	60.9	10

Clean Up

Use personal protective equipment (chemical resistant goggles/gloves/clothing). Without direct contact, remove spilled or excess product and place in suitable sealed container. Dispose of excess product and container in accordance with applicable environmental regulations.

Health and Safety Information

For information and advice on the safe handling, storage and disposal of chemical products, users should refer to the most recent SAFETY DATA SHEET containing physical, ecological, toxicological and other safety-related data.

KEEP OUT OF REACH OF CHILDREN
FOR INDUSTRIAL USE ONLY

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