



# VOLSEAL® 200

## CEMENTITIOUS WATERPROOFING BY CRYSTALLIZATION

**T  
E  
C  
H  
N  
I  
C  
A  
L  
D  
A  
T  
A**

### DESCRIPTION

Volseal 200 is a surface applied material, which waterproofs and protects concrete in-depth. It consists of grey Portland cement, specially treated quartz sand and a compound of active chemicals. Volseal 200 is supplied in powder form in 25kg tubs, and needs only to be mixed with water prior to application.

When Volseal 200 is applied to a concrete surface the active chemicals combine with the free lime and moisture present in the capillary track, to form insoluble crystalline complexes. These crystals block the capillaries and minor shrinkage cracks in the concrete to prevent any further water ingress (even under pressure). However, the layer will still allow the passage of water vapour through the structure (i.e. the concrete will still be able to "breathe"). In addition to waterproofing the structure, Volseal 200 protects concrete against seawater, wastewater, aggressive ground water and certain chemical solutions. Volseal 200 is approved for use in contact with potable water, and is therefore suitable for the treatment of water storage tanks, reservoirs, water towers etc. Volseal 200 is not a decorative material.

### APPLICATIONS

- Structural bearing planes, as part of the Volclay VOLTEX System (pads, pile caps, etc.)
- Basement retaining wall

- Concrete slabs (floor/roof/balcony)
- Construction joints
- Water retaining structures
- Swimming pools
- Sewage treatment plants
- Channels
- Potable water tanks

### INSTALLATION

#### Preparation

All concrete to be treated with Volseal 200 must be clean and have an 'open' capillary system. Remove laitance, dirt, grease etc by means of high pressure water jetting, wet sand-blasting or wire brushing. Faulty concrete in the form of cracks, honeycombing, etc must be chased out, coated with Volseal 200 and filled flush with proprietary repair mortars. Surfaces must be pre-wetted prior to the Volseal 200 application, but be free of standing water (damp not wet).

#### Mixing

Volseal 200 is mechanically mixed with clean water to a consistency of thick oil paint. Approximate mixing ratio is 1 part water to 2.5 parts of powder (by volume), so one tub of Volseal 200 will require 9-11 litres of water. Mix using a mixing paddle with a slow speed electric mixer / drill. Add the powder to the water. Mix only as much as can be used within



Birch House, Scotts Quays  
Birkenhead, Merseyside, CH41 1FB, UK  
Tel: +44 (0)151 606 5900  
Fax: +44 (0)151 606 5932

Sales Tel: +44 (0)151 606 5244  
Sales Fax: +44 (0)151 606 5949

20 minutes and stir the mixture frequently. If the mixture starts to set do not add more water, simply re-mix to restore workability.

### Application

**SLURRY CONSISTENCY.** Apply Volseal 200 in one or two 1mm thick coats according to specification by short-bristled masonry brush or appropriate power spray equipment. When two coats are specified apply the second coat at right angles to the first, whilst the first coat is still 'green'.

**DRY POWDER** (horizontal surfaces only). The specified amount (typically between 1-1.5Kg/m<sup>2</sup>) of Volseal 200 is distributed in powder form through a sieve and trowelled into the freshly placed concrete once this has reached initial set.

**POST TREATMENT.** Once the Volseal 200 treatment has reached initial set it should be moist cured with a fine fog spray of water 2-3 times per day for three days. In hot or windy conditions it should be moist cured more frequently. During the curing period the Volseal 200 treatment must be protected from rainfall, frost or ponding of water.

### Usage

**VERTICAL CONCRETE SURFACES** (internal and external). Two coats of Volseal 200 at 0.75Kg/m<sup>2</sup> per coat, applied by brush or spray equipment. Apply the second coat at right angles to the first.

**CONCRETE SLABS & FOUNDATIONS.** One slurry coat of Volseal 200 at 1.00Kg/m<sup>2</sup> applied to hardened concrete, or dry sprinkled and trowel applied to fresh concrete when this has reached initial set.

**CONSTRUCTION JOINTS.** One slurry coat of Volseal 200 at 1.5Kg/m<sup>2</sup> applied prior to placing the next lift / bay of concrete.

**BLINDING CONCRETE.** One slurry coat of Volseal 200 at 1.5Kg/m<sup>2</sup> applied to hardened concrete prior to placing the overlay concrete slab, or dry sprinkled

and trowel applied to fresh concrete when this has reached initial set.

### LIMITATIONS

**NOTE.** Do not apply Volseal 200 at temperatures below +5°C. Volseal 200 cannot be used as an additive to concrete or plasters.

### TECHNICAL DATA

Potable water approved	Yes
Withstand water pressure	> 12 bars @ 28 days
Colour	Cement grey
Bulk density	Approx 1.25
Setting time	60 min

All data are averages of several tests under laboratory conditions. In practice, climatic variations such as temperature, humidity and porosity of substrate may affect those values.

### SIZE & PACKAGING

#### Materials Supplied

25kg plastic tubs

#### SHELF LIFE

12 months

#### STORAGE

When stored in a dry place in unopened, undamaged original packaging.

### HEALTH & SAFETY

Volseal 200 contains cement and is irritating to eyes and skin. Volseal 200 may cause sensitisation by

# **VOLSEAL® 200**

## **TECH DATA** continued...



skin contact. Keep out of reach of children. Avoid contact with skin and eyes. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable gloves.

For further information please refer to material safety data sheet.

### **NOTES**

This data sheet is for general guidance purposes only and may contain information that is inappropriate for certain conditions of use. Accordingly, all recommendations and suggestions are made without guarantee.

Further information is available from our Technical Department.



Birch House, Scotts Quays  
Birkenhead, Merseyside, CH41 1FB, UK  
Tel: +44 (0)151 606 5900  
Fax: +44 (0)151 606 5932

Sales Tel: +44 (0)151 606 5244  
Sales Fax: +44 (0)151 606 5949